Cl **00** *SC* *P* *L* # **374**

Thompson, Geoffrey Nortel

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

I continue to believe that many of the technically sound concepts included in this proposal, while suitable for the access market, are fundamentally at odds with the underlying principals of Ethernet embodied in IEEE Std 802.3 to date. While we have made changes in the past they have been all realativley minor and most of them have worked out. Some, in retrospect, while they seemed like a good idea at the time have set bad precedents for later work. Across it all Std 802.3 has remained conceptually pretty consistent. P802.3ah has several significant departures from that conceptual consistency. I believe that the precedents they set will cause significant confusion over the long term and destroy the conceptual consistency of Ethernet as it is known.
The specific areas that concern me most are:
Loss of the peer relationship to a provider - customer asymmetry
Unidirectional transport
Loopback
New non CSMA/CD mechanisms for shared media access arbitration.
OAM mechanism that are not consistent with the earlier Management
Low speed operation not consistent with prevalent perception of Ethernet.
The requirement for and complexity of ranging & discovery protocols
Requirement for additional levels of station addressing

SuggestedRemedy

Revise the PAR and the draft so that what is currently designated as P802.3ah can be approved as a separate full/new standard that is approved as and will remain a separate standard from IEEE Std 802.3. This will allow this project and its provider oriented successors/amendments to more freely meet the requirements of this significantly different marketplace and set of customers.
Pursue further steps to approval, both editorially and procedurely as a separate standard.

Proposed Response *Response Status* **W**

PROPOSED REJECT.

This issue has been discussed several times in the past

Cl **00** *SC* *P* *L* # **120**

Morales Barroso, Jose L&M Data Communica

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

It is very important for Ethernet over voice-grade copper connections to supply power either from the Central Office (CO) like in the European ISDN, or from the switch/hub in LANs. This feature would have many advantages, not only for service providers, but also for users of 10PASS-TS or 2BASE-TL in LANs and campus networks; since it enables users to connect remote devices. For example, the cameras used in video-monitoring systems would need only one pair to transport the signal and the power, rather than the four pairs specified now in 802.3af. This would increase the link length from 100 m to 2 km.

SuggestedRemedy

The specifications of 802.3af should be extended to include voice-grade copper, in order to make the changes required.
Clause 31 should be modified to something like this: "DTE powering is intended to provide both data transfer and power feed to 10BASE-T, 100BASE-TX, 1000BASE-T, 10PASS-TS or 2BASE-TL devices".
As a reference, the ISDN and HDSL connections in Europe supply power from CO to the CPEs through POTS cables.

Proposed Response *Response Status* **W**

PROPOSED REJECT.

The suggestion may make a great new project, however, extending af is out of the scope of EFM

Cl **00** *SC* *P* *L* # **121**

Morales Barroso, Jose L&M Data Communica

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

The large number of connections based on EFM that will exist in the future makes it very advisable to apply power management procedures (copper & optical fiber) in order to eliminate "ghost power", because the average use of this connections is less than 5 hours/day (< 20% of the total time). For example, with 200 million users, the energy saving would be of the order of 14 TWh/year, equivalent to 1,4 Billion € (<>1,75 Billion $).

SuggestedRemedy

There is a power management specified in Std 802.11-1999, Clause 11, Subclause 11.2, that will serve as a basis to implement the control via the OAM protocol or with a specific procedure. In order to reduce the power consumed by the equipment, diverse components of these equipment can become disconnected during periods of inactivity.

Applying power management to all the Ethernet equipment (not only EFM) would result in a huge energy saving, due to the high number of devices that use this technology.

Proposed Response *Response Status* **W**

PROPOSED REJECT.

Again, while this may be a good suggestion for a new project it is out of the scope of EFM's objectives.

Cl **00** *SC* *P* *L* # **307**

Dawe, Piers Agilent

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

Referring to comment 343 against D3.0, 'Are we sure we haven't messed up the legacy Ethernet?' with a response of 'REJECT. The commenter is encouraged to file a suggested remedy.' Specific remedies were filed in D3.0 comments 313 380 with attachment http://www.ieee802.org/3/efm/public/comments/d3_0/pdfs/dawe_ 2_ 0104.pdf . Revised remedies are filed against D3.1 clause 66, 57, 56 and the front matter (99). The current draft is indeed making a mess of traditional Ethernet by attempting to demand non-standard PCS behavior for some of the suite of PMDs needed for 'traditional' (campus, industrial, core and metro) Ethernet use. In particular, 100BASE-LX10 and 1000BASE-LX10. These divergent requirements do no service to the standardization of Ethernet access networks either.

SuggestedRemedy

See other comments.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Will be discussed on Monday

Cl **00** *SC* *P* *L* # **405**

Grow, Robert Intel

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

I am now satisfied and will sign off my following D3.0 TR comments:
#500, #512, #537, #543.

Because #528 is mostly satisfied, I will sign it off and replace it with a new more specific TR.

SuggestedRemedy

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **00** *SC* *P* *L* # **99303**

Dawe, Piers Agilent

Comment Type **TR** *Comment Status* **R** *D3.0 #343*

Are we sure we haven't messed up the legacy Ethernet?
This rather vague comment is to replace an old TR which was triggered by counters(?) which fouled up regular Ethernet, and I've submitted it to encourage all readers to consider if the implications of the changes and additions in EFM could cause an unintended issue to existing Ethernets, including 10G Ethernet.

SuggestedRemedy

Check list:
Counters and registers still OK for legacy Ethernet?
Management stuff still OK?
100BASE-LX10 and 1000BASE-LX10 not tied to any public-networks-specific requirements?
No damage to 10G?
No outlawing current MAC, RS, PCS, PMAs in subscriber access networks?
Other?

Proposed Response *Response Status* **U**

REJECT.

The commenter is encouraged to file a suggested remedy.

Cl **00** *SC* *P* *L* # **251**

King, Neal Infineon Technologies

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

Please reference comments by Burkart Schneiderheinze (Infineon).

SuggestedRemedy

Remedies are proposed in the comments by Schneiderheinze.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Will look at those comments

Cl **00** *SC* *P* *L* # **99300**

Thompson, Geoffrey Nortel

Comment Type **TR** *Comment Status* **A** *D3.0 #795*

The entirely new concept to 802.3 of doing shared access via an entirely new access protocol is hidden through lack of use of the proper terminology to describe what is going on. The P2MP portion of the proposal is, in fact, a new shared access protocol of the TDMA variety yet none of the following standard terms appears appear anywhere in the description thereof:

multiple access
access method
time division
TDMA
access domain
MAC protocol

In fact the only mentions of a "shared LAN" is the claim that P2MP is emulating a shared LAN rather than admitting it is one!

SuggestedRemedy

Come clean. P2MP is at its most basic level a master-slave TDMA LAN. Revise text to describe P2MP fully as such using established 802 terminology for multiple access shared LANs.

Proposed Response *Response Status* **U**

ACCEPT IN PRINCIPLE.

Master-slave relationship is described in 64.3.1. item h.

Modify item d in 64.3.1 as follows:
Multiple MACs operate on a shared medium by allowing only a single MAC to transmit upstream at any given time across the network using a time-division multiple access (TDMA) method.

Cl **00** *SC* *P* *L* # **372**

Thompson, Geoffrey Nortel

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

There is no provision in the draft to assure that the required disclaimer text (Ref: SB Ops Manual 5.9.3) will be included in the published standard.

SuggestedRemedy

Make provision in the next version of the draft to include the appropriately placed following text:
“At lectures, symposia, seminars, or educational courses, an individual presenting information on IEEE standards shall make it clear that his or her views should be considered the personal views of that individual rather than the formal position, explanation, or interpretation of the IEEE.”

Proposed Response *Response Status* **W**

PROPOSED REJECT.

Appropriate text will be added by IEEE-SA staff editor prior to publication

Cl **00** *SC* *P* *L* # **99301**

Grow, Robert Intel

Comment Type **TR** *Comment Status* **A** *ALL D3.0 #528*

Inappropriate uses of error rate.

SuggestedRemedy

Search for error rate and replace with error ratio to be consistent with similar change implemented by IEEE Std 802.3aj-2003.

Proposed Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Where the quantity is errors per bit change to ratio. Where the quantity is error per unit time then it can remain as rate.

Cl **00** *SC* *P* *L* # **99302**

Grow, Robert Intel

Comment Type **TR** *Comment Status* **A** *Cu duplex D3.0 #500*

Full-duplex is not used correctly. A section that illustrates this well is 56.1 (bottom of page 158). P2MP does not use full duplex links -- it is a passive star.

EFM copper confuses the existing uses of full-duplex and half-duplex (see 1.1.1, 1.1.1.1, 1.1.1.2, 1.4.135, 1.4.139, 4.1.1, 4.1.2.1.1, etc.) In the published standards, full-duplex text generally is written with the assumption that CRS and COL do not need to be implemented in full duplex mode.

Similar terms are used interchangably or linked. For example "full duplex" as shorthand for "full duplex mode", (802.3ah, page 24 line 13 and 17), full duplex link (802.3, 4.1.1) and full duplex operation being synonomous with full duplex mode(802.3, 4.1.1) and MAC full duplex mode linked with an underlying full duplex PMD link).

The base

SuggestedRemedy

Harmonize use of full duplex and half duplex with the published standard. I believe this requires a full search of the base documents to make sure text does not contradict functionality exploited by EFM.

Most of the conflicts with EFM copper uses will require base document changes.

I believe full duplex and half duplex should not be used in P2MP descriptions except for describing full duplex emulation or when specifically referencing a mode as described in the base document.

Proposed Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

The first paragraph of the comment is factually incorrect.
P2MP does not use a passive star topology like 10BASE-FP.
P2MP does provide simultaneous full duplex transmission on a single strand of fiber via wavelength division multiplexing.

Regarding the second paragraph,

On p 318, line 50, change "full duplex operation" to
"simultaneous transmission and reception without contention".

Check other instances of full or half duplex in clause 61 and reference Annex 4A wherever reference is made to the full-duplex MAC.

The third paragraph of the comment does not cite any errors or deficiences in the draft as it refers to material that is unchanged
from the base standard.

Cl **00** *SC* **0** *P* **1** *L* **35** # **99304**

James, David JGG

Comment Type **TR** *Comment Status* **A** *D3.0 #726*

Excessive capitalization.
This is just one example. Instruct your editors to eliminate capitalization on everything except proper nouns and the first word of headings and sentences.

The profuse use of capitalization, for emphasis, field name delineation, acronyms, etc. is unnecessary and distracting. With so many capitals, its hard to tell when one sentence or field name begins and another one ends.

Start at the front, work through the end, and have a policy in mind. Simply repeating the 802.3 mistakes is not sufficient.

SuggestedRemedy

for network Operations, Administration and Maintenance (OAM) is included
==>
for network operations, administration and maintenance (OAM) is included

Proposed Response *Response Status* **U**

ACCEPT IN PRINCIPLE.

Will try to improve on capitalization

Cl **00** *SC* **0** *P* **10** *L* **1** # **99305**

James, David JGG

Comment Type **TR** *Comment Status* **R** *D3.0 #730*

Unnecessary page, not part of the specification.
This is normally provided (or so says Tom Alexander) for the convenience of editors when the document is in FrameMaker source. Its not needed in pdf, and (in fact) could lead to some interesting translation ambiguities.

SuggestedRemedy

Remove this and following page.

Proposed Response *Response Status* **U**

REJECT.

This has usually been added to 802.3 docs.

Cl **00** *SC* **0** *P* **2** *L* **1** # **99306**
James, David JGG

Comment Type **TR** *Comment Status* **A** *D3.0 #727*

This trademark usage page is blank, with no notice of any desire to change or method of change.

This comments was not addressed when marked as editorial, in previous working group ballots. I hope action is taken this time.

SuggestedRemedy

Either:
1) Eliminate the page
2) Put some text describing what and when will happen to this page.

Proposed Response *Response Status* **U**

ACCEPT IN PRINCIPLE.

This page is a reminder that text will be added on publication. An editors note can be added to this effect

Cl **00** *SC* **00** *P* **1** *L* **37** # **627**
Dawe, Piers Agilent

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

10G

SuggestedRemedy

10 Gb/s

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **00** *SC* **00** *P* **2** *L* **4** # **628**
Dawe, Piers Agilent

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

Comment 727

SuggestedRemedy

Add editor's note to explain this page?

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Seems self explanatory to me. Perhaps something like "Will be added by IEEE upon publication"

Cl **00** *SC* **00** *P* **4** *L* **14** # **629**
Dawe, Piers Agilent

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

'Clauses 56 through Clause 67 and Annex 58A through 67A' should be...

SuggestedRemedy

Clauses 56 through 67 and Annexes 58A through 67A (like p3 line 50)

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **00** *SC* **00** *P* **4** *L* **25** # **630**
Dawe, Piers Agilent

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

Missing space and comma

SuggestedRemedy

" '2001provides' s/b '2001, provides'"

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **00** *SC* **00** *P* **4** *L* **29** # **631**
Dawe, Piers Agilent

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

Wrong reference

SuggestedRemedy

'802.3ah-20xx' should be '802.3ak-20xx'. Or both.

Proposed Response *Response Status* **W**

PROPOSED REJECT.

Seems ok.

Cl **00** *SC* **00** *P* **9** *L* **6** # **632**
Dawe, Piers Agilent

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

10Gb/s

SuggestedRemedy

10 Gb/s

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **00** SC **00** P **All** L # **626**
Dawe, Piers Agilent

Comment Type **E** *Comment Status* **D**
TMs and comment 743?

SuggestedRemedy

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

Cl **00** SC **61.2.1.3.3** P **364** L **37** # **585**
Cravens, George Mindspeed

Comment Type **T** *Comment Status* **D** *Refered to Cu*
PPM tolerance on the ipg_timer and rate_matching_timer don't seem to belong. While the MII clock has a 100 ppm requirement, this information doesn't belong here.

Remove both mentions of tolerance +- 100 ppm.

SuggestedRemedy
Remove both mentions of tolerance +- 100 ppm.

(lines 37 and 40).

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

Refered to Cu

Cl **00** SC **61.2.2** P **365** L **39** # **586**
Cravens, George Mindspeed

Comment Type **E** *Comment Status* **D**
PMEPME stutters.

SuggestedRemedy
Change to PME.

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

Cl **01** SC P L # **430**
Schneiderheinze, Burkart Infineon Technologies

Comment Type **E** *Comment Status* **D**
PMI not replaced by PME 4 times in clause 1

SuggestedRemedy
replace PMI by PME

Proposed Response *Response Status* **O**

Cl **01** SC **1** P **14** L **54** # **264**
Dawe, Piers Agilent

Comment Type **E** *Comment Status* **D**
Shouldn't this be ANSI T1? or ATIS T1?

SuggestedRemedy
Consider changing to 'ANSI T1....' or ''ATIS T1....' and move to new position in alphabetical list. If appropriate, make similar changes to trial-use T1 references following.

Proposed Response *Response Status* **W**
PROPOSED REJECT.

Cl **01** SC **1** P **14** L **9** # **263**
Dawe, Piers Agilent

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

SuggestedRemedy
In the example 0F(16), make the 16 a subscript and remove the brackets.

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

Cl **01** SC **1** P **15** L **21** # **265**
Dawe, Piers Agilent

Comment Type **E** *Comment Status* **D**
Broken quantity

SuggestedRemedy
Use non-breaking space between 100 and Mb/s.

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

Cl **01** *SC* **1** *P* **15** *L* **45** # **266**

Dawe, Piers — Agilent

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

Unwanted , and missing .

SuggestedRemedy

61 and 63.) Also remove , from line 42.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **01** *SC* **1.3** *P* **14** *L* **12** # **1**

Jacob Ben Ary — TELDOR Wires & Cabl

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

There are new access cables standards, IEC 62255 series. This new standard should be mentioned in the normative references.

SuggestedRemedy

Add the following standard:
IEC 62255 - Multicore and symmetrical pair/quad cables for broadband digital communications (High bit rate Digital access Telecommunication Network)

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Will check on relevance of this standard and add if appropriate.

Cl **01** *SC* **1.3** *P* **14** *L* **24** # **99343**

Grow, Robert — Intel

Comment Type **TR** *Comment Status* **A** *D3.0 #512*

This reference is already in IEEE Std 802.3ae-2002, but with a year and different title.

SuggestedRemedy

Delete or correct as appropriate. If the document number and title are correct, it should be a "Change" (to 802.3ae), not an "Insert".

Proposed Response *Response Status* **U**

ACCEPT.

Cl **01** *SC* **1.3** *P* **14** *L* **40** # **418**

Barry, O'Mahony — Intel

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

Normative references need updating, to align them with the documents that are actually being referenced in the text

SuggestedRemedy

Change G.994.1 (2003) to G.994.1 (2004)

Change "T1.424/Trial-Use Part 1" to "ANSI T1.424-2004"; delete Part 3 reference.

Change T1.417 to ANSI T1.417

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **01** *SC* **1.4** *P* **15** *L* **22** # **634**

Dawe, Piers — Agilent

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

Unwanted '100BASE-BX-10'

SuggestedRemedy

Remove

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **01** *SC* **1.4** *P* **15** *L* **22** # **633**

Dawe, Piers — Agilent

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

"Definition of 100BASE-BX10 has changed following comment 515. But why would 100BASE-BX10 be treated differently to 1000BASE-BX10, 1000BASE-PX10, 1000BASE-PX10?"

SuggestedRemedy

Change all or none.

Proposed Response *Response Status* **W**

PROPOSED REJECT.

Can the commenter please provide specific changes

Cl **01** *SC* **1.4** *P* **15** *L* **35** # **635**

Dawe, Piers Agilent

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

10km needs a space

SuggestedRemedy

"10 km, 20 km"

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **01** *SC* **1.4** *P* **15** *L* **38** # **99344**

James, David JGG

Comment Type **TR** *Comment Status* **A** *D3.0 #732*

Excessive capitalization. There is no point in capitalizing every defined word (or many of them, with no apparent pattern). This confuses the parsing of sentences, since defined words, registers, fields, etc. are all capitalized.

SuggestedRemedy

1.4.xxx Aggregation group: ...
==>
1.4.xxx aggregation group: ...

1.4.xxx Bandplan: ...
==>
1.4.xxx bandplan: ...

1.4.xxx Coupled Power Ratio (CPR): ...
==>
1.4.xxx coupled power ratio (CPR): ...

1.4.xxx Downstream: ...
==>
1.4.xxx downstream: ...

1.4.xxx Grant: Within P2MP protocols, ...
==>
1.4.xxx grant: Within P2MP protocols, ...

1.4.xxx Logical Link Identifier (LLID): ...
==>
1.4.xxx logical link identifier (LLID): ...

1.4.xxx MPCP Registration: ...
==>
1.4.xxx MPCP registration: ...

1.4.xxx OAM Discovery: ...
==>
1.4.xxx OAM discovery: ...

1.4.xxx Operations, Administration and Maintenance (OAM): ...
==>
1.4.xxx operations, administration and maintenance (OAM): ...

1.4.xxx Optical Line Terminal (OLT): ...
==>
1.4.xxx optical line terminal (OLT): ...

1.4.xxx Optical Network Unit (ONU): ...
==>
1.4.xxx optical network unit (ONU): ...

1.4.xxx P2MP Discovery: ...
==>
1.4.xxx P2MP discovery: ...

1.4.xxx P2MP Discovery window: ...
==>
1.4.xxx P2MP discovery window: ...

1.4.xxx P2MP Timestamp: ...
==>
1.4.xxx P2MP timestamp: ...

1.4.xxx Point to Multi-Point Network (P2MP): ...
==>
1.4.xxx point to multi-point network (P2MP): ...

1.4.xxx Point-to-point emulation (P2PE): ...
==>
1.4.xxx point-to-point emulation (P2PE): ...

1.4.xxx Ranging: ...
==>
1.4.xxx ranging: ...

1.4.xxx Reflectance: ...
==>
1.4.xxx reflectance: ...

1.4.xxx Upstream: ...
==>
1.4.xxx upstream: ...

Proposed Response *Response Status* **U**

ACCEPT IN PRINCIPLE.

Will capitalize abbreviations in a definition to be consistant with 802.3ae (part of base document), Otherwise they will not be.

For definitons they will not be capitalized

Cl **01** *SC* **1.4** *P* **16** *L* **2** # **408**

Grow, Robert Intel

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

Grammar problem.

SuggestedRemedy

Change "an subscriber" to "a subscriber".

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **01** *SC* **1.4** *P* **16** *L* **2** # **636**

Dawe, Piers Agilent

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

"Grammar; comments 851, 520,790"

SuggestedRemedy

"end of a link **is** closer to **a** subscriber,"

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **01** *SC* **1.4** *P* **16** *L* **8** # **591**

Dr. David V. James

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

has excess capitalization, as can be seen by looking at Definitions are ****>>>>NOT<<<<**** capitalized just because they are defined. Even the most recent 802.3 "bible" has finally done this (mostly) right.

SuggestedRemedy

I view the responses to submitted comments arrogant and ill informed. Your should read the IEEE Style manual, which is available on line.
After that, establishing editorial guidelines (which a chief editor should do) or distributing pointers to useful references would be useful, such as http://dvjames.com/templates/StdBook.pdf.
A response of 802.3 precedence is irrelevent: your job is to write based on IEEE style guidelines. Besides, the precedence (most recent 802.3) also shows definitions not capitalized unless proper nouns.

Proposed Response *Response Status* **W**

PROPOSED REJECT.

The commenter is encouraged to provide specific comments and suggested remedies

Cl **01** *SC* **1.4** *P* **17** *L* **5** # **99345**

James, David JGG

Comment Type **TR** *Comment Status* **A** *D3.0 #733*

Excessive capitalization. There is no point in capitalizing every acronym (or many of them, with no apparent pattern). This confuses the parsing of sentences, since defined words, registers, fields, etc. are all capitalized.
Also, IEEE Style manual clearly shown acronyms not capitalized unless proper nouns.

Due to the large number of these, and failures in the past when attempting to resolve these earlier, they have been elevated to a TR.

After fixing the unnecessary capitalization, provide a check list to the other clause editors. Its easier for them to search, then for me and/or others to do so on their behalf.

SuggestedRemedy

CO Central Office
==>
CO central office

CPE Customer Premises Equipment
==>
CPE customer premises equipment

CPR Coupled Power Ratio
==>
CPR coupled power ratio

DMT Discrete Multi-Tone
==>
DMT discrete multi-tone

DA Destination Address
==>
DA destination address

EFM Ethernet in the First Mile
==>
EFM Ethernet in the first mile

EFM Cu Ethernet in the First Mile ...
==>
EFM Cu Ethernet in the first mile ...

FEC Forward Error Correction
==>
FEC forward error correction

FSW Frame Synchronization Word
==>
FSW frame synchronization word<cr
LLID Logical Link identifier
==>
LLID logical link identifier

MPCP Multi-Point Control Protocol
==>
MPCP multi-point control protoco

OAM Operations, Administration, and Maintenance
==>
OAM operations, administration, and maintenance

OAMPDU Operations, Administration, and Maintenance Protocol Data Unit
==>
OAMPDU operations, administration, and maintenance protocol data unit

ODN Optical Distribution Network
==>
ODN optical distribution network

OH Overhead
==>
OH overhead

OLT Optical Line Terminal
==>
OLT optical line terminal

ONU Optical Network Unit
==>
ONU optical network unit

ORLT Optical return loss tolerance
==>
ORLT optical return loss tolerance

P2P Point to Point
==>
P2P point to point

P2PE Point to Point Emulation
==>
P2PE point to point emulation

P2MP Point to Multi-Point
==>
P2MP point to multi-point

PAF PMI Aggregation Function
==>
PAF PMI aggregation function

PAFH PMI Aggregation Function Header

==>
PAFH PMI aggregation function header

PAM Pulse Amplitude Modulation
==>
PAM pulse amplitude modulation

PMS-TC Physical Media Specific - Transmission Convergence
==>
PMS-TC physical media specific - transmission convergence

PSD Power Spectral Density
==>
PSD power spectral density

SA Source Address
==>
SA source address

SHDSL Single-pair High-speed Digital Subscriber Line
==>
SHDSL single-pair high-speed digital subscriber line

STU-O SHDSL Transceiver Unit - Central Office
==>
STU-O SHDSL transceiver unit - central office

STU-R SHDSL Transceiver Unit - Remote
==>
STU-R SHDSL transceiver unit - remote

TCM Trellis Coded Modulation
==>
TCM Trellis coded modulation

UPBO Upstream power back-off
==>
UPBO upstream power back-off

Proposed Response *Response Status* **U**

ACCEPT IN PRINCIPLE.

Will capitalize abbreviations in a definition to be consistant with 802.3ae (part of base document), Otherwise they will not be.

For definitons they will not be capitalized

Cl **01** *SC* **1.5** *P* **17** *L* **38** # **382**

Beili, Edward Actelis Networks

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

PAF is defined as PMI aggregation function while it is PME aggregation function

SuggestedRemedy

Replace PMI with PME in the description.

Proposed Response *Response Status* **O**

Cl **01** *SC* **1.5** *P* **17** *L* **39** # **383**

Beili, Edward Actelis Networks

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

PAFH is defined as PMI aggregation function header while it should be PME aggregation function header.
Besides it is not used anywhere in the text .

SuggestedRemedy

Remove PAFH from the list of abbreviations.

Proposed Response *Response Status* **W**

PROPOSED REJECT.

Cl **01** *SC* **1.5** *P* **17** *L* **45** # **386**

Beili, Edward Actelis Networks

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

Typo: "sddress" instead of "address"

SuggestedRemedy

Correct the typo.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **01** *SC* **1.5** *P* **17** *L* **47** # **384**

Beili, Edward — Actelis Networks

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

STU-O is defined instead of STU-C.

SuggestedRemedy

Replace STU-O and STU-R definitions with the following:
STU - SHDSL Transceiver Unit
STU-C - STU at the Central Office end
STU-R - STU at the Remote end

Proposed Response *Response Status* **W**

PROPOSED REJECT.

Cl **01** *SC* **1.5** *P* **17** *L* **6** # **385**

Beili, Edward — Actelis Networks

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

Some abbreviations used in the text are not listed in Abbreviations section.

SuggestedRemedy

Add the following abbreviations to the list:
DSL - Digital Subscriber Line
VDSL - Very high speed Digital Subscriber Line
xDSL - Generic term covering the family of all DSL technologies, e.g. SHDSL, ADSL, VDSL
LT - Line Termination
NT - Network Termination
TC - Transmission Convergence
VTU - VDSL Transceiver Unit
VTU-O - VTU at the Central Office end
VTU-R - VTU at the Remote end

Proposed Response *Response Status* **W**

PROPOSED REJECT.

We have discussed this in the past.

Cl **04A** *SC* *P* *L* # **156**

Braga, Aldobino — UNH-IOL

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

Many of the cross-references don't work

SuggestedRemedy

Please fix the cross-references.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

I think all of the internal references work but I'll check through them again. Many external references are to clauses that are not open as part of this project so I don't know how to fix those.

A complete list would be helpful.

Cl **04A** *SC* **4A.1.2** *P* **556** *L* **50** # **145**

Braga, Aldobino — UNH-IOL

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

Figure 4A-1 is not the architectural model mentioned.

SuggestedRemedy

Please add the Architectural model, label it Figure 4A-1, and increment all other Figure numbers and Figure reference.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **04A** *SC* **4A.1.4** *P* **558** *L* **31** # **146**

Braga, Aldobino — UNH-IOL

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

The note in the figure is incomplete.

SuggestedRemedy

Note should read, "NOTE-a1, b2, etc., refer to functions listed in 4A.1.4."

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **04A** *SC* **4A.2.2** *P* **561** *L* **35** # **152**

Braga, Aldobino UNH-IOL

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

The paragraph used to have the following statement:
"Within the Pascal descriptions provided in Clause 4, a "‡"in the left margin indicates a line that has been added to support management services. These lines are only required if Layer Management is being implemented. These changes do not affect any aspect of the MAC behavior as observed at the LLC-MAC and MAC-PLS interfaces of ISO/IEC 8802-3:1990."

As this has nothing to do specifically with half duplex operation I don't see why it was removed.

SuggestedRemedy

Please add the statement, and fix the Pascal code and flow charts such that the "‡" symbols are replaced wherever applicable.

Proposed Response *Response Status* **W**

PROPOSED REJECT.

This change was actually done on purpose to help clean up duplicated text or code that was sometimes exactly the same and other times defined differently.

Take, for example, the description of TransmitStatus or ReceiveStatus in 4.3.2 - there is a different list of status code types for each frame status field depending on whether Layer Management exists. Both of these exist in today's Clause 4 because of the requirement to maintain compatibility with MACs developed before Layer Management existed.

The management services were not removed. Instead they were made the only option since there is no requirement to maintain a description that doesn't support management services as was the case with Clause 4.

Cl **04A** *SC* **4A.2.3.1** *P* **562** *L* **41** # **147**

Braga, Aldobino UNH-IOL

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

Missing cross-reference.

SuggestedRemedy

Please change "…CRC value is generated…" to "…CRC value as defined in 3.2.8 is generated…"

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

This problem comes from 802.3ae where the reference to 3.2.8 was deleted. This means that the current Clause 4 MAC, as approved by 802.3ae, has no reference to the CRC in 3.2.8!

This comment should be sent to maintenance against Clause 4 as well.

Replace "CRC value generated by the MAC sublayer" with "CRC value as defined in 3.2.8"

Cl **04A** *SC* **4A.2.3.2.1** *P* **562** *L* **54** # **153**

Braga, Aldobino UNH-IOL

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

"Or-ing" the transmitting variable with carrierSense will make this MAC behave differently than a Clause 4 full duplex MAC.

A Clause 4 FD MAC and PHY combo is able to transmit while receiving because the MAC ignores the carrierSense signal. Using an Annex 4A FD MAC and the same PHY will provide different results; the MAC will not be able to transmit while currently receiving a frame.

SuggestedRemedy

Suggest adding a "carrierSenseMode bit". When the bit is set (true), then transmitting should be "or-ed" with carrierSense. When the bit is not set (false), then transmitting should be the only variable checked before sending the frame to the Physical Layer.

This would also affect these areas in the document:
Pg. 564, line 53: part in parenthesis is only true if carrierSenseMode bit set.
Pg. 564, line 54: don't monitor carrierSense if carrierSenseMode bit not set.
Pg. 568, line 32: add a transmit state variable called carrierSenseMode
Pg. 569, line 52: In Initialize procedure set carrierSenseMode
Pg. 569, line 53: carrierSense should only be checked if carrierSenseMode bit is set
Pg. 571, line 54: carrierSense should only be checked if carrierSenseMode bit is set
Pg. 572, line 03: carrierSense should only be checked if carrierSenseMode bit is set
Pg. 578, line 32: need to explain listening to carrierSense would be optional

* There should be a statement saying that carrierSenseMode is false when deferenceMode is false.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Detailed instructions:

At the end of the first paragraph in 4A.2.3.2.1, add the following sentence: "The variable carrierSense is ignored in process Deference when the variable carrierSenseMode is FALSE."

Add the new variable and description just below "deferenceMode" in the var list in 4A.2.7.2: "carrierSenseMode: Boolean; {Indicates the desired mode of operation, and enables using carrierSense to extend deference due to congestion in the PHY}"

Add an assignment to this new variable in procedure Initialize in 4A.2.7.5 after the assignment to the deferenceMode variable: "carrierSenseMode := . . .; {True for implementations that use carrierSense to indicate congestion in the PHY, false otherwise. carrierSenseMode is ignored when deferenceMode is FALSE}

This last sentence assumes comment #196 is rejected. If accepted, remove this last sentence.

Two places in process Deference (page 571, line 54 and page 572, line3), replace "carrierSense" with "(carrierSenseMode and carrierSense)". Italicise the word "and".

In the carrierSense variable description in 4A.3.3 (page 578, line32), replace the first paragraph with the following: "When the value of variable carrierSenseMode is set to TRUE, ".

Insert the following paragraph after this one: "When the value of variable carrierSenseMode is set to FALSE, the carrierSense variable is ignored by the MAC."

Add a single asterisk after "carrierSense" twice in the Deference process control flow diagram in Figure 4A-3c then add a text note in the diagram: "* - carrierSense is ignored when carrierSenseMode is FALSE"

Cl **04A** *SC* **4A.2.3.2.1** *P* **564** *L* **11** # **148**

Braga, Aldobino UNH-IOL

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

Figure 4A-3C - Control Flow
BitReceiver process

The negative arc off of "receiveDataValid off or frameFinished on?" used to go before the "receive a bit" block. Now it goes below it. This means only one bit will be received.

SuggestedRemedy

Please place the arc before the "receive a bit" block.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **04A** *SC* **4A.2.5** *P* **566** *L* **43** # **154**

Braga, Aldobino UNH-IOL

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

"…BitTransmitter shall first transmit the preamble, a bit sequence used for physical medium stabilization and synchronization, followed by the Start Frame Delimiter."

But in the Pascal Code I don't see:
"while currentTransmitBit? < = lastHeaderBit do
begin
TransmitBit(outgoingHeader [currentTransmitBit]);{transmit header one bit at a time}
currentTransmitBit :=currentTransmitBit +1
end ;"

SuggestedRemedy

Either put the snippet of code into BitTransmitter so that the header will be transmitted or put PhysicalSignalEncap back in with the exception of Jam enforcement.

If you put PhysicalSignalEncap back into the document, you'll also have to make the following changes:
Figure 4A-2, will need a PhysicalSignalEncap block
Annex 4A2.5, replace BitTransmitter with PhysicalSignalEncap
Annex 4A.2.8 (edit BitTransmitter process, add a description, and add PhysicalSignalEncap procedure)

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

PhysicalSignalEncap seemed to be a useful place to transmit the preamble without reacting to collisions. I'd prefer not to reinstate this code.

To remove the possibility of a race condition, in procedure StartTransmit (page 571, line 45) reverse the order of the assignments to "transmitting" and "lastHeaderBit".

In process BitTransmitter, inside the "while transmitting do" loop (page 572, line 18), add the following code after the "begin":
"while currentTransmitBit = lastHeaderBit do
begin
TransmitBit(outgoingHeader [currentTransmitBit]);
currentTransmitBit :=currentTransmitBit +1
end;"

Cl **04A** *SC* **4A.2.7.1** *P* **568** *L* **12** # **149**

Braga, Aldobino UNH-IOL

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

Two occurrences of:
"headerContents: array [1..headerSize] of Bit)"

SuggestedRemedy

Remove first instance of "headerContents: array [1..headerSize] of Bit)"

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

This problem comes from 802.3ae where this same mistake was made.

This comment should be sent to maintenance against Clause 4 as well.

Cl **04A** *SC* **4A.2.7.1** *P* **571** *L* **17** # **150**

Braga, Aldobino UNH-IOL

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

Two occurrences of:
"begin
ComputePad := {Append an array of size padSize of arbitrary bits to the MAC client dataField}
end; {ComputePadParam}"

SuggestedRemedy

Remove the first instance of:
"begin
ComputePad := {Append an array of size padSize of arbitrary bits to the MAC client dataField}
end; {ComputePadParam}"

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

This problem comes from 802.3ae where this same mistake was made.

This comment should be sent to maintenance against Clause 4 as well.

Cl **04A** *SC* **4A.2.7.2** *P* **568** *L* **19** # **151**

Braga, Aldobino
UNH-IOL

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

It is difficult to differentiate the prose from the code.

SuggestedRemedy

Please place a new line between the descriptive text and the beginning of the Pascal code.

This also occurs on:
Pg. 569 line 43
Pg. 570 line 9
Pg. 570 line 31
Pg. 571 line 29
Pg. 571 line 41
Pg. 571 line 51
Pg. 572 line 11
Pg. 572 line 53
Pg. 573 line 52
Pg. 574 line 18
Pg. 574 line 38
Pg. 575 line 28

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **04A** *SC* **4A.2.8** *P* **571** *L* **32** # **196**

Kramer, Glen
Teknovus

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

Thin MAC discussion at the January meeting had the following resolution:
a. Introduce variable 'deferenceMode' to enable/disable IPG enforcement in MAC
b. retain 'carrierSense' to allow PHY controlling the congestion

Yet, in the currend draft if the defernceMode is false, both the IPG enforcement and carrierSense signals will be ignored.

SuggestedRemedy

The correct specification should keep line 32 in TransmitLinkManagement as it was before:
while deferring do {Defer to physical layer contention and IFS}

deferenceMode variable should be used in process Deference:
if deferenceMode then Wait(interFrameSpacing); {Time out entire interframe gap}

This way one may disable IPG in MAC but still use carrierSense to control congestion or maintain IPG.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

I'm okay with this change, in conjunction with adding carrierSenseMode. This keeps these 2 variables completely separate. Does it make sense to change the name of this variable to interFrameSpacingMode?

In addition to the suggested remedy, make the following changes:

Add a double asterisk after "wait interframe spacing" in the Deference process control flow diagram in Figure 4A-3c then add a text note in the diagram: "** - deferring for an interframe spacing is ignored when deferenceMode is FALSE"

Change the definition of the deferenceMode variable in 4A.2.7.2 to be: "deferenceMode: Boolean; {Indicates the desired mode or operation , and enables waiting for interframe spacing during the deference process}

Cl **04A** *SC* **4A.3.3** *P* **578** *L* **28** # **155**

Braga, Aldobino UNH-IOL

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

I don't think the definition of carrierSense should be changed. Only what the MAC does when it sees it.

SuggestedRemedy

Please define a bit indicating when carrierSense is being used (carrierSenseMode) and copy verbatim the text from Clause 4 with the following exceptions:
Replace "In half duplex mode, …" with "When carrierSenseMode is set to true,…"
and
Replace "In full duplex mode, …" with "When carrierSenseMode is set to false, …"

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

I'm not sure I agree with this. The description for carrierSense is for half-duplex links. In a PHY using the full-duplex MAC, carrierSense does not necessarily act the same way and merely is an indication of contention. I'll wait for the

When carrierSenseMode is set to TRUE, the MAC sublayer shall monitor the value of carrierSense to defer its own transmissions when the medium is busy.The Physical Layer sets carrierSense to true immediately upon detection of activity on the physical medium. After the activity on the physical medium ceases, carrierSense is set to false. Note that the true/false transitions of carrierSense are not defined to be precisely synchronized with the beginning and the end of the frame, but may precede the beginning and lag the end, respectively. (See 4A.2 for details.) When carrierSenseMode is set to FALSE, carrierSense is unde?ned.

Cl **04A** *SC* **4A.3.3** *P* **578** *L* **32** # **197**

Kramer, Glen Teknovus

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

In full duplex mode of operation PHY does not encounter any contention (for the media). But it may encounter congestion due to rate mismatch, etc.

SuggestedRemedy

Replace the word 'contention' with 'congestion' (2 occurences in this paragraph)

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

This word is used in 4A several times. If we change it in these 2 places, I recommend we change it everywhere.

Cl **22** *SC* **1.4** *P* **21** *L* **1** # **99309**

James, David JGG

Comment Type **TR** *Comment Status* **R** *D3.0 #734*

Excessive capitalization. There is no point in capitalizing every acronym (or many of them, with no apparent pattern). This confuses the parsing of sentences, since defined words, registers, fields, etc. are all capitalized.
Also, IEEE Style manual clearly shown acronyms not capitalized unless proper nouns.

Due to the large number of these, and failures in the past when attempting to resolve these earlier, they have been elevated to a TR.

After fixing the unnecessary capitalization, provide a check list to the other clause editors. Its easier for them to search, then for me and/or others to do so on their behalf.

SuggestedRemedy

22. Reconciliation Sublayer (RS) and Media Independent Interface (MII)
==>
22. Reconciliation sublayer (RS) and media independent interface (MII)

Proposed Response *Response Status* **U**

REJECT.

Changing the title of an existing clause is outside the scope of P802.3ah.

Cl **22** *SC* **22.2.4.1.12** *P* **23** *L* **10** # **267**

Dawe, Piers Agilent

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

Does it have to be so repetitive? I know it's following (stretching) precedent, but there doesn't seem any need to say 'bit 0.5 should always be written as zero,'. If the PHY won't do this feature, it would be just as good, or better, for the STA not to attempt to write to bit 0.5 at all. I hope the effect of this comment is merely editorial, but just in case, I've made it a T.

SuggestedRemedy

Shorten to:
If a PHY reports via bit 1.7 that it lacks the ability to encode and transmit data from the media independent interface regardless of whether the PHY has determined that a valid link has been established, the PHY shall
return a value of zero in bit 0.5, and any attempt to write a one to bit 0.5 shall be ignored.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

This is done both ways. See 22.2.4.1.3 and 22.2.4.1.4.

Cl **22** *SC* **22.2.4.1.12** *P* **23** *L* **20** # **99310**

Booth, Brad Intel

Comment Type **TR** *Comment Status* **A** *D3.0 #747*

Subclause is unclear and contains data that is either duplicated or belongs in another clause.

SuggestedRemedy

Move the last sentence of the last paragraph to be the last sentence of the first paragraph.

Move the second paragraph to proceed the first paragraph. Move MF42 & MF43 in PICS to proceed MF38 & MF39.

Delete the third paragraph and delete MF40 & MF41. This information should be in those respective clauses and repetition here just requires editing if another standards development wishes to use this bit.

Proposed Response *Response Status* **U**

ACCEPT IN PRINCIPLE.

I agree with all the moves.

The third paragraph was added to resolve a TR in WG ballot that expressed concern about enabling this capability without consideration of the ramifications.

Cl **22** *SC* **22.2.4.1.12** *P* **23** *L* **27** # **268**

Dawe, Piers Agilent

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

This doesn't say what is meant: 'A management entity shall only set bit 0.5 to a logic one after ...'

SuggestedRemedy

Change to:
A management entity shall set bit 0.5 to a logic one only after ...

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **22** *SC* **22.2.4.1.12** *P* **23** *L* **32** # **269**

Dawe, Piers Agilent

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

Do we have to spell this out fully?

SuggestedRemedy

Consider extending 'The default value of bit 0.5 is zero.' to:
The default value of bit 0.5 is zero, except for 1000BASE-PX-D, where it is one.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **22** *SC* **22.2.4.2.8** *P* *L* # **270**

Dawe, Piers Agilent

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

This is a read-only status bit, we can't say it 'shall be set' to anything. Editorial: note PMA in 66.1

SuggestedRemedy

Change to:
A PHY shall return a value of zero in bit 1.7 if it is not a 100BASE-X PHY using the PMA and PCS specified in 66.1 or a 1000BASE-X PHY using the PCS specified in 66.2.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **22** *SC* **22.2.4.2.8** *P* **25** *L* **9** # **99311**

Thompson, Geoffrey Nortel

Comment Type **TR** *Comment Status* **A** *D3.0 #793*

Proposed text goes well beyond the allowed scope of the project. As worded it would appear to allow "unidirectional ability" on legacy PHY types. This change could cause great confusion and interoperability problems with conformat legacy networks.

SuggestedRemedy

Limit the scope of this change to the PHY types being added by this clause that support unidirectional ability. Require that the value of bit 1.7 will be zero for all other current PHY types.
Any WG action to add unidirectional ability to legacy PHY types should be done through maintenance or a new project with the appropriate scope.

Proposed Response *Response Status* **U**

ACCEPT IN PRINCIPLE.

"Bit 1.7 shall be set to 0 for all PHYs except the following: 100BASE-X using the PCS specified in 66.1 and 1000BASE-X using the PCS specified in 66.2."

Use the major capability from comment #748 in the PICS entry.

Cl **22** *SC* **22.7.3.4** *P* **27** *L* **22** # **409**

Grow, Robert — Intel

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

MF43 through MF45 are inconsistent on style.

SuggestedRemedy

Move the value/comment information to the value/comment column.
MF43: Feature = "Enable Unidirectional mode", V/C= "Enable only when ..."
MF44: Feature = "Disable Unidirectional mode", V/C= "Unidirectional mode is disabled before disabling OAM sublayer when not part ..."
MF45: Feature = "Unidirectional Ability", V/C= "Bit 1.7=0 for all PHYs..."

Similar modifications to MF 38 and MD39 are also advised.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **30** *SC* **30** *P* **29** *L* **5** # **637**

Dawe, Piers — Agilent

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

10Gb/s

SuggestedRemedy

10 Gb/s. Also annex 30A

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **30** *SC* **30** *P* **30** *L* **1** # **397**

Law, David — 3Com

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

Replace long dash with short dash thought Clause 30.

SuggestedRemedy

See comment.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **30** *SC* **30** *P* **38** *L* **1** # **639**

Dawe, Piers — Agilent

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

Wrong dash type in table x--y (or maybe two dashes used)

SuggestedRemedy

"This problem shows up in several places and affects references to figures as well as tables, so it looks like a template problem."

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **30** *SC* **30.1.2.1.1.3** *P* **71** *L* **19** # **481**

Schneiderheinze, Burkart — Infineon Technologies

Comment Type **T** *Comment Status* **D** *Cu STF*

loss of power also supported by 2BASE-TL no reason for removing SHDSL part

SuggestedRemedy

remove limitation to 10PASS-TS

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **30** *SC* **30.11.1.1.11** *P* **59** *L* **23** # **24**

Law, David — 3Com

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

The attribute aOAMRemoteFlagsField needs rules for update added as it is a reception based attribute.

SuggestedRemedy

Suggest the following test be added:

This value is updated on reception of a valid frame with (1) a destinationField equal to the reserved multicast address for Slow_Protocols specified in Table 43B–1, (2) lengthOrType field value equal to the reserved Type for Slow_Protocols as specified in Table 43B–2, (3) a Slow_Protocols subtype value equal to the subtype reserved for OAM as specified in Table 43B–3.;

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **30** *SC* **30.11.1.1.11** *P* **59** *L* **31** # **244**
Martin, David Nortel Networks

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

The Flags field is present in every OAMPDU. This attribute should be updated according to the last received OAMPDU of any code value.

SuggestedRemedy

Change "received Local Information TLV" to "received OAMPDU"

Also need to add the associated 'when updated etc' text. Add

"This value is updated on reception of a valid frame, with (1) destinationField equal to the reserved multicast address for Slow_Protocols specified in Table 43B-1, (2) lengthOrType field value equal to the reserved Type for Slow_Protocols as specified in Table 43B-2, (3) a Slow_Protocols subtype value equal to the subtype reserved for OAM as specified in Table 43B-3, (4) the OAM code equals one of the codes as specified in Table 57-4."

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **30** *SC* **30.11.1.1.12** *P* **59** *L* **47** # **245**
Martin, David Nortel Networks

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

Need to be a little more specific on where the Revision field is.

SuggestedRemedy

Change "Figure 57-10) of the most recently transmitted" to "Figure 57-10) in the Local Information TLV of the most recently transmitted"

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **30** *SC* **30.11.1.1.13** *P* **60** *L* **4** # **246**
Martin, David Nortel Networks

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

Need to be a little more specific on where the Revision field is.

SuggestedRemedy

Change "Figure 57-10) of the most recently transmitted" to "Figure 57-10) in the Local Information TLV of the most recently transmitted"

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **30** *SC* **30.11.1.1.35** *P* **66** *L* **6** # **247**
Martin, David Nortel Networks

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

Typo.

SuggestedRemedy

Change "Errored Symbol field" to "Errored Symbols field"

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **30** *SC* **30.11.1.1.38** *P* **67** *L* **6** # **599**
Squire, Matt Hatteras Networks

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

The configuration description doesn't match the event. It should say that it is measured over a given number of frames as in 57.5.3.3.

SuggestedRemedy

Change first paragraph in BEHAVIOR to:

The first integer is a four-octet value indicating the duration of the Errored Frame Period Event (see 57.5.3.3) window, in terms of the number of frames in the window.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **30** *SC* **30.11.1.1.39** *P* **67** *L* **11** # **25**
Law, David 3Com

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

The third and fourth integers are in the wrong order.

SuggestedRemedy

The third and fourth integers should read:

The third INTEGER represents the Errored Frame Threshold field
The fourth INTEGER represents the Errored Frames field

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **30** *SC* **30.11.1.1.39** *P* **67** *L* **19** # **248**
Martin, David Nortel Networks

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

Relocate third integer below the fourth to preserve same sequence as in c57.

SuggestedRemedy

Move line 19 for Errored Frames to below line 20 for Errored Frame Threshold and re-number.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **30** *SC* **30.11.1.1.4** *P* **57** *L* **26** # **598**
Squire, Matt Hatteras Networks

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

C30 combines send_local_remote_1 and send_local_remote_2 from the discovery state machine into one state. These states have distinct meanings in the state diagram which should be exposed.

SuggestedRemedy

Break send_local_remote into 2 states in C30 (30.11.1.1.4)

Rename the states in the discovery state machine to provide more meaningful monikers. Suggestion: send_local_remote and send_local_remote_approved(?)

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Clause 30 will be changed if the change to Clause 57 is accepted.

Cl **30** *SC* **30.11.1.1.41** *P* **67** *L* **5153** # **249**
Martin, David Nortel Networks

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

Typo.

SuggestedRemedy

Change the three occurrences of "Errored Frame Second..." to "Errored Frame Seconds..."

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **30** *SC* **30.11.1.1.42** *P* **68** *L* **11** # **26**
Law, David 3Com

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

The third and fourth integers are in the wrong order.

SuggestedRemedy

The third INTEGER represents the Errored Symbol Threshold field
The fourth INTEGER represents the Errored Symbols field

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **30** *SC* **30.11.1.1.42** *P* **68** *L* **19** # **250**
Martin, David Nortel Networks

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

Move Errored Symbols line below the Errored Symbol Threshold line to preserve alignment with c57.

SuggestedRemedy

Move line 19 for Errored Symbols below line 20 for the Errored Symbol Threshold and re-number.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **30** *SC* **30.11.1.1.6** *P* **57** *L* **54** # **641**
Dawe, Piers Agilent

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

Rogue Capitals

SuggestedRemedy

Lots of them.

Proposed Response *Response Status* **W**

PROPOSED REJECT.

The capitalisation is consistent with that uses in Clause 57, the reference Clause for this attribute, and exactly matches that of the similar line found on page 58, line 16 which there is no comment against.

Cl **30** *SC* **30.12.1.1.10** *P* **73** *L* **32** # **642**

Dawe, Piers — Agilent

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

aReomotePAFCapacity.;

SuggestedRemedy

aRemotePAFCapacity.; Run the spell checker.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **30** *SC* **30.12.1.1.11** *P* **73** *L* **48** # **482**

Schneiderheinze, Burkart — Infineon Technologies

Comment Type **T** *Comment Status* **D** *Cu STF*

cross reff points to local PME available register, there is no clause 45 register which reflects the Far End capabilities

SuggestedRemedy

remove cross ref, add a note that this information can be provided by 'analyzing' the discovery process

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Either a Clause 45 regsiter will need to be provided or this attribute will have to be removed.

Cl **30** *SC* **30.12.1.1.12** *P* **74** *L* **8** # **483**

Schneiderheinze, Burkart — Infineon Technologies

Comment Type **T** *Comment Status* **D** *Cu STF*

cross ref points to local PME aggregate regsiter

SuggestedRemedy

update cross ref to 45.2.6.7, add a note that this information is valid when programming of PME aggregation on all link is finished

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **30** *SC* **30.12.1.1.3** *P* **71** *L* **10** # **387**

Beili, Edward — Actelis Networks

Comment Type **T** *Comment Status* **D** *Cu STF*

Values of noPMEAssigned and noPeerPMEPresent are not defined clearly.

SuggestedRemedy

Add some explanatory text (also make sure that clause 45 has matching definitions) e.g:
noPMEAssigned means that PAF is enabled but Aggregation register is all zeros (no modems assigned).
Currently there's no limitation in the text that you have to have at least 1 bit set in the Aggregation.
May be we should add that in.
noPeerPMEPresent means that there was no answer during handshake initialization. It could also mean that the modem on the other end physically exists but was excluded from the aggregation as a result of Discovery (i.e. belongs to a different CPE already taken by another CO).

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Clause 45 will need to be updated to reflect this.

Cl **30** *SC* **30.12.2.1.2** *P* **74** *L* **40** # **484**

Schneiderheinze, Burkart — Infineon Technologies

Comment Type **E** *Comment Status* **D** *Cu STF*

Cross ref points to remote PMESNRMgn

SuggestedRemedy

update cross ref to 45.2.1.17 and add a respective object for remote SNR value

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

The cross-ref will be updated but the new attribute will not be added.

Cl **30** *SC* **30.12.2.1.3** *P* *L* # **38**

Law, David — 3Com

Comment Type **T** *Comment Status* **D** *Cu STF*

Text is currently incomplete - reads '(see XREF).;'.

SuggestedRemedy

Once TC coding violations register is added, complete this cross-reference.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

See comment #198.

Cl **30** *SC* **30.12.2.1.3** *P* **74** *L* **47** # **485**
Schneiderheinze, Burkart Infineon Technologies

Comment Type **T** *Comment Status* **D** *Cu STF*
max count is 19530 per second

SuggestedRemedy
update value

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

Cl **30** *SC* **30.12.2.1.3** *P* **74** *L* **48** # **643**
Dawe, Piers Agilent

Comment Type **E** *Comment Status* **D**
10Mb/s

SuggestedRemedy
10 Mb/s

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

Cl **30** *SC* **30.12.2.1.3** *P* **74** *L* **54** # **281**
Dawe, Piers Agilent

Comment Type **E** *Comment Status* **D** *Cu STF*
see XREF

SuggestedRemedy
see where?

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

See comment #198.

Cl **30** *SC* **30.12.2.1.3** *P* **74** *L* **54** # **486**
Schneiderheinze, Burkart Infineon Technologies

Comment Type **T** *Comment Status* **D** *Cu STF*
missing cross ref

SuggestedRemedy
point to 45.2.6.9

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

Cl **30** *SC* **30.12.2.1.4** *P* **75** *L* **1** # **388**
Beili, Edward Actelis Networks

Comment Type **TR** *Comment Status* **D** *Cu STF*
aProfileSelect for 2BaseTL is defined to support a max of 4 values simultaneously. Should be 6 (for each region), see 63A.4.
Also pointers to 62A.3 and 63A.3 are given (with a wrong hyperlinks) instead of 62A.3.7 and 63A.4 respectively.
In addition to that 63A.3.7 defines only a single Complete Profile. Didn't we agree in Vancouver to have them defined?
Finally note that writing a list of profiles for 2BaseTL would result (after a few minutes) in selection of a single profile or even none at all (on extremely long lines for example). The reading operation would probably return a list of integers in the beginning (or N/A?) and then a single value (current operating profile) with no possibility to retrieve original list. Is this what we want? Also value for failure is not specified.

SuggestedRemedy
- Specify that aProfileSelect for 2BaseTL should support a max of 6 values simultaneously.
- Fix references and hyperlinks to 62A and 63A
- Define a list of Complete Profiles for 10PassTS (either in 62A [preferably] or in Clause 30)
- Define a value for ProfileSelect failure
- May be we should have another attribute which would be read only: aOperatingProfile

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

Define that aProfileSelect support a max of 6 values.
References to 62A and 63A will be fixed.
A value for ProfileSelect failure will be defined.
A new attribute aOperatingProfile will be added.

The complete list of Profiles for 10PassTS will have to be provided in 62A.

Cl **30** *SC* **30.12.2.1.4** *P* **75** *L* **10** # **487**
Schneiderheinze, Burkart Infineon Technologies

Comment Type **T** *Comment Status* **D** *Cu STF*
2BASE_TL PME does support all profiles

SuggestedRemedy
add a note that 4 profiles can be chosen for g.994.1 training sessions and the one with the highest data rate will be used

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

Cl **30** *SC* **30.12.2.1.4** *P* **75** *L* **14** # **488**
Schneiderheinze, Burkart Infineon Technologies

Comment Type **E** *Comment Status* **D** *Cu STF*
after startup only 1 profile is used

SuggestedRemedy
change profile number to profile number

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

See comment #388. A new attribute aOperatingProfile will be added that reports the current operating profile.

Cl **30** *SC* **30.12.2.1.4** *P* **75** *L* **18** # **489**
Schneiderheinze, Burkart Infineon Technologies

Comment Type **E** *Comment Status* **D** *Cu STF*
cross refs to tables just point to the 2BASE part

SuggestedRemedy
add cross refs to table for 10Pass if there are similar registers

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

See comment #388. The complete list of Profiles for 10PassTS will have to be provided in 62A.

Cl **30** *SC* **30.12.2.1.4** *P* **75** *L* **9** # **392**
kimpe, marc Adtran

Comment Type **T** *Comment Status* **D** *Cu STF*
The number of profiles was augmented from 4 to 6 for 2Base-TL

SuggestedRemedy
Change line 9 to : A 2BAse-TL supports a maximum of 6 values.

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

Cl **30** *SC* **30.12.2.1.4** *P* **75** *L* **9** # **398**
Law, David 3Com

Comment Type **E** *Comment Status* **D**
'10PASE-TS PME' should read '10PASS-TS PME'.

SuggestedRemedy
See comment.

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

Cl **30** *SC* **30.13** *P* **75** *L* **24** # **22**
Law, David 3Com

Comment Type **T** *Comment Status* **D**
Move OMPEmulation managed object class to be 30.3.3, a subclause of DTE Management, as PHY device managed object class already is.

SuggestedRemedy
Delete subclause 30.13. Renumber subclause 30.13.1 to be subclause 30.3.3 and renumber all subsequent subclauses as required.

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

Cl **30** *SC* **30.13.1.1.5** *P* **76** *L* **30** # **644**
Dawe, Piers Agilent

Comment Type **E** *Comment Status* **D**
a OLT

SuggestedRemedy
an OLT

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

Cl **30** *SC* **30.13.1.1.6** *P* **76** *L* **42** # **645**
Dawe, Piers Agilent

Comment Type **E** *Comment Status* **D**
Unwanted trailing)

SuggestedRemedy
Remove. Also on line 54.

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

Cl **30** *SC* **30.2.2.1** *P* **32** *L* **1** # **99314**

Grow, Robert Intel

Comment Type **TR** *Comment Status* **A** *D3.0 #537*

oMACControlFunctionEntity is not completly removed from 802.3-2002 by the changes of 802.3ah.

SuggestedRemedy

Remove reference in IEEE Std 802.3 Table 30-1c (pdf page 859, printed page 282) and 30A.4.1 pdf page 1063, printed page 486) -- requires redefinition of package.

Proposed Response *Response Status* **U**

ACCEPT IN PRINCIPLE.

On further examination it appears that the only mention of the oPAUSEEntity object in IEEE Std 802.3-2002 is in table 30-1c (page 834) and subclause 30.3.4. While the object name oMACControlFunctionEntity is not very descriptive of the attributes that it contains, the pause attributes, it will be far easier to preserve this object name than to change to oPAUSEEntity as this would impact the GDMO MIB in Annex 30A.

Based on this:

[1] Back out the changes that deleted oMACControlFunctionEntity and added oPAUSEEntity.

Instead:

[2] Change the text 'oPAUSEEntity managed object class (instance of oMACControlFunctionEntity) (30.3.4)' to simply read 'oMACControlFunctionEntity (30.3.4)'
[3] Change the text 'This subclause formally defines the behaviours for the oPAUSEEntity managed object class attributes.' in subcluase 30.3.4 'PAUSE entity managed object class' to read 'This subclause formally defines the behaviours for the oMACControlFunctionEntity managed object class attributes.'.

Cl **30** *SC* **30.2.2.1** *P* **32** *L* **30** # **402**

Law, David 3Com

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

The inclusion of the entire 30.2.2.1 text at draft D3.1 has introduced a couple of errors:

[1] The managed object 'oPSEGroup' is missing.
[2] The managed object 'oMidSpanGroup' seems to have been added.

SuggestedRemedy

[1] Add the object 'oPSEGroup':

oPSEGroup
The PSE Group managed object class is a view of a collection of PSEs.

[2] Delete the object 'oMidSpanGroup'.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **30** *SC* **30.2.2.1** *P* **33** *L* **39** # **377**

Beili, Edward Actelis Networks

Comment Type **TR** *Comment Status* **D** *Cu STF*

oTC is described as providing PME Aggregation Function (PAF), while 61.1.4.1.3 states that "The PAF is located in the PCS, between the MAC-PHY Rate Matching function and the TC sublayer."

SuggestedRemedy

Replace oTC definition with the following:
"oPAF - The oPAF managed object class provides the management controls necessary for PME Aggregation Function sublayer to be managed."
Replace "oTC" with "oPAF" in the definition of oPME (page 33, line 7).
Replace "oTC" with "oPAF" in Figure 30-3 and in Table 30-5.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **30** *SC* **30.2.5** *P* **37** *L* **46** # **277**

Dawe, Piers Agilent

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

No need to cross out the reference.

SuggestedRemedy

Reinstate '(30.3.4)'.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **30** *SC* **30.2.5** *P* **38** *L* **15** # **278**

Dawe, Piers — Agilent

Comment Type **T** *Comment Status* **D** *Cu STF*

I don't think the PME Aggregation Capability package should be mandatory, as it is new, and as I understand it, relevant to just a few port types.

SuggestedRemedy

Conditional?

Proposed Response *Response Status* **W**

PME Management only has one capability, PME Aggregation hence when PME Management is implement that one capability has to be implement and is therefore mandatory.

See also comment #378.

Cl **30** *SC* **30.2.5** *P* **40** *L* **44** # **378**

Beili, Edward — Actelis Networks

Comment Type **TR** *Comment Status* **D** *Cu STF*

PME Aggregation Capability is set as Mandatory. oPME attributes (e.g. PMESNRMgn) are shown to be a part of PME Aggregation Capability while clearly they are not and should be a part of 10P/2B capability.

SuggestedRemedy

Add 10P/2B Package (Conditional).
Make aPhyEnd, aPhyCurrentStatus, aPAFSupported, aRemotePAFSupported and all attributes of oPME to be part of the 10P/2B Package.
Replace "PME Aggregation Capability (Mandatory)" with "PME Aggregation Package (Optional)". Put the rest of the oPAF attributes there (see my previous comment on oTC) .

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Will add a new 10P/2B Package to Table 30-5, this will contain the attributes aPMEID, aPMESNRMgn, aTCCodingViolations and aProfileSelect.

Cl **30** *SC* **30.3.5.1** *P* **44** *L* **14** # **28**

Law, David — 3Com

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

Include the string MPCP in all MPCP related attributes.

SuggestedRemedy

Add the text 'MPCP' after the initial 'a' to the following attribute names:

aTxGate
aTxRegAck
aTxRegister
aTxRegRequest
aTxReport
aRxGate
aRxRegAck
aRxRegister
aRxRegRequest
aRxReport

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **30** *SC* **30.3.5.1** *P* **44** *L* **14** # **27**

Law, David — 3Com

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

The attribute aMPCPID is missing.

SuggestedRemedy

Add the attribute aMPCPID that reads as follows:

aMPCPID
ATTRIBUTE
APPROPRIATE SYNTAX:
INTEGER
BEHAVIOUR DEFINED AS:
The value of aMPCPID is assigned so as to uniquely identify an MPCP entity among the subordinate managed objects of the containing object.;

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **30** *SC* **30.3.5.1.13** *P* **47** *L* **42** # **31**
Law, David 3Com

Comment Type **T** *Comment Status* **D**
Missing condition for incrementing this counter.

SuggestedRemedy
Add the condition '(1) a destinationField equal to the reserved multicast address for MAC Control specified in 31A', renumber the existing conditions as required.

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

Cl **30** *SC* **30.3.5.1.14** *P* **48** *L* **3** # **32**
Law, David 3Com

Comment Type **T** *Comment Status* **D**
Missing condition for incrementing this counter.

SuggestedRemedy
Add the condition '(1) a destinationField equal to the reserved multicast address for MAC Control specified in 31A', renumber the existing conditions as required.

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

Cl **30** *SC* **30.3.5.1.15** *P* **48** *L* **19** # **33**
Law, David 3Com

Comment Type **T** *Comment Status* **D**
Missing condition for incrementing this counter.

SuggestedRemedy
Add the condition '(1) a destinationField equal to the reserved multicast address for MAC Control specified in 31A', renumber the existing conditions as required.

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

Cl **30** *SC* **30.3.5.1.16** *P* **48** *L* **35** # **34**
Law, David 3Com

Comment Type **T** *Comment Status* **D**
Missing condition for incrementing this counter.

SuggestedRemedy
Add the condition '(1) a destinationField equal to the reserved multicast address for MAC Control specified in 31A', renumber the existing conditions as required.

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

Cl **30** *SC* **30.3.5.1.17** *P* **48** *L* **43** # **638**
Dawe, Piers Agilent

Comment Type **E** *Comment Status* **D**
"Empty line, font of lines 45-47."

SuggestedRemedy

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

Can't find the error but when checking for it found the follow errors:

In subclause 30.3.5.1.9 'aTxRegAck' the text 'A count of the number of times a GATE MPCP frames transmission occurs.' should read 'A count of the number of times a REGISTER_ACK frames transmission occurs.'

In subclause 30.3.5.1.10 'aTxRegister' the text 'A count of the number of times a GATE MPCP frames transmission occurs.' should read 'A count of the number of times a REGISTER MPCP frames transmission occurs.'

In subclause 30.3.5.1.11 'aTxRegRequest' the text 'A count of the number of times a GATE MPCP frames transmission occurs.' should read 'A count of the number of times a REGISTER_REQ MPCP frames transmission occurs.'

In subclause 30.3.5.1.12 'aTxReport' the text 'A count of the number of times a GATE MPCP frames transmission occurs.' should read 'A count of the number of times a REPORT MPCP frames transmission occurs.'

In subclause 30.3.5.1.13 'aRxGate' the text 'A count of the number of times a REPORT MPCP frames reception occurs.' should read 'A count of the number of times a GATE MPCP frames reception occurs.'

In subclause 30.3.5.1.14 'aRxRegAck' the text 'A count of the number of times a REPORT MPCP frames reception occurs.' should read 'A count of the number of times a REGISTER_ACK MPCP frames reception occurs.'

In subclause 30.3.5.1.15 'aRxRegister' the text 'A count of the number of times a REPORT MPCP frames reception occurs.' should read 'A count of the number of times a REGISTER MPCP frames reception occurs.'

In subclause 30.3.5.1.16 'aRxRegRequest' the text 'A count of the number of times a REPORT MPCP frames reception occurs.' should read 'A count of the number of times a REGISTER_REQ MPCP frames reception occurs.'

Cl **30** *SC* **30.3.5.1.17** *P* **48** *L* **51** # **35**

Law, David 3Com

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

Missing condition for incrementing this counter.

SuggestedRemedy

Add the condition '(1) a destinationField equal to the reserved multicast address for MAC Control specified in 31A', renumber the existing conditions as required.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **30** *SC* **30.3.5.1.6** *P* **45** *L* **43** # **29**

Law, David 3Com

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

Suggest changed wording to match similar attributes.

SuggestedRemedy

Change the text 'This counter is incremented when a MA_CONTROL.request ...' to read 'Increment counter by one when a MA_CONTROL.request ...'.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **30** *SC* **30.3.5.1.6** *P* **45** *L* **47** # **396**

Law, David 3Com

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

Is an increment rate of 1 600 000 counts per second correct. Can these MAC Control frames really be generated at line rate.

SuggestedRemedy

Check what the real maximum rate is and update as required.

Also check rate for the attributes:

aMPCPMACCtrlFramesTransmitted
aMPCPMACCtrlFramesReceived
aTxGate
aTxRegAck
aTxRegister
aTxRegRequest
aTxReport
aRxGate
aRxRegAck
aRxRegister
aRxRegRequest
aRxReport

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **30** *SC* **30.3.5.1.7** *P* **46** *L* **1** # **30**

Law, David 3Com

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

Suggest changed wording to match similar attributes.

SuggestedRemedy

Change the text 'This counter is incremented when a ReceiveFrame function call returns a valid frame with: (1) a ...' to read 'Increment counter by one when a ReceiveFrame function call returns a valid frame with: (1) a ...'.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **30** *SC* **30.5.1..14** *P* **48** *L* **10** # **99315**

Grow, Robert Intel

Comment Type **TR** *Comment Status* **A** *D3.0 #543*

Cut and paste with incomplete edits? The APPROPRIATE SYNTAX of aFECCorrectedBlocks and aFECUncorrectableBlocks are not consistent in either maximum increment rates or in specification of both 10 Mb/s and 1000 Mb/s

SuggestedRemedy

It seems like the Corrected and Uncorrectable counts should have the same maximum increment rate and applicability to same speeds.

Proposed Response *Response Status* **U**

ACCEPT.

This was an incomplete edit.

Cl **30** *SC* **30.5.1.1.12** *P* **54** *L* **46** # **280**

Dawe, Piers Agilent

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

I'm puzzled by this counter. It will count detectably errored code-groups within frames - I don't think it counts errored idles (not sure about errored /C/? We already have a FrameCheckSequenceErrors counter which will count once per errored frame (max approx 15000 bits on the line or 90000 for RPR). If we had more than one error per frame except very occasionally, the error rate (after any FEC) would be approx 10^-5 or worse - we don't need to know how much worse.
Also this counter will miss many 4B/5B errors, as the 4B/5B code doesn't have very good error detection. It will miss some 8B/10B errors. But a total of the FCS check counter plus the other frame-oriented counters e.g. aAlignmentErrors will catch them. So for half-way usable or good links, aPCSCodingViolation will under-estimate the number of errors.
Further, this counter will run up to silly numbers on a burst, masking any information about the quality of the link.
And it makes the management of different speeds more different than it need be, as this counter seems to apply to some but not all port types.

SuggestedRemedy

If this counter is needed for anything (maybe it is needed for 10P/2B?) then explain, and give a reference, and reconsider how it interacts with FEC. Also add a throttle, at least optionally: could say that counting one for any block of 1000 octets is acceptable (SONET uses block checking), as is ignoring up to 1000 octets after an error (ESCON uses this blanking method).
If the counter is not needed, get rid of it.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Discus - if these issues are all true hasn't this counter got to the point where it no longer of any use and should be removed.

Cl **30** *SC* **30.5.1.1.12** *P* **54** *L* **46** # **23**

Law, David 3Com

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

The attribute aPCSCodingViolation should be moved from the MAU to the PHYEntity as it is now part of the RS.

SuggestedRemedy

Move the attribute aPCSCodingViolation to be in the PHYEntity.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **30** *SC* **30.5.1.1.13** *P* **55** *L* **17** # **640**

Dawe, Piers Agilent

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

Rogue capital

SuggestedRemedy

Forward s/b forward

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **30** *SC* **30.5.1.1.15** *P* **55** *L* **50** # **36**

Law, David 3Com

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

This counter cannot support the 10PASS-TS PHY since this counter is a per PHY counter, a count of FEC corrected blocks for the 10PASS-TS PHY would be a per PME counter and would need to be added to the PME object if require. In addition even if the attribute were to be provided there is no Clause 45 register to support it.

SuggestedRemedy

[1] Change the text 'For 10PASS-TS and 1000BASE-PX PHYs, a count of corrected ...' to read 'For 1000BASE-PX PHYs, a count of corrected ...'.
[2] Remove the text relating to increment rate for 10Mb/s.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **30** *SC* **30.5.1.1.16** *P* *L* # **37**

Law, David 3Com

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

This counter cannot support the 10PASS-TS PHY since this counter is a per PHY counter, a count of FEC uncorrected blocks for the 10PASS-TS PHY would be a per PME counter and would need to be added to the PME object if require. In addition even if the attribute were to be provided there is no Clause 45 register to support it.

SuggestedRemedy

[1] Change the text 'For 10PASS-TS and 1000BASE-PX PHYs, a count of uncorrected ...' to read 'For 1000BASE-PX PHYs, a count of uncorrected ...'.
[2] Remove the text relating to increment rate for 10Mb/s.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **30** *SC* **30.5.1.1.2** *P* **52** *L* **15** # **479**

Schneiderheinze, Burkart Infineon Technologies

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

link to MAU type to register defined in clause 45 in case of 2BASE-TL/10PASS-TS missing

SuggestedRemedy

add link to 45.2.1.1 (PMA/PMD) and to 45.2.3.1 (PCS) for 10PASS/2BASE

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **30** *SC* **30.5.1.1.4** *P* **52** *L* **40** # **597**

Squire, Matt Hatteras Networks

Comment Type **TR** *Comment Status* **D** *Cu STF*

We added a "available reduced" state to the aMediaAvailable, but I don't see how to interpret it.

One doesn't really know the aggregate group to which a PME belongs unless the PME is thru handshaking so that the discovery process completed and the discovery registers exchanged. If it was up, once you get a link fault, you don't know that the discovery information for that PME is valid any more, so you can't just say that group is operating at reduced capacity - that PME may have been reassigned. And if the PME was never up, then you don't know which aggregate group it should belong to, and you can't determine which group is "reduced".

I guess every PCS to which a PME is mapped in the available register could be called reduced, but that doesn't seem right either.

SuggestedRemedy

Eliminate "available_reduced" or clarify how it works given the dynamic/discovered relationship between PMEs and their aggregates.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

The enumeration "available_reduced" will be removed.

Cl **30** *SC* **30.5.1.1.4** *P* **53** *L* **43** # **480**

Schneiderheinze, Burkart Infineon Technologies

Comment Type **E** *Comment Status* **D** *Cu STF*

not clear how the other enumeration types which are not covered by this paragraph map (i.e. PCS link fault, remote fault,..)

SuggestedRemedy

add a note that other enumerates are not supported by 2BASE/10PASS

Proposed Response *Response Status* **W**

PROPOSED REJECT.

The mapping is from the PHY type to the enumerations - if an enumeration is not covered for a particular PHY type it cannot occur.

Cl **30** *SC* **30.5.1.1.6** *P* **54** *L* **28** # **272**

Dawe, Piers Agilent

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

Editorials on: 'Note that this counter will only increment for 10Mb/s baseband and broadband MAUs.'
1. Needs space between 10 and Mb/s
2. It would be better to clarify exactly which 10 Mb/s MAUs are and aren't affected. Either spell out these MAUs by name: 10BASE5, 10BASE2 and so on (8 of them?), or say that 10PASS-TS does not use jabber.

SuggestedRemedy

Change to:
Note that this counter will increment for 10 Mb/s baseband and broadband MAUs only (not for 10PASS-TS).

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

The space will be added between 10 and Mb/s.

The intention of using the terms Baseband and Broadband was to avoid having to list a whole set of 100, 1000 and 10G PHYs that do not increment the counter - listing 10PASS-TS as a special exception seems odd.

Cl **30** *SC* **30.5.1.1.6** *P* **54** *L* **28** # **271**

Dawe, Piers Agilent

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

This doesn't say what is meant: 'Note that this counter will only increment for 10Mb/s baseband and broadband MAUs.' As opposed to decrement, I presume.

SuggestedRemedy

Change to:
Note that this counter will increment for 10 Mb/s baseband and broadband MAUs only.
And see editorial comment.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **30** *SC* **30.5.1.1.6** *P* **54** *L* **28** # **276**

Dawe, Piers Agilent

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

This doesn't say what is meant: 'While a 10PASS-TS or 2BASE-TL PMA/PMD is initializing, this bit shall also indicate link down (see 45.2.1.12).' In addition to what? Indicating (receive) link down is what it does anyway. I think the intent is that the bit should be in receive-link-down state when initializing even if the receive link is up. Or it might be that the bit should indicate during initialization as well as at other times.

SuggestedRemedy

Delete 'also', insert 'receive'.

Proposed Response *Response Status* **W**

This appears this comment is against text that appears in Clause 45.

Cl **30** *SC* **30.5.1.3.1** *P* **54** *L* **32** # **273**

Dawe, Piers Agilent

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

This subclause is out of place. It should be on p56, after 30.5.1.1.16

SuggestedRemedy

Please move it.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **30** *SC* **31.12.2.1.3** *P* **74** *L* **54** # **198**

Beck, Michael Alcatel Bell nv

Comment Type **E** *Comment Status* **D** *Cu STF*

Missing cross-reference.

SuggestedRemedy

Cross-reference should be: "10P/2B TC encapsulation error counter" 45.2.6.9.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **30** *SC* **Table 30-1b** *P* **37** *L* **5** # **395**

Law, David 3Com

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

The editing instruction found on Page 48 of IEEE Std 802.3ae-2002 that reads 'In Tables 30-1a, 30-1b, 30-1c, 30-1d, and 30-1e, change the DTE and MAU column heading "100/1000 Mb/s Monitor Capability (Optional)" to read "PHY Error Monitor Capability (Optional)." has not been implemented in the excerpts of tables 30-1b and 30-1c shown in IEEE P802.3ah.

Note - It seem this instruction wasn't carried out in the excerpt table 30-1b shown in IEEE Std 802.3ae-2002 either which may have lead to this error.

SuggestedRemedy

[1] A change should be added that states 'In Tables 30-1a, 30-1b, 30-1c, 30-1d, and 30-1e, change the DTE column heading '100/1000 Mb/s Monitor Capability (optional)" to read "PHY Error Monitor Capability (optional)"

[2] The DTE column heading '100/1000 Mb/s Monitor Capability (optional)" for the excerpts of 30-1b and 30-1c shown be change to read "PHY Error Monitor Capability (optional)"

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **30A** *SC* **30A.20.2** *P* **167** *L* **17** # **400**

Law, David 3Com

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

The attribute is names 'aOAMLocalErrFrameConfig' yet the arc is named '... oamLocalErrFrameSecsConfig(266)' and the behaviour '(No Suggestions) the arc to be named '... oamLocalErrFrameConfig(266)' and the behaviour 'bOAMLocalErrFrameConfig;'.

SuggestedRemedy

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

The arc will be corrected to '.. oamLocalErrFrameSecsSummaryConfig(266)' which matchs the attribute and behaviour name.

Cl **30A** *SC* **30A.8.1** *P* **144** *L* **13** # **399**

Law, David 3Com

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

Changes to subclause 30A.8.1 and 30A.8.2 proceed changes to 30A.4.2.

SuggestedRemedy

Re-order these changes so that the changes to 30A.4.2 come first.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **30B** *SC* **30B** *P* **176** *L* # **302**

Dawe, Piers Agilent

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

Subscribe

SuggestedRemedy

Subscriber

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **31A** *SC* *P* **181** *L* **23** # **194**

Kramer, Glen Teknovus

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

Table 31A-3:

Text in the Interpretation column is inaccurate and ambiguous.

SuggestedRemedy

Use the following description

start: Time when transmission should be initiated
length: Interval of time during which transmission is allowed
arrive: Indicates that a grant was received and is queued for future activation

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **31A** *SC* *P* **181** *L* **32** # **193**
Kramer, Glen Teknovus

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

Table 31A-3:

description of force_report is inaccurate.

"The OLT expects the ONU to generate a REPORT at the next transmission opportunity following this indication."

When GATE message is received, each grant is indicated to the MAC Control client, including any grant with force_report=true. However, there may be many transmission opportunities before this grant becomes active.

SuggestedRemedy

"The OLT expects the ONU to transmit a REPORT messgae during the transmission opprtunity identified by start and length fields."

Same change for the "force_report = false" table entry.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **31A** *SC* *P* **182** *L* **14** # **195**
Kramer, Glen Teknovus

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

Text "Indicates amount or pending transmission in the corresponding queue" is confusing and ambiguous.

SuggestedRemedy

Use the following text

"Indicates amount of data waiting in the corresponding queue including the associated transmission overhead"

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **31A** *SC* **31A** *P* **180** *L* **18** # **279**
Dawe, Piers Agilent

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

Does unidirectional mode inhibit the use of PAUSE? Which takes precedence, the far end telling a station to stop transmitting frames, or the OAM layer saying it may? Does 'non-control frames' in table 31A-1 exclude OAM frames or just MCPC frames? Table 31A-2 mentions 'data frames' - should the terminology be aligned?

SuggestedRemedy

57.1.5.3 seems clearer. If it's right, clarify 31A?

Proposed Response *Response Status* **W**

PROPOSED REJECT.
31 beahvioral model is unaffected by OAM as OAM PDUs are treated as any other MAC client.

Cl **31A** *SC* **31A** *P* **181** *L* **26** # **303**
Dawe, Piers Agilent

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

Grammar

SuggestedRemedy

Change 'was' to 'has been'.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **31A** *SC* **31A** *P* **182** *L* **50** # **304**
Dawe, Piers Agilent

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

is a requested ?

SuggestedRemedy

is requested? has been requested? Also font size in central column.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
Is requested

Cl **43B** *SC* **43B** *P* **185** *L* **56** # **654**
Dawe, Piers Agilent

Comment Type **E** *Comment Status* **D**
Wrong year

SuggestedRemedy
s/b 2004

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

Cl **45** *SC* **45** *P* **79** *L* **1** # **403**
Law, David 3Com

Comment Type **TR** *Comment Status* **D**
Please add a register to support the aPHYCurrentStatus attribute (30.12.1.1.3).

As part of this clarification of the value 'no PMEAssigned' and 'noPeerPMEPresent' should be clarified.

'no PMEAssigned'
Does it mean that the physical layer is not up or does it mean that the PME Aggregation register has just 1 bit set with the PAF enable bit not set (no PAF) or does it relate to something else?

'noPeerPMEPresent'
Again, it is not clear to what condition this relates to, is it that the physical link is not up, that the remote TC is not synchronized or is it intended to use some PMD parameter or is it the result of the discovery phase, saying there is no link to be aggergatable with the selected one??

SuggestedRemedy
See comment.

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

Ick. It would seem that this attribute is referring to functionality that has not really been discussed. Perhaps the attribute can be changed to reflect 1.69 instead?

Otherwise, we'll have to add the register.

Cl **45** *SC* **45** *P* **79** *L* **6** # **647**
Dawe, Piers Agilent

Comment Type **E** *Comment Status* **D**
10Gb/s

SuggestedRemedy
10 Gb/s

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

Cl **45** *SC* **45** *P* **79** *L* **6** # **646**
Dawe, Piers Agilent

Comment Type **E** *Comment Status* **D**
Draft 4.0 of IEEE P802.3ak?

SuggestedRemedy
s/b at least draft 5.3

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

Cl **45** *SC* **45** *P* **80** *L* **1** # **39**
Law, David 3Com

Comment Type **TR** *Comment Status* **D**
The TC coding violations register is missing. In subclause 61.3.3.7.2 'Receive state diagram', the specific text reads:

TC_coding_error
when this signal is asserted, the Coding violation counter register is incremented (see 45.2.3.17). The default value of this variable is FALSE; it returns to FALSE on every state transition.

Unfortunately when I look at 45.2.3.17 it is the '10P/2B capability register' so this seems to be broken. A search of Clause 45 for the 'Coding violation counter' referenced in subclause 61.3.3.7.2 didn't report anything, nor do a search of Clause 45 for a counter that looked like it might be the Coding violation counter.

SuggestedRemedy
Add the TC coding violations counter to Clause 45.

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

See 254

Cl **45** *SC* **45** *P* **80** *L* **11** # **274**
Dawe, Piers Agilent

Comment Type **E** *Comment Status* **D**
Need space between 1000 and Mb/s

SuggestedRemedy
Insert space

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

Cl **45** *SC* **45.1** *P* **80** *L* **11** # **648**
Dawe, Piers Agilent

Comment Type **E** *Comment Status* **D**
1000Mb/s

SuggestedRemedy
1000 Mb/s

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

Cl **45** *SC* **45.1** *P* **80** *L* **11** # **282**
Dawe, Piers Agilent

Comment Type **E** *Comment Status* **D**
Missing space

SuggestedRemedy
1000 Mb/s

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

Cl **45** *SC* **45.2** *P* **80** *L* **50** # **609**
Law, David 3Com

Comment Type **T** *Comment Status* **D**
Change "..the register contents.." to "..contents of the register pair.."

Comment from Ed Turner.

SuggestedRemedy

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

Cl **45** *SC* **45.2** *P* **82** *L* **7** # **83**
Law, David 3Com

Comment Type **E** *Comment Status* **D**
The hash symbol should not be used.

[Comment provided by Edward Turner]

SuggestedRemedy
Replace with "number".

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

Cl **45** *SC* **45.2.1** *P* *L* # **254**
Squire, Matt Hatteras Networks

Comment Type **TR** *Comment Status* **D**
There's an XREF for the TPS-TC coding violations in 30.12.2.1.3. Basically, I think the variable is missing from C45, 45.2.1

SuggestedRemedy
Add a per-PME TPS-TC coding violation counter to C45, and correct the reference.

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

The per TPS-TC coding violations register was added via the remedy to Comment #73 on D3.0. It is now found in 45.2.6.9 under the name "TC encapsulation error counter".

Fix cross references to point to 45.2.6.9.
Rename register to "TPS-TC coding violations register"

Cl **45** *SC* **45.2.1** *P* **76** *L* **33** # **99327**
Grow, Robert Intel

Comment Type **TR** *Comment Status* **A** *o D3.0 #555*
Mixing control and status in a register is a bad idea. We have avoided that in the past. This register (and other registers like 1.22) are named control, but have a least one status bit.

SuggestedRemedy
Separate the control and status bits into different registers for all new registers.

Proposed Response *Response Status* **U**
ACCEPT.

Cl **45** *SC* **45.2.1.1** *P* **85** *L* **32** # **275**
Dawe, Piers Agilent

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

What's gone wrong here? The footnote in 802.3ae is right, what's here doesn't apply.

SuggestedRemedy

Footnote should be:
R/W = Read/Write, SC = Self Clearing

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **45.2.1.11** *P* **87** *L* **21** # **431**
Schneiderheinze, Burkart Infineon Technologies

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

SC = Self Clearing defined but not used

SuggestedRemedy

remove

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **45.2.1.11.1** *P* **86** *L* **40** # **492**
Schneiderheinze, Burkart Infineon Technologies

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

Currently there is no mechanism defined for clearing down (NACK(CD)a g.994.1 session

SuggestedRemedy

define an appropriate bit Clear Down in 10P/2BPMD control register

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

There are no more bits in the table. Can we say that writing a "0" to bit 15 will initiate clear down? Since the bit will be a "1" when the link is in handshake, writing 0 should clear down.

Why do we need this anyway?

Cl **45** *SC* **45.2.1.11.1** *P* **86** *L* **47** # **40**
Law, David 3Com

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

No PICS entry for the first "shall".

[Comment provided by Edward Turner]

SuggestedRemedy

Add a PICS entry for the first shall statement.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **45.2.1.11.1** *P* **86** *L* **48** # **41**
Law, David 3Com

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

No PICS entry for the "shall".

[Comment provided by Edward Turner]

SuggestedRemedy

Add a PICS entry for the shall statement.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **45.2.1.11.1** *P* **86** *L* **48** # **283**
Dawe, Piers Agilent

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

Ambiguous: is this sentence 'Upon MMD reset, this bit shall be set to zero.' an instruction to the MMD's implementer or its user (the STA)? Could be either for a R/W bit.

SuggestedRemedy

Please clarify.

Proposed Response *Response Status* **W**

PROPOSED REJECT.

Shalls cannot apply to the user.

Cl **45** *SC* **45.2.1.11.2** *P* **86** *L* **53** # **284**
Dawe, Piers Agilent

Comment Type **E** *Comment Status* **D**
only in the wrong place

SuggestedRemedy
Change to 'Writing to this bit is valid only when ...'

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

Cl **45** *SC* **45.2.1.11.2** *P* **86** *L* **54** # **649**
Dawe, Piers Agilent

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

SuggestedRemedy
down

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

Cl **45** *SC* **45.2.1.11.3** *P* **87** *L* **28** # **6**
Law, David 3Com

Comment Type **T** *Comment Status* **D**
The table says that "silence time" is measured in seconds. It would be helpful if the description text also said this.

[Comment provided by Edward Turner]

SuggestedRemedy
Add "(in seconds)" between "time" and "is" at the end of the line.

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

Cl **45** *SC* **45.2.1.11.4** *P* **87** *L* **37** # **84**
Law, David 3Com

Comment Type **E** *Comment Status* **D**
The statement "..is a traffic disruptive operation.." sounds awkward.

[Comment provided by Edward Turner]

SuggestedRemedy
Replace with "..may corrupt the data on the link.."

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

Change to:

Changing this bit alters the fundamental operation of the PMA/PMD, therefore, writes to change this bit shall be ignored if the link is up or initializing

Cl **45** *SC* **45.2.1.11.4** *P* **87** *L* **38** # **285**
Dawe, Piers Agilent

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

SuggestedRemedy
Add . Also in 45.2.1.18, 45.2.1.21, 45.2.1.22, 45.2.1.26, 45.2.1.41, 45.2.1.42, 45.2.1.43, 45.2.3.17.2, more.

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

Cl **45** *SC* **45.2.1.11.5** *P* **87** *L* **42** # **70**
Law, David 3Com

Comment Type **T** *Comment Status* **D**
Correct '7' to be '6'.

[Comment provided by Edward Turner]

SuggestedRemedy
See comment.

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

Cl **45** *SC* **45.2.1.11.5** *P* **87** *L* **51** # **424**
Barry, O'Mahony Intel

Comment Type **E** *Comment Status* **D**
missing word "be"

SuggestedRemedy
Change "may set" to "may be set"

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

Cl **45** *SC* **45.2.1.11.5** *P* **87** *L* **54** # **425**
Barry, O'Mahony Intel

Comment Type **E** *Comment Status* **D**
Last sentence leaves behavoir of PHY's ambiguous in some instances.

SuggestedRemedy
Change from:
"If the “-R” is not capable of the “preferred” mode, the “-R” may behave as 10PASS-TS or 2BASE-TL respectively."
to:
"If the “-R” is not capable of the “preferred” mode, the “-R” is set to 10PASS-TS or 2BASE-TL respectively."

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

Cl **45** *SC* **45.2.1.12** *P* **88** *L* **16** # **290**
Dawe, Piers Agilent

Comment Type **E** *Comment Status* **D**
K = 1024

SuggestedRemedy
kb/s

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

Cl **45** *SC* **45.2.1.13** *P* **89** *L* **40** # **490**
Schneiderheinze, Burkart Infineon Technologies

Comment Type **T** *Comment Status* **D**
2BASE also provides CRC counter register

SuggestedRemedy
also provides useful information add CRC counter register for local and link partner

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

Does g.SHDSL already provide the EOC commands to transfer this info?

Cl **45** *SC* **45.2.1.13** *P* **89** *L* **49** # **613**
Law, David 3Com

Comment Type **E** *Comment Status* **D**
Change "send" to "sent"

Comment from Ed Turner.

SuggestedRemedy

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

Cl **45** *SC* **45.2.1.13** *P* **89** *L* **52** # **293**
Dawe, Piers Agilent

Comment Type **E** *Comment Status* **D**
only defined. Not what? used?

SuggestedRemedy
Change this and its several clones to:
This register is defined for "-O" port sub-types only.

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

Cl **45** *SC* **45.2.1.13** *P* **89** *L* **54** # **491**

Schneiderheinze, Burkart — Infineon Technologies

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

not clear how link partner register 'react' on a read and how they are affected by MMD reset?

SuggestedRemedy

add a note that the behaviour of Link Partner register for read access and for MMD reset is exactly the same as for the local register

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **45.2.1.13** *P* **89** *L* **7** # **111**

Law, David — 3Com

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

It may be useful to add '('-O' PHY only)' to the subsection heading. Also apply to other register subsection headings that are for the -O PHY only. [Comment provided by Edward Turner]

SuggestedRemedy

See comment.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **45.2.1.13.1** *P* **77** *L* **10** # **99328**

Grow, Robert — Intel

Comment Type **TR** *Comment Status* **A** *o D3.0 #556*

The operation of these bits is not consistent with that previously used in 802.3. Control bits also be status bits is not a common function. STA if writing a valid value to a control register should be able to read that register and always get back the value written unless the device/MMD has been reset.

SuggestedRemedy

Redefine and separate the control and status functions of the bits and all similarly confusing bits.

Proposed Response *Response Status* **U**

ACCEPT.

Cl **45** *SC* **45.2.1.13.1** *P* **90** *L* **18** # **113**

Law, David — 3Com

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

Suggest the text can be clarified. [Comment provided by Edward Turner]

SuggestedRemedy

Change '..one, the PHY updates all link partner..' to '..one, the '-O' PHY updates its link partner..'

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **45.2.1.13.1** *P* **90** *L* **20** # **65**

Law, David — 3Com

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

The word "must" is used here and on line 30.

[Comment provided by Edward Turner]

SuggestedRemedy

Change to "shall" or "will".

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

If the ". . ." operation does not complete within 10 seconds. . .

Cl **45** *SC* **45.2.1.13.2** *P* **90** *L* **28** # **114**

Law, David — 3Com

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

Suggest the text can be clarified. [Comment provided by Edward Turner]

SuggestedRemedy

Change '..the PHY..' to '..the '-O' PHY..'

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **45.2.1.13.2** *P* **90** *L* **29** # **606**
Law, David 3Com

Comment Type **T** *Comment Status* **D**
Incorrect reference.

Comment from Ed Turner.

SuggestedRemedy
Change reference "45.2.1.14" to "45.2.1.22"

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

Cl **45** *SC* **45.2.1.13.2.** *P* **90** *L* **29** # **432**
Schneiderheinze, Burkart Infineon Technologies

Comment Type **E** *Comment Status* **D**
wrong cross reference

SuggestedRemedy
change 45.2.1.14 to 45.2.1.21

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

Cl **45** *SC* **45.2.1.14.1** *P* **90** *L* **51** # **42**
Law, David 3Com

Comment Type **T** *Comment Status* **D**
No PICS entry for the "shall".

[Comment provided by Edward Turner]

SuggestedRemedy
Add a PICS entry for the shall statement.

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

Cl **45** *SC* **45.2.1.15** *P* **91** *L* **33** # **650**
Dawe, Piers Agilent

Comment Type **E** *Comment Status* **D**
Missing period

SuggestedRemedy
"Also p93 lines 6, 28, p107 line 6, 25 and 54 and more…"

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

Cl **45** *SC* **45.2.1.15** *P* **91** *L* **37** # **433**
Schneiderheinze, Burkart Infineon Technologies

Comment Type **E** *Comment Status* **D**
remove 'CROSS REF'

SuggestedRemedy
remove 'CROSS REF'

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

Cl **45** *SC* **45.2.1.19** *P* **92** *L* **32** # **71**
Law, David 3Com

Comment Type **T** *Comment Status* **D**
Add a reference to the clause that describes how this register is used.

[Comment provided by Edward Turner]

SuggestedRemedy
See comment.

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

Cl **45** *SC* **45.2.1.2.1** *P* **73** *L* **33** # **99329**
Grow, Robert Intel

Comment Type **TR** *Comment Status* **A** *o D3.0 #547*
It is not clear in what context the added sentence applies.

SuggestedRemedy
Change to read: "For 10PASS-TS or 2BASE-TL operations, when read as one, a fault has been detected and more detailed . . ."

Proposed Response *Response Status* **U**
ACCEPT.

Cl **45** *SC* **45.2.1.2.2** *P* **86** *L* **5** # **45001**

Copied from C30 #276

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

This doesn't say what is meant: 'While a 10PASS-TS or 2BASE-TL PMA/PMD is initializing, this bit shall also indicate link down (see 45.2.1.12).' In addition to what? Indicating (receive) link down is what it does anyway. I think the intent is that the bit should be in receive-link-down state when initializing even if the receive link is up. Or it might be that the bit should indicate during initialization as well as at other times.

SuggestedRemedy

Delete 'also', insert 'receive'.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

"While a 10PASS-TS or 2BASE-TL PMA/PMD is initializing, this bit shall indicate receive link down (see45.2.1.12)."

Cl **45** *SC* **45.2.1.2.2** *P* **86** *L* **5** # **21**

Law, David 3Com

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

There's an extra "shall" statement added here but no new, nor change to the existing, PICS entry is provided.

[Comment provided by Edward Turner]

SuggestedRemedy

Add an extra PICS entry or modify the existing PICS entry for subsection 45.2.1.2.2.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **45.2.1.21** *P* **93** *L* **1** # **5**

Law, David 3Com

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

There is no way an '-R' PHY can know when this register has been updated by an '-O' PHY. Maybe the '-R' PHY doesn't need to know. The '-O' PHY has register 1.33 to tell it when the link partner communication has completed.

[Comment provided by Edward Turner]

SuggestedRemedy

Either define a default for bits 15-4 that is not a valid operational value (dangerous) so that the '-R' PHY can poll the register to see when it's been updated. Or, add a bit to register 1.41 that is set to a "1" when the '-O' PHY has written to it and is cleared to a "0" when the '-R' STA reads from the PHY.

Proposed Response *Response Status* **W**

PROPOSED REJECT.

See 45.2.1.13.2.

"When this bit is set to a one, the PHY sends the contents of the 2B link partner line quality thresholds register (see 45.2.1.14) to the link partner. While the operation is in progress, the PHY shall keep the bit set as one. The “Send Link partner parameters” operation must complete within 10 seconds, or its result shall be marked as “failed” (see 45.2.1.14) and the operation marked as “complete”. After completion of the operation or upon reset, the PHY shall reset the bit to zero. A write to this bit when link is down shall cause the result to be marked as “failed” and the operation marked as “complete”."

Cl **45** *SC* **45.2.1.21** *P* **93** *L* **21** # **72**

Law, David 3Com

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

Add a subclause with definitions for the loop attenuation threshold bits and the SNR margin threshold bits. Also reference the clause that uses these values.

[Comment provided by Edward Turner]

SuggestedRemedy

See comment.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **45.2.1.21** *P* **93** *L* **3** # **614**
Law, David 3Com

Comment Type **E** *Comment Status* **D**
Missing "s" off the end of "threshold"

Comment from Ed Turner.

SuggestedRemedy

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

Cl **45** *SC* **45.2.1.21** *P* **93** *L* **4** # **493**
Schneiderheinze, Burkart Infineon Technologies

Comment Type **E** *Comment Status* **D**
10PASS-TS missing

SuggestedRemedy
add 10PASS-TS

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

Cl **45** *SC* **45.2.1.23** *P* **93** *L* **39** # **73**
Law, David 3Com

Comment Type **T** *Comment Status* **D**
Add a reference to the clause where the FEC counter is described.

[Comment provided by Edward Turner]

SuggestedRemedy
See comment.

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

Cl **45** *SC* **45.2.1.24** *P* **94** *L* **8** # **74**
Law, David 3Com

Comment Type **T** *Comment Status* **D**
Add a reference to the clause where the FEC counter is described.

[Comment provided by Edward Turner]

SuggestedRemedy
See comment.

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

Cl **45** *SC* **45.2.1.25** *P* **94** *L* **19** # **607**
Law, David 3Com

Comment Type **T** *Comment Status* **D**
Is this register actually the "10P/2B Electrical Length Register" ? (Like 1.48) If so, change the name here to the full name and update table 45-2 as well.

Comment from Ed Turner.

SuggestedRemedy

Proposed Response *Response Status* **W**
PROPOSED REJECT.

2B does not support electrical length.

Cl **45** *SC* **45.2.1.26** *P* **94** *L* **40** # **494**
Schneiderheinze, Burkart Infineon Technologies

Comment Type **E** *Comment Status* **D**
2B does not support electrical length (as indicated in 45.2.1.25)

SuggestedRemedy
remove 2B in heading and following paragraph

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

Cl **45** *SC* **45.2.1.27** *P* **95** *L* **1** # **86**
Law, David 3Com

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

The word "may" is a reserved word (See IEEE-SA Style Manual).

13. Word usage
==========

13.1 Shall, should, may, and can

<snip>

The word may is used to indicate a course of action permissible within the limits of the standard (may equals is permitted).

[Comment provided by Edward Turner]

SuggestedRemedy

Change "... may be ..." to "... are ...". Also line 21.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **45.2.1.28** *P* **95** *L* **22** # **115**
Law, David 3Com

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

Is this register for the -O PHY only? It seems to be. [Comment provided by Edward Turner]

SuggestedRemedy

If this register is for the -O PHY only, then add text to say 'This register is only for the '-O' port sub types' (as in other register descriptions).

Also possibly needed for: 45.2.1.29, 45.2.1.30, 45.2.1.31, 45.2.1.32, 45.2.1.36, 45.2.1.37, 45.2.1.38.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

All except .37 and .38

Cl **45** *SC* **45.2.1.3** *P* **73** *L* **40** # **99330**
Grow, Robert Intel

Comment Type **TR** *Comment Status* **A** *o D3.0 #548*

This paragraph in its current form is likely to generate interpretations requests. The section is about two registers yet it uses the phrase "this register", etc. If these registers are part of the Link Partner MMD, it can only have one value as well as bit definition and the paragraph is not needed, it can simply be referenced. If the Link Partner MMD can have a different value (e.g., the link partner's PMD/PMD device identifier), then it isn't the same registers but two different registers that have the same format.

SuggestedRemedy

Delete the added paragraph, and correct by adding a description of the registers in 45.7. Reference 1.2, 1.3 definitions for format rather than replicating.

Proposed Response *Response Status* **U**

ACCEPT IN PRINCIPLE.

Change text to read "these registers"

Change text
"this register is a member of the Link Partner PMA/PMD MMD."

to read

"Therefore, the Link Partner PMA/PMD MMD also contains PMA/PMD device identifier registers with the same format described here."

Cl **45** *SC* **45.2.1.3.6** *P* **100** *L* **32** # **12**
Law, David 3Com

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

There is only a subsection definition for the bit "Refresh status".

[Comment provided by Edward Turner]

SuggestedRemedy

Add subsections with definition text for all the other bits in the register.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **45.2.1.30** *P* **96** *L* **19** # **8**
Law, David 3Com

Comment Type **T** *Comment Status* **D**
There is no subclause (i.e. 45.2.1.30.1) to define the behaviour of bit 1.53.0.

[Comment provided by Edward Turner]

SuggestedRemedy
Add a subsection with a description of the behaviour of this bit.

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

Do not add subsection, instead elaborate in the 45.2.1.30

Cl **45** *SC* **45.2.1.32** *P* **97** *L* **1** # **9**
Law, David 3Com

Comment Type **T** *Comment Status* **D**
There is no subsection to define the behaviour of bit 1.56.0.

[Comment provided by Edward Turner]

SuggestedRemedy
Add a subsection with a description of the behaviour of this bit.

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

Do not add subsection, instead elaborate in the 45.2.1.32

Cl **45** *SC* **45.2.1.32** *P* **97** *L* **4** # **617**
Law, David 3Com

Comment Type **E** *Comment Status* **D**
Change "..for 10P.." to ".. for the 10P.."

Comment from Ed Turner.

SuggestedRemedy

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

Cl **45** *SC* **45.2.1.36** *P* **99** *L* **33** # **87**
Law, David 3Com

Comment Type **E** *Comment Status* **D**
The abbreviation "who's" is for "who is" and is incorrect in this instance.

[Comment provided by Edward Turner]

SuggestedRemedy
Replace with "whose" meaning "belonging to".

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

Cl **45** *SC* **45.2.1.36.1** *P* **100** *L* **32/33** # **608**
Law, David 3Com

Comment Type **T** *Comment Status* **D**
The bit "Refresh tone table" does not exist in register 1.64 Is it the "Refresh tone status" bit ? If so, change the text here.

Comment from Ed Turner.

SuggestedRemedy

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

Change to "tone status bit"

Cl **45** *SC* **45.2.1.38** *P* **101** *L* **47** # **286**
Dawe, Piers Agilent

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

SuggestedRemedy
Change to:
PMA (see 62.2.4.3).

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

Cl **45** *SC* **45.2.1.4** *P* **103** *L* **23** # **555**
Schneider, Kevin Adtran

Comment Type **TR** *Comment Status* **D**
SHDSL.bis specifies up to 8 data ranges while this register restrict it to only 4.

SuggestedRemedy
Change from 4 to 8 data ranges and update the registers to reflect 8 range.

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

Cl **45** *SC* **45.2.1.4** *P* **103** *L* **23** # **389**
kimpe, marc Adtran

Comment Type **TR** *Comment Status* **D**
SHDSL.bis specifies up to 8 data ranges while this register restrict it to only 4.

SuggestedRemedy
Change from 4 to 8 data ranges and update the registers to reflect 8 range.

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

See 555

Cl **45** *SC* **45.2.1.40** *P* **103** *L* **19** # **619**
Law, David 3Com

Comment Type **E** *Comment Status* **D**
Change "..set.." to "..sets.."

Comment from Ed Turner.

SuggestedRemedy

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

Cl **45** *SC* **45.2.1.40** *P* **103** *L* **21** # **2**
Law, David 3Com

Comment Type **T** *Comment Status* **D**
Use of the word "peer". Change to "link partner" ?
Check chapter for other occurrences and change.

[Comment provided by Edward Turner]

SuggestedRemedy
Change all occurrences of "peer" to "link partner".

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

Cl **45** *SC* **45.2.1.40** *P* **103** *L* **25** # **495**
Schneiderheinze, Burkart Infineon Technologies

Comment Type **TR** *Comment Status* **D**
If at least one data rate range is specified with different min and max data rates, the peer PMA/PMDs perform line probing'. Not clear on which data rates line probing should take place, what the PMMS probe duration should be. Additionally each SHDSL PHY requests prodict specific probes from the other side

SuggestedRemedy
remove sentence and add PMMS bit in i.e. 2B general parameter register. The description of the bit shall mention when enabled that the SHDSL PHY selects data rates and probe duration based on the ranges defined in the 2B PMD parameters register.

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

Cl **45** *SC* **45.2.1.40** *P* **103** *L* **26** # **620**
Law, David 3Com

Comment Type **E** *Comment Status* **D**
Change "..PMMS, link.." to "..PMMS, the link.."

Comment from Ed Turner.

SuggestedRemedy

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

Cl **45** *SC* **45.2.1.40** *P* **103** *L* **29** # **287**
Dawe, Piers Agilent

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

Please don't introduce more nerdy notation for machines into this standard! The main text is to be written in human language.

SuggestedRemedy

Replace == with 'is' or 'equals'.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Use "equals"

Cl **45** *SC* **45.2.1.40** *P* **103** *L* **29** # **621**
Law, David 3Com

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

Too many "=" symbols (C notation?). Change "==" to "=" in two places here and anywhere else it appears in C45.

Comment from Ed Turner.

SuggestedRemedy

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

see 287

Cl **45** *SC* **45.2.1.40** *P* **103** *L* **30** # **622**
Law, David 3Com

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

Change "..and link.." to "..and the link.."

Comment from Ed Turner.

SuggestedRemedy

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **45.2.1.40** *P* **104** *L* **11** # **288**
Dawe, Piers Agilent

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

Consistency.

SuggestedRemedy

Replace all instances of 'kbps' with 'kb/s'

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **45.2.1.40** *P* **104** *L* **23** # **497**
Schneiderheinze, Burkart Infineon Technologies

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

Power already defined by Annex and data rate, additional specification not necessary

SuggestedRemedy

remove power fields in 2B PMD register, align additionally all fields to 8 bit boundary

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Synchronize with comment #555
Residual register numbers will be marked as reserved.

Cl **45** *SC* **45.2.1.40** *P* **104** *L* **25** # **496**
Schneiderheinze, Burkart Infineon Technologies

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

not clear what automatic means

SuggestedRemedy

add description that automatic means the selection of the constellation is up to the PHY

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **45.2.1.40** *P* **104** *L* **8** # **498**
Schneiderheinze, Burkart Infineon Technologies

Comment Type **T** *Comment Status* **D**
the -R device needs also write access to 2B PMD register in order to limit ranges to its capabilites

SuggestedRemedy
allow the -R device also read access to this register

Proposed Response *Response Status* **W**
PROPOSED REJECT.

The mode is always set by the -O. All compliant 2BASE-TL PHYs must support all modes.

Cl **45** *SC* **45.2.1.40** *P* **105** *L* **40** # **499**
Schneiderheinze, Burkart Infineon Technologies

Comment Type **T** *Comment Status* **D**
not clear where the current data rate should be put in

SuggestedRemedy
define a new register (16 bit) which contains the negotiated data rate (8 bit) and the constellation (8 bit)

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

Current data rate is found in 1.31.15:5.

Add a register for negotiated constellation.

Cl **45** *SC* **45.2.1.42** *P* **106** *L* **16** # **291**
Dawe, Piers Agilent

Comment Type **E** *Comment Status* **D**
Never decrement? only in the wrong place.

SuggestedRemedy
Change 'its value will only increment when refreshed.' to 'its value will increment only when refreshed.' Also in 45.2.1.46, 45.2.1.48 and other places.

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

Should actually be:

'its value will only change when refreshed'

Cl **45** *SC* **45.2.1.43** *P* **106** *L* **31** # **292**
Dawe, Piers Agilent

Comment Type **E** *Comment Status* **D**
Font size, .

SuggestedRemedy
Also in 45.2.1.45 and other places.

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

Cl **45** *SC* **45.2.1.43** *P* **106** *L* **39** # **500**
Schneiderheinze, Burkart Infineon Technologies

Comment Type **T** *Comment Status* **D**
non roll over behaviour is not described

SuggestedRemedy
remove NR

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

Cl **45** *SC* **45.2.1.49** *P* **108** *L* **7** # **3**
Law, David 3Com

Comment Type **T** *Comment Status* **D**
What has been unavailable? Add a sentence to clarify.

[Comment provided by Edward Turner]

SuggestedRemedy
See comment.

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

Cl **45** *SC* **45.2.1.49** *P* **108** *L* **7** # **501**
Schneiderheinze, Burkart Infineon Technologies

Comment Type **E** *Comment Status* **D**
counter is 8 bit wide

SuggestedRemedy
8.bit counter

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

Cl **45** *SC* **45.2.3.** *P* **112** *L* **7** # **434**
Schneiderheinze, Burkart Infineon Technologies

Comment Type **T** *Comment Status* **D**
Register 3.72 appears twice

SuggestedRemedy
change PAF lost end from 72 to 73, change start of reserved registers accordingly

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

Cl **45** *SC* **45.2.3.17** *P* **114** *L* **5** # **294**
Dawe, Piers Agilent

Comment Type **T** *Comment Status* **D**
This sentence is incorrect: 'The 10P/2B capability register controls general functions of the PHY.'. Because that's what a control register is for. A capability register reports capability, doesn't control.

SuggestedRemedy
Change 'controls' to 'reports' or similar.

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

'The 10P/2B capablity register reports which functions are supported by the PCS.'

Cl **45** *SC* **45.2.3.17.2** *P* **114** *L* **33** # **611**
Law, David 3Com

Comment Type **T** *Comment Status* **D**
Change "..attempted.." to "..completed.."

Comment from Ed Turner.

SuggestedRemedy

Proposed Response *Response Status* **W**
PROPOSED REJECT.

Attempted is correct because if the remote is not present or does not support the feature the attempt will fail and the bit will be marked appropriately

Cl **45** *SC* **45.2.3.18** *P* **114** *L* **48** # **651**
Dawe, Piers Agilent

Comment Type **E** *Comment Status* **D**
simultaneously. (default)

SuggestedRemedy
remove the .

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

Cl **45** *SC* **45.2.3.18** *P* **114** *L* **54** # **435**
Schneiderheinze, Burkart Infineon Technologies

Comment Type **E** *Comment Status* **D**
typo: R/O instead of RO

SuggestedRemedy
change R/O to RO

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

Cl **45** *SC* **45.2.3.18** *P* **115** *L* **22** # **503**
Schneiderheinze, Burkart Infineon Technologies

Comment Type **T** *Comment Status* **D**
term 'link established' is just local, how do I set the PAF enable side on the -R device?

SuggestedRemedy
currently no mechanism defined for setting the PAF enable of the -R device, set this bit as soon as I start programming PME aggregation, data transfer will be started as soon as TC_synchronized become true

Proposed Response *Response Status* **W**
PROPOSED REJECT.

The use of the PAF, if supported by the -R, is always determined by the -O

Cl **45** *SC* **45.2.3.18.1** *P* **115** *L* **6** # **295**

Dawe, Piers — Agilent

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

Are bits 3.61.15 and 3.61.14 control or capability bits? The description is like capability, but R/W and placement in a control register imply control.

SuggestedRemedy

If they are control bits, add the corresponding capability bits to Table 45-42a.

Proposed Response *Response Status* **W**

PROPOSED REJECT.

These are control bits that tell the PHY how the MAC (RS, actually) will behave. 45.2.3.18.1 and 45.2.3.18.2 mention this.

Cl **45** *SC* **45.2.3.19** *P* **115** *L* **28** # **504**

Schneiderheinze, Burkart — Infineon Technologies

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

register is a PCS register therefore not the PME is queried but the PCS

SuggestedRemedy

replace queried PME with PME connected/attached to the queried PCS

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **45.2.3.19** *P* **115** *L* **31** # **43**

Law, David — 3Com

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

No PICS entry for the "shall".

[Comment provided by Edward Turner]

SuggestedRemedy

Add a PICS entry for the shall statement.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **45.2.3.19** *P* **115** *L* **33** # **116**

Law, David — 3Com

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

Too many eses in 'theses'. [Comment provided by Edward Turner]

SuggestedRemedy

See comment.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **45.2.3.19** *P* **115** *L* **38** # **76**

Law, David — 3Com

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

The word 'may' is a reserved word and probably not what is intended here.

From the IEEE-SA Style manual:

13. Word usage
==========

13.1 Shall, should, may, and can

<snip>

The word may is used to indicate a course of action permissible within the limits of the standard (may equals is permitted).

[Comment provided by Edward Turner]

SuggestedRemedy

Is this really a permitted option - if not the text may need to be reworded.

Proposed Response *Response Status* **W**

PROPOSED REJECT.

The point is really that it doesn't matter what happens to these registers if the -R doesn't support PME. The 'may' is only useful? information for the implementer.

Cl **45** *SC* **45.2.3.2.2.** *P* **113** *L* **26** # **502**
Schneiderheinze, Burkart Infineon Technologies

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

not clear whether in an application with i.e. 4 PMA/PMD all TCsynchronized signals have to be active or at minimum 1 is sufficient

SuggestedRemedy

add a note, that in case of more TCs at least 1 TC sublayer is synchronized for setting this bit to one

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **45.2.3.20** *P* **116** *L* **28** # **505**
Schneiderheinze, Burkart Infineon Technologies

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

shouldn't MMD reset 'turn the PAF off'?? If yes, after reset this register should be '0'

SuggestedRemedy

reset value of '0', consider PAF enable bit

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **45.2.3.21** *P* **116** *L* **54** # **436**
Schneiderheinze, Burkart Infineon Technologies

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

PAF RX error counter: should currently be present (and used, I suppose) even if PAF is not implemented. This is a contradiction to page 366, line 31 (there is defined that when PAF is not available or not enabled no PAF error detecting rules are applied).

SuggestedRemedy

harmonize

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Mention in 45.2.3.21 through 45.2.3.28 that these registers are inactive when PAF is unsupported or disabled. They retain their previous values if PAF is disabled.

Cl **45** *SC* **45.2.3.26** *P* **118** *L* **42** # **437**
Schneiderheinze, Burkart Infineon Technologies

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

PAF lost fragment register should currently not be incremented when coding violation counter was incremented for a fragment. This is only reasonable if exactly one fragment is discarded because of a coding violation; but PAF lost fragment has also only to be set once if more fragments are missing (possibly for different reasons like TC-CRC-error or loss of sync in one of the TCs). So it makes no sense to handle this very special case.

SuggestedRemedy

Remove sentence 'If the coding violation counter register (see 45.2.3.17) is incremented for a fragment, this register is not incremented for the same fragment'

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **45.2.3.26** *P* **118** *L* **42** # **77**
Law, David 3Com

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

Can´t find the register in the cross reference (45.2.3.17). Broken reference? or incorrect register?

[Comment provided by Edward Turner]

SuggestedRemedy

See comment.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Point to TC encap error register in MMD #6

Cl **45** *SC* **45.2.6** *P* **112** *L* **13** # **506**
Schneiderheinze, Burkart Infineon Technologies

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

TC control register missing (for i.e. reset which is used in TC synchronization state machines - see 61.3.3.5.1)

SuggestedRemedy

add TC control register, with at least the reset bit defined

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

To be included as part of the TC sublayer control register in MMD #6

Cl **45** *SC* **45.2.6.10** *P* **126** *L* **22** # **443**
Schneiderheinze, Burkart Infineon Technologies

Comment Type **E** *Comment Status* **D**
wrong cross reference

SuggestedRemedy
fix it

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

Cl **45** *SC* **45.2.6.3** *P* **122** *L* **10** # **117**
Law, David 3Com

Comment Type **E** *Comment Status* **D**
While 'please' is polite, its not IEEE style. [Comment provided by Edward Turner]

SuggestedRemedy
Delete 'please'.

Also on page 123, line 54.

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

pardon me.

Cl **45** *SC* **45.2.6.3.1** *P* **122** *L* **43** # **624**
Law, David 3Com

Comment Type **E** *Comment Status* **D**
Add an "s" to the end of "return"

Comment from Ed Turner.

SuggestedRemedy

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

Cl **45** *SC* **45.2.6.3.1** *P* **123** *L* **1** # **79**
Law, David 3Com

Comment Type **T** *Comment Status* **D**
'1.32.13' is incorrect. Change to '6.17.0'

[Comment provided by Edward Turner]

SuggestedRemedy
See comment.

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

Cl **45** *SC* **45.2.6.3.1.** *P* **123** *L* **1** # **439**
Schneiderheinze, Burkart Infineon Technologies

Comment Type **E** *Comment Status* **D**
wrong cross reference

SuggestedRemedy
change 1.32.13 to 6.17.0

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

Cl **45** *SC* **45.2.6.4.** *P* **123** *L* **7** # **440**
Schneiderheinze, Burkart Infineon Technologies

Comment Type **T** *Comment Status* **D**
10P/2B aggregation discovery status register' is only defined for -O-Ports. This sentence is missing

SuggestedRemedy
add this sentence

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

Cl **45** *SC* **45.2.6.4.1** *P* **123** *L* **22** # **438**

Schneiderheinze, Burkart — Infineon Technologies

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

Result of 'Link Partner Aggregation' is merged into discovery status register. These are seperate functions, justifying an own '10P/2B Link Partner PME aggregate status' register.

SuggestedRemedy

Create '10P/2B Link Partner PME aggregate status' register. Adapt Table 45-59a accordingly.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Change name of register to "Aggregation and discovery operation status register"

Cl **45** *SC* **45.2.6.4.1** *P* **123** *L* **28** # **80**

Law, David — 3Com

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

'..shall read as zero..' would be better as '..shall remain set to zero..' Also on line 41.

[Comment provided by Edward Turner]

SuggestedRemedy

See comment.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **45.2.6.5** *P* **123** *L* **54** # **507**

Schneiderheinze, Burkart — Infineon Technologies

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

Not clear whether this register contains after g.994.1 sessions the value of remote_discovery_registers received from the -R device

SuggestedRemedy

add a note that these register store the value of remote_discovery_registers received from the -R device

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **45.2.6.6.1** *P* **124** *L* **44** # **81**

Law, David — 3Com

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

'1.22.1:0' is incorrect. Change to '1.21.1:0'.

[Comment provided by Edward Turner]

SuggestedRemedy

See comment.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **45.2.6.6.1** *P* **124** *L* **47** # **4**

Law, David — 3Com

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

The word "must" is used here.

From the IEEE-SA Style manual:

13. Word usage
==========

13.1 Shall, should, may, and can

The word shall is used to indicate mandatory requirements strictly to be followed in order to conform to the standard and from which no deviation is permitted (shall equals is required to). The use of the word must is deprecated and shall not be used when stating mandatory requirements; must is used only to describe unavoidable situations. The use of the word will is deprecated and shall not be used when stating mandatory requirements; will is only used in statements of fact.

[Comment provided by Edward Turner]

SuggestedRemedy

Change "must" to "shall".

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Change to

"This operation makes use of G.994.1 handshaking messages, therefore only valid when the link status is down. . ."

Cl **45** *SC* **45.2.6.6.1** *P* **125** *L* **2** # **118**
Law, David 3Com

Comment Type **E** *Comment Status* **D**
Add 's' to end of 'return'. [Comment provided by Edward Turner]

SuggestedRemedy
See comment.

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

Cl **45** *SC* **45.2.6.7.** *P* **125** *L* **33** # **441**
Schneiderheinze, Burkart Infineon Technologies

Comment Type **E** *Comment Status* **D**
wrong register name in table

SuggestedRemedy
change to link partner PME aggregate data

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

Cl **45** *SC* **45.2.6.8** *P* **125** *L* **43** # **119**
Law, David 3Com

Comment Type **E** *Comment Status* **D**
Better than '..as in 61.2.3' is '..defined in 61.2.3'.

Also on page 126, line 4. [Comment provided by Edward Turner]

SuggestedRemedy
See comment.

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

Cl **45** *SC* **45.2.6.9** *P* **126** *L* **3** # **625**
Law, David 3Com

Comment Type **E** *Comment Status* **D**
Change "..number 64/64 octet .." to "..number of 64/64 octet.."

Comment from Ed Turner.

SuggestedRemedy

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

Actually, change to "number of 64/65 octet"
^

Cl **45** *SC* **45.2.6.9.** *P* **126** *L* **7** # **442**
Schneiderheinze, Burkart Infineon Technologies

Comment Type **T** *Comment Status* **D**
TC encapsulation error counter register: add a hint that this register is incremented for each TC_coding_error signal defind in clause 61.

SuggestedRemedy
add a hint that this register is incremented for each TC_coding_error signal defind in clause 61.

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

Cl **45** *SC* **45.2.7** *P* **127** *L* **22** # **296**
Dawe, Piers Agilent

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

SuggestedRemedy
put 'Buffer' into lower case - several occurrences.

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

Cl **45** *SC* **45.2.7.2.1** *P* **127** *L* **52** # **126**
Brown, Benjamin Independent

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

According to the second paragraph in section 11 of the IEEE Standards Style Manual, Clauses and subclauses shall be divided into further subclauses only when there is to be more than one subclause. In other words, clauses and subclauses should not be broken down into further subclauses if another subclause of the same level does not exist.

SuggestedRemedy

This subclause cannot stand alone. Either create a peer subclause for the reserved bits or make this description part of 45.2.7.2.

Doing a quick check through the clause shows there are lots of places like this.

45.2.1.25.1
45.2.1.27.1
45.2.1.28.1
45.2.1.36.1
45.2.6.3.1
45.2.6.6.1
45.2.7.2.1
45.2.7.3.1

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Succinctly subsume the fourth level subclauses into the superior subclause.

Cl **45** *SC* **45.2.7.3.** *P* **128** *L* **12** # **444**
Schneiderheinze, Burkart Infineon Technologies

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

wrong description for FEC enable

SuggestedRemedy

change to 1 = enable, 0 = disable

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **45.2.7.3.1** *P* **128** *L* **21** # **652**
Dawe, Piers Agilent

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

an PHY

SuggestedRemedy

a PHY

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **45.5.5.15** *P* **136** *L* **33** # **60**
Law, David 3Com

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

Add "or reset" to the "feature" column of TC10.

[Comment provided by Edward Turner]

SuggestedRemedy

See comment.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **45.5.5.16** *P* **137** *L* **13** # **61**
Law, David 3Com

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

Add "or reset" to the "feature" column of TC18.

[Comment provided by Edward Turner]

SuggestedRemedy

See comment.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **45.5.5.16** *P* **137** *L* **18** # **62**
Law, David 3Com

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

Add "or reset" to the "feature" column of TC20.

[Comment provided by Edward Turner]

SuggestedRemedy

See comment.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **45.5.5.16** *P* **137** *L* **23** # **63**
Law, David 3Com

Comment Type **T** *Comment Status* **D**
Add "or reset" to the "feature" column of TC22.

[Comment provided by Edward Turner]

SuggestedRemedy
See comment.

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

Cl **45** *SC* **45.5.5.17** *P* **137** *L* **30** # **299**
Dawe, Piers Agilent

Comment Type **E** *Comment Status* **D**
45.5.5.17 or 45.5.5.16?

SuggestedRemedy
45.5.5.16?

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

s/b 16

Cl **45** *SC* **45.5.5.17** *P* **138** *L* **14** # **297**
Dawe, Piers Agilent

Comment Type **T** *Comment Status* **D**
There seem to be several PICS entries marked as CTT:M which are FEC-specific. To save rework in a future project:

SuggestedRemedy
Consider creating a major option for FEC, status CTT:M, and change items CT5-11 to FEC:M.

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

Cl **45** *SC* **45.5.5.3** *P* **131** *L* **8** # **44**
Law, David 3Com

Comment Type **T** *Comment Status* **D**
There is no "shall" statement for this PICS entry.

[Comment provided by Edward Turner]

SuggestedRemedy
Delete this PICS entry.

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

Cl **45** *SC* **45.5.5.3** *P* **132** *L* **10** # **45**
Law, David 3Com

Comment Type **T** *Comment Status* **D**
Add "or reset" to MM17 "feature" column.

[Comment provided by Edward Turner]

SuggestedRemedy
See comment.

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

Cl **45** *SC* **45.5.5.3** *P* **132** *L* **13** # **46**
Law, David 3Com

Comment Type **T** *Comment Status* **D**
Add "or reset" to MM18 "feature" column.

[Comment provided by Edward Turner]

SuggestedRemedy
See comment.

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

Cl **45** *SC* **45.5.5.3** *P* **132** *L* **16** # **47**
Law, David 3Com

Comment Type **T** *Comment Status* **D**
Change "45.2.1.25" to "45.2.1.25.1"

[Comment provided by Edward Turner]

SuggestedRemedy
See comment.

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

Cl **45** *SC* **45.5.5.3** *P* **132** *L* **22** # **48**
Law, David 3Com

Comment Type **T** *Comment Status* **D**
Add "or reset" to MM21 "feature" column.

[Comment provided by Edward Turner]

SuggestedRemedy
See comment.

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

Cl **45** *SC* **45.5.5.3** *P* **132** *L* **25** # **49**
Law, David 3Com

Comment Type **T** *Comment Status* **D**
Add "or reset" to MM22 "feature" column.

[Comment provided by Edward Turner]

SuggestedRemedy
See comment.

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

Cl **45** *SC* **45.5.5.3** *P* **132** *L* **27** # **50**
Law, David 3Com

Comment Type **T** *Comment Status* **D**
Add "or reset" to MM23 "feature" column.

[Comment provided by Edward Turner]

SuggestedRemedy
See comment.

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

Cl **45** *SC* **45.5.5.3** *P* **132** *L* **29** # **51**
Law, David 3Com

Comment Type **T** *Comment Status* **D**
Add "or reset" to MM24 "feature" column.

[Comment provided by Edward Turner]

SuggestedRemedy
See comment.

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

Cl **45** *SC* **45.5.5.3** *P* **132** *L* **32** # **52**
Law, David 3Com

Comment Type **T** *Comment Status* **D**
Add "or reset" to MM25 "feature" column.

[Comment provided by Edward Turner]

SuggestedRemedy
See comment.

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

Cl **45** *SC* **45.5.5.6** *P* **133** *L* **30** # **53**
Law, David 3Com

Comment Type **T** *Comment Status* **D**
Can't find "shall" statements for RM53, RM54, or RM55. Can't relate these PICS entries to the register bits in section 45.2.3.17.

[Comment provided by Edward Turner]

SuggestedRemedy
Should items RM53, RM54, and RM55 be deleted ?

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

delete them

Cl **45** *SC* **45.5.5.6** *P* **133** *L* **40** # **653**
Dawe, Piers Agilent

Comment Type **E** *Comment Status* **D**
0to

SuggestedRemedy
0 to

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

Cl **45** *SC* **45.5.5.6** *P* **133** *L* **40** # **298**
Dawe, Piers Agilent

Comment Type **E** *Comment Status* **D**
0to

SuggestedRemedy
0 to

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

Cl **45** *SC* **45.5.5.6** *P* **133** *L* **43** # **55**
Law, David 3Com

Comment Type **T** *Comment Status* **D**
There's only one "shall" statement for RM57 and RM58.

[Comment provided by Edward Turner]

SuggestedRemedy
Should item RM58 be deleted ?

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

Delete it

Cl **45** *SC* **45.5.5.6** *P* **133** *L* **43** # **54**
Law, David 3Com

Comment Type **T** *Comment Status* **D**
Add "or initializing" to the "features" column.

[Comment provided by Edward Turner]

SuggestedRemedy
See comment.

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

Cl **45** *SC* **45.5.5.6** *P* **133** *L* **50** # **57**
Law, David 3Com

Comment Type **T** *Comment Status* **D**
There's no "shall" statement for RM59.

[Comment provided by Edward Turner]

SuggestedRemedy
Should item RM59 be deleted ?

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

Delete it

Cl **45** *SC* **45.5.5.6** *P* **134** *L* **3** # **58**
Law, David 3Com

Comment Type **T** *Comment Status* **D**
RM61 and RM62 duplicate the same conditions.

[Comment provided by Edward Turner]

SuggestedRemedy
Should item RM62 be deleted ?

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

delete it

Cl **45** *SC* **45.5.5.6** *P* **135** *L* **29** # **59**
Law, David 3Com

Comment Type **T** *Comment Status* **D**
No "shall" statements for RM81 or RM82.

[Comment provided by Edward Turner]

SuggestedRemedy
Should items RM81 and RM82 be deleted ?

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

delete them

Cl **45** *SC* **45.5.5.8** *P* **133** *L* **27** # **56**
Law, David 3Com

Comment Type **T** *Comment Status* **D**
Can't find a "shall" statement for RM52.

[Comment provided by Edward Turner]

SuggestedRemedy
Should item RM52 be deleted ?

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

Delete it

Cl **45** *SC* **45-106** *P* **88** *L* **18** # **110**
Law, David 3Com

Comment Type **E** *Comment Status* **D**
For bit 1.31.4, '0' behaviour is placed on the line above '1' behaviour. The convention for Clause 45 is for the '1' behaviour to be described on the line above '0' behaviour.
[Comment provided by Edward Turner]

SuggestedRemedy
Swap the two lines over.

Also for bits: 1.31.3, 1.32.15, 1.32.13, 1.33.14, 1.33.12, 1.50.8, 1.59.15, 1.59.14, 1.99.15, 1.99.14, 1.99.13, 1.99.12, 1.60.12, 1.60.11, 1.61.0, 6.17.1, 1.17.0 and any others that I missed.

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

Cl **45** *SC* **45-10y** *P* **103** *L* **14** # **95**
Law, David 3Com

Comment Type **E** *Comment Status* **D**
Add "RO" definition to note.

[Comment provided by Edward Turner]

SuggestedRemedy
See comment.

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

Cl **45** *SC* **45-2** *P* **83** *L* **35** # **67**
Law, David 3Com

Comment Type **T** *Comment Status* **D**
It may be useful to indicate in this table which registers are for the '-O' PHY only. If so, add '('-O' PHY only)' to 1.32, 1.33, 1.34/35, 1.38, 1.40, 1.42, 1.48, 1.49, 1.57, 1.58, 1.59-63, 1.64, 1.90, 1.92, 1.94, 1.96, 1.98, 1.100

And (I think) 1.50, 1.51/52, 1.53, 1.54/55, 1.56, 1.65/67, 1.68, 1.69

[Comment provided by Edward Turner]

SuggestedRemedy
See comment.

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

Cl **45** *SC* **45-3** *P* **85** *L* **22** # **68**
Law, David 3Com

Comment Type **T** *Comment Status* **D**
10PASS-TS/2BASE-TL has been added to this table.

[Comment provided by Edward Turner]

SuggestedRemedy
Need to update the associated subsection text for bits 1.0.5:2 to include a description of the new setting.

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

Cl **45** *SC* **Table 45-102** *P* **104** *L* **22** # **75**
Law, David 3Com

Comment Type **T** *Comment Status* **D**
The notation ':x" is not used in Clause 45. Also line 42 and page 105, lines 13 and 33.

[Comment provided by Edward Turner]

SuggestedRemedy
Delete :x' or replace with '[6:2]'

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

Delete x:

Make similar changes to all tables that use this or similar notation.

Cl **45** *SC* **Table 45-10a** *P* **78** *L* **21** # **91**
Law, David 3Com

Comment Type **E** *Comment Status* **D**
Don't need "RO" or "SC" definitions in note.

[Comment provided by Edward Turner]

SuggestedRemedy
See comment.

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

Cl **45** *SC* **Table 45-10ab** *P* **106** *L* **40** # **97**
Law, David 3Com

Comment Type **E** *Comment Status* **D**
Add "NR" definition to note.

[Comment provided by Edward Turner]

SuggestedRemedy
See comment.

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

See #500

Cl **45** *SC* **Table 45-10af** *P* **109** *L* **19** # **98**
Law, David 3Com

Comment Type **E** *Comment Status* **D**
Add "R/W" definition to note.

[Comment provided by Edward Turner]

SuggestedRemedy
See comment.

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

Cl **45** *SC* **Table 45-10af** *P* **109** *L* **4** # **17**
Law, David 3Com

Comment Type **T** *Comment Status* **D**
There are no subsections to describe the behaviour of these bits.

[Comment provided by Edward Turner]

SuggestedRemedy
Add subsections and descriptive text.

Proposed Response *Response Status* **W**
PROPOSED REJECT.

The table and 45.2.1.51 already provide sufficient description of the bit behavior.

Cl **45** *SC* **Table 45-10b** *P* **88** *L* **15** # **64**
Law, David 3Com

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

The notation ":=" is borrowed from "C" and I don't think is usual in 802.3
Replace with "=" or the text "is equal to".

Also scrub the rest of the chapter for this (Tables 45-10o, 45-10q, 45-10t, 45-10v, 45-10z).

SuggestedRemedy

See comment.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **Table 45-10c** *P* **89** *L* **16** # **82**
Law, David 3Com

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

I found this table quite confusing and it took some time to work out what it was trying to say.

[Comment provided by Edward Turner]

SuggestedRemedy

[1] Delete the third column ('-R').
[2] Rename the column called 'link partner register -O' to 'Register accessed in -O PHY'.
[3] Rename the column called 'local register counterpart -O' to 'Register mirrored from / to -R PHY'.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **Table 45-10d** *P* **90** *L* **13** # **92**
Law, David 3Com

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

Don't need "RO" in note. Add "R/W" definition to note.

[Comment provided by Edward Turner]

SuggestedRemedy

See comment.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **Table 45-10d** *P* **90** *L* **5** # **85**
Law, David 3Com

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

The "O" of "operation" should be capitalized. As should the "R" of "reserved" and the "V" of "value". Other tables are also missing capitalization of the first letters in line entries. Scrub the chapter to capitalize the first letter of each line of text in the 'boxes' of the tables.

[Comment provided by Edward Turner]

SuggestedRemedy

See comment.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **Table 45-10g** *P* **92** *L* **15** # **93**
Law, David 3Com

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

Add "R/W" definition to note.

[Comment provided by Edward Turner]

SuggestedRemedy

See comment.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **Table 45-10i** *P* **93** *L* **20** # **94**
Law, David 3Com

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

Add "RO" definition to note.

[Comment provided by Edward Turner]

SuggestedRemedy

See comment.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **Table 45-10t** *P* **98** *L* **1** # **10**
Law, David 3Com

Comment Type **T** *Comment Status* **D**
There are no subsections to describe the behaviour of these bits.

[Comment provided by Edward Turner]

SuggestedRemedy
Add subsections and descriptive text.

Proposed Response *Response Status* **W**
PROPOSED REJECT.

The description in the tables and 45.2.1.34 is sufficient

Cl **45** *SC* **Table 45-10t** *P* **98** *L* **14** # **103**
Law, David 3Com

Comment Type **E** *Comment Status* **D**
Delete ":" after "1.59.4:0".

[Comment provided by Edward Turner]

SuggestedRemedy
See comment.

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

Cl **45** *SC* **Table 45-10t** *P* **98** *L* **25** # **112**
Law, David 3Com

Comment Type **T** *Comment Status* **D**
Change "1.62.9" to "1.62.15:9". [Comment provided by Edward Turner]

SuggestedRemedy
See comment.

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

Cl **45** *SC* **Table 45-10t** *P* **98** *L* **29** # **102**
Law, David 3Com

Comment Type **T** *Comment Status* **D**
Change "1.63.9" to "1.63.15:9".

[Comment provided by Edward Turner]

SuggestedRemedy
See comment.

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

Cl **45** *SC* **Table 45-10u** *P* **99** *L* **5** # **11**
Law, David 3Com

Comment Type **T** *Comment Status* **D**
There are no subsections to describe the behaviour of these bits.

[Comment provided by Edward Turner]

SuggestedRemedy
Add subsections and descriptive text.

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

Elaborate in 45.2.1.35.

Cl **45** *SC* **Table 45-10v** *P* **100** *L* **22** # **7**
Law, David 3Com

Comment Type **T** *Comment Status* **D**
I don't understand why the SNR margin is split over 2 registers in this way. Surely it would be better to have all the SNR margin bits in one register? (i.e. bits 15:7).

[Comment provided by Edward Turner]

SuggestedRemedy
See comment.

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

Move SNR margin to 6.67.9:0

Cl **45** *SC* **Table 45-10w** *P* **101** *L* **10** # **13**
Law, David 3Com

Comment Type **T** *Comment Status* **D**
There are no subsections to describe the behaviour of these bits.

[Comment provided by Edward Turner]

SuggestedRemedy
Add subsections and descriptive text

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

Cl **45** *SC* **Table 45-10w** *P* **101** *L* **12** # **104**
Law, David 3Com

Comment Type **E** *Comment Status* **D**
Change "-" to ":" in "1.68.15-9".

[Comment provided by Edward Turner]

SuggestedRemedy
See comment.

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

Cl **45** *SC* **Table 45-10w** *P* **101** *L* **21** # **88**
Law, David 3Com

Comment Type **E** *Comment Status* **D**
Incomplete sentence "..turned off end".

[Comment provided by Edward Turner]

SuggestedRemedy
Complete the sentence.

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

Sentence should read:

"PMA/PMD is reporting that it no longer has power supply input for proper operation"

Cl **45** *SC* **Table 45-10x** *P* **102** *L* **14** # **66**
Law, David 3Com

Comment Type **T** *Comment Status* **D**
The statement ".. the power switch was turned off.." seems very specific. What if the power supply just failed? Wouldn't that seem the same?

[Comment provided by Edward Turner]

SuggestedRemedy
Change to ".. power has been removed from the far end .."

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

Change to:

"Link partner PMA/PMD is reporting that it no longer has power supply input for proper operation"

Cl **45** *SC* **Table 45-10x** *P* **102** *L* **3** # **14**
Law, David 3Com

Comment Type **T** *Comment Status* **D**
There are no subsections to describe the behaviour of these bits.

[Comment provided by Edward Turner]

SuggestedRemedy
Add subsections and descriptive text.

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

Cl **45** *SC* **Table 45-10x** *P* **102** *L* **5** # **105**
Law, David 3Com

Comment Type **E** *Comment Status* **D**
Change "-" to ":" in "1.69.15-9".

[Comment provided by Edward Turner]

SuggestedRemedy
See comment.

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

Cl **45** *SC* **Table 45-10y** *P* **103** *L* **3** # **15**
Law, David 3Com

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

There are no subsections to describe the behaviour of these bits. Clarification is required of the three "Annexes" referred to here. Are these Annexes in the 802.3 document?

[Comment provided by Edward Turner]

SuggestedRemedy

Add subsections and descriptive text.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

These are actually g.SHDSL annexes. Provide the reference in the bit descriptions

Cl **45** *SC* **Table 45-10z** *P* **104** *L* **17** # **106**
Law, David 3Com

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

Change "1.82.15:13" to "1.82.15:14".

[Comment provided by Edward Turner]

SuggestedRemedy

See comment.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **Table 45-10z** *P* **104** *L* **37** # **107**
Law, David 3Com

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

Change "1.84.15:13" to "1.84.15:14".

[Comment provided by Edward Turner]

SuggestedRemedy

See comment.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **Table 45-10z** *P* **104** *L* **5** # **16**
Law, David 3Com

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

There are no subsections to describe the behaviour of these bits.

[Comment provided by Edward Turner]

SuggestedRemedy

Add subsections and descriptive text.

Proposed Response *Response Status* **W**

PROPOSED REJECT.

The behavior of these which is already described at a high level in 45.2.1.40. It is not clear what further description is necessary

Cl **45** *SC* **Table 45-10z** *P* **105** *L* **29** # **109**
Law, David 3Com

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

Change "1.86.15:13" to "1.86.15:14".

[Comment provided by Edward Turner]

SuggestedRemedy

See comment.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **Table 45-10z** *P* **105** *L* **40** # **96**
Law, David 3Com

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

Add "RO" definition to note.

[Comment provided by Edward Turner]

SuggestedRemedy

See comment.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **Table 45-10z** *P* **105** *L* **8** # **108**
Law, David 3Com

Comment Type **E** *Comment Status* **D**
Change "1.86.15:13" to "1.86.15:14".

[Comment provided by Edward Turner]

SuggestedRemedy
See comment.

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

Cl **45** *SC* **Table 45-3** *P* **85** *L* **32** # **90**
Law, David 3Com

Comment Type **E** *Comment Status* **D**
Don't need "RO" in note. Add "R/W" and "SC" definitions to note.

[Comment provided by Edward Turner]

SuggestedRemedy
See comment.

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

Cl **45** *SC* **Table 45-32** *P* **113** *L* **40** # **18**
Law, David 3Com

Comment Type **T** *Comment Status* **D**
An extra bit (3.4.1) has been added.

[Comment provided by Edward Turner]

SuggestedRemedy
Need to add the bit definition text in as a subsection as well just after the table.

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

Cl **45** *SC* **Table 45-42a** *P* **114** *L* **21** # **99**
Law, David 3Com

Comment Type **E** *Comment Status* **D**
Remove "R/W" definition from note.

[Comment provided by Edward Turner]

SuggestedRemedy
See comment.

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

Cl **45** *SC* **Table 45-42b** *P* **114** *L* **54** # **100**
Law, David 3Com

Comment Type **E** *Comment Status* **D**
Change "R/O" to "RO" in note.

[Comment provided by Edward Turner]

SuggestedRemedy
See comment.

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

Cl **45** *SC* **Table 45-5** *P* **86** *L* **19** # **69**
Law, David 3Com

Comment Type **T** *Comment Status* **D**
Need to add a subsection with text to describe the behaviour of this bit.

[Comment provided by Edward Turner]

SuggestedRemedy
See comment.

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

Add line for both bits, as in 802.3ae

Cl **45** *SC* **Table 45-5** *P* **86** *L* **7** # **89**
Law, David 3Com

Comment Type **T** *Comment Status* **D**
Change "1.4.15:13" to "1.4.15:3".

[Comment provided by Edward Turner]

SuggestedRemedy
See comment.

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

Cl **45** *SC* **Table 45-58** *P* **112** *L* **6** # **20**
Law, David 3Com

Comment Type **TR** *Comment Status* **D**
It appears two bits have be allocated the same address, 3.72. Change the second occurrence of 3.72 to be 3.73 and change the Reserved bits to be 3.74 through 3.32 767.

[Comment provided by Edward Turner]

SuggestedRemedy
Change 3.72 to 3.73, and change 3.73 to 3.74 on the next line.

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

Cl **45** *SC* **Table 45-59a** *P* **121** *L* **20** # **78**
Law, David 3Com

Comment Type **T** *Comment Status* **D**
It may be useful to indicate which registers are the '-O' PHY only in this table. If so, add '('-O' PHY only)' to 6.16, 6.17?, 6.18-20, 6.21, 6.22-23.

[Comment provided by Edward Turner]

SuggestedRemedy
See comment.

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

Cl **45** *SC* **Table 45-59c** *P* **123** *L* **19** # **101**
Law, David 3Com

Comment Type **E** *Comment Status* **D**
Add "R/W" definition to note.

[Comment provided by Edward Turner]

SuggestedRemedy
See comment.

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

Cl **45** *SC* **Table 45-59i** *P* **126** *L* **26** # **19**
Law, David 3Com

Comment Type **T** *Comment Status* **D**
There are no subsections to describe the behaviour of these bits.

[Comment provided by Edward Turner]

SuggestedRemedy
Add subsections and descriptive text.

Proposed Response *Response Status* **W**
PROPOSED REJECT.

The table and intro text already provide sufficient description.

Cl **45** *SC* **Tbl. 45-10** *P* **96** *L* **31** # **616**
Law, David 3Com

Comment Type **E** *Comment Status* **D**
Too many "=" symbols is confusing. Change "..length = 144" to "..length of 144"
Also on the next line and in table 45-10

Comment from Ed Turner.

SuggestedRemedy

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

Cl **45** *SC* **Tbl. 45-10a** *P* **87** *L* **12** # **605**
Law, David 3Com

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

The word "shall" appears twice in this table. We do not usually put "shalls" in tables, and in this case they are unneccessary since section 45.2.1.11.4 has the "shalls" for these bits. Replace them in the table with something else.

Comment from Ed Turner.

SuggestedRemedy

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Remove shall.

operate -> operation

Cl **45** *SC* **Tbl. 45-10a** *P* **87** *L* **5** # **612**
Law, David 3Com

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

Swap over the "0" and "1" lines so that the "1" line is above the "0" line.

Comment from Ed Turner.

SuggestedRemedy

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **Tbl. 45-10o** *P* **96** *L* **10** # **610**
Law, David 3Com

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

Change "..sets the required.." to "..sets the minimum required.."

Comment from Ed Turner.

SuggestedRemedy

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **Tbl. 45-10w** *P* **101** *L* # **618**
Law, David 3Com

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

Are there lines missing from the tables between the bits or is my printout dodgy? There should be a line drawn between each bit in all the tables.

Comment from Ed Turner.

SuggestedRemedy

Proposed Response *Response Status* **W**

PROPOSED REJECT.

dodgy printout

Cl **45** *SC* **Tbl. 45-10z** *P* **104** *L* **11** # **623**
Law, David 3Com

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

Add a space between "=" and "64n"

Comment from Ed Turner.

SuggestedRemedy

Also in 9 other places in this table.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **Tbl. 45-2** *P* **84** *L* **5** # **615**
Law, David 3Com

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

Section 45.2.1.26 calls this the "10P/2B link partner electrical length register"

Comment from Ed Turner.

SuggestedRemedy

Correct it here.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **Tbl. 45-59a** *P* **121** *L* **14** # **604**

Law, David 3Com

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

This new MMD (TC) does not have the ´standard´ control or status registers. These are needed for bits like reset and speed ability / setting. There´s also two bits (device present) that we have in the other MMDs that allow an STA to poll each MMD to see if it´s present. These bits must be added to the TC MMD.

Comment from Ed Turner.

SuggestedRemedy

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **56** *SC* **56** *P* **188** *L* **15** # **658**

Dawe, Piers Agilent

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

Space after period at end of line?

SuggestedRemedy

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Will remove the extra space

Cl **56** *SC* **56.1** *P* **158** *L* **17** # **99346**

Booth, Brad Intel

Comment Type **TR** *Comment Status* **A** *D3.0 #760*

Figures 56-1 and 56-2 should be showing the relationship of the EFM layers to the LAN model and the OSI reference model.

SuggestedRemedy

2BASE-TL and 10PASS-TS can be merged in 56-1.

In 56-2, remove one stack and remove brackets showing OLT and ONU(s). That information belongs in the P2MP clause. The name of the medium should just be "MEDIUM". The MEDIUM should be shown as a shared medium, jagged edge on both ends. Port types should be listed under the MEDIUM.

Proposed Response *Response Status* **U**

ACCEPT IN PRINCIPLE.

For the Cu stacks, we will merge the two into one stack.

The commenter is correct that the P2MP diagram appears in subsequent clauses. However,since this is a new means of operating on a shared medium it warrants its own topology in the introduction (as it is different from the point-to-point).

The jagged edges are correct as is since there are no additional OLTs to the left of the shown stack. The jagged edge to the right indicates that the medium could go on with additional ONUs (and OLT is mentioned as singular in contrast to ONUs).

Indication that the ONUs communicate with the OLT but not with each other will be indicated by way of arrows or curvature.

The stub on the left will be removed. The connecterization on the GMII will be removed.

Cl **56** *SC* **56.1** *P* **188** *L* **13** # **657**

Dawe, Piers Agilent

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

single mode

SuggestedRemedy

s/b single-mode

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **56** *SC* **56.1** *P* **188** *L* **13** # **656**
Dawe, Piers Agilent

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

kms

SuggestedRemedy

Use nonbreaking space between 10 and km; delete the s

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **56** *SC* **56.1** *P* **188** *L* **28** # **306**
Dawe, Piers Agilent

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

While there is only one type of MAC OAM sublayer and so on, the wide thing marked 'RECONCILIATION' is in fact two distinct things: clause 22 RS and clause 35 RS. Look at figure 22-1 or 35-1.

SuggestedRemedy

Show separate RSs following Figure 22-1 or 35-1. Label them '10/100 Mb/s RS', '100 Mb/s RS' and/or '1000 Mb/s RS' as appropriate. Add 'RS = RECONCILIATION SUBLAYER' to the abbreviations list at bottom of figure.

Proposed Response *Response Status* **W**

PROPOSED REJECT.

We discussed this at the last session. The RS may be different but need not be seperated out

Cl **56** *SC* **56.1** *P* **188** *L* **32** # **199**
Beck, Michael Alcatel Bell nv

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

In the copper stack, the TC sublayer is missing.

SuggestedRemedy

In Figure 56-1, add a TC sublayer between "Cu PCS" and "PMA".
In Table 56-2, replace column "Cu PCS" with "Cu PCS & TC".

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **56** *SC* **56.1** *P* **188** *L* **51** # **305**
Dawe, Piers Agilent

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

It isn't as simple as this, at least not in D3.1: 'MAC is configured in half duplex mode'. See 61.1.4.1.2 and 61.7.

SuggestedRemedy

Change 'is' to 'may be'.

Proposed Response *Response Status* **W**

PROPOSED REJECT.

Clause 56 does not describe the detailed procedure. As the commenter points out the procedure can be found in C61

Cl **56** *SC* **56.1.1** *P* **189** *L* **37** # **309**
Dawe, Piers Agilent

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

It is not reasonable to say that 100BASE-LX10 and 1000BAS-LX10 PMDs must use clause 66 PCS/PMAs. They are not just for the access market; such ports have been sold by multiple NEMs for years now. To change the rules now would cause confusion and possibly interoperability issues, damaging to both Ethernet access and mainstream Ethernet markets, because it is not likely that the real world will obey D3.1 rules (if it does, EFM would be the loser, being cut off from the economies of scale of mainstream Ethernet).
1000BASE-LX10 and 1000BASE-LX are interoperable, and work on MMF as well as SMF. It should be unnecessary for a DTE in a CO to need different PCS rules for different GBIC ports (with probably the SAME GBICs in them) depending whether they connect into the core network or the access network!

SuggestedRemedy

Change '66.1 and 66.2, respectively.'24, 36, 37 66.1 and/or 66.2'. See other related comments.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Will be discussed on Monday

Cl **56** *SC* **56.1.1** *P* **189** *L* **39** # **310**
Dawe, Piers Agilent

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

Missing spaces, broken quantity. Abbreviate 'meters'.

SuggestedRemedy

2 Mb/s 10 Mb/s 750<NonBreakingSpace>m

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **56** *SC* **56.1.2.2** *P* **190** *L* **17** # **358**
Dawe, Piers Agilent

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

In this RS subclause we need to briefly refer to changes to 10G RS.

SuggestedRemedy

Add sentence: 'An optional modification of the 10 Gb/s RS allows for remote fault signaling by OAM frames.'

Proposed Response *Response Status* **W**

PROPOSED REJECT.

This is mentioned in the relevant section 56.1.5

Cl **56** *SC* **56.1.2.2** *P* **190** *L* **17** # **308**
Dawe, Piers Agilent

Comment Type **TR** *Comment Status* **D** *Refer to copper*

Surprisingly, nowhere in the draft is there a statement of which RS the 2BASE-TL and 10PASS-TS PHYs connect to. Even if the editors believe that it's 'obviously' clause 22, that doesn't mean it's the case: one would not obviously expect low-speed PHYs to use the 10G MDIO clause 45, but they do. Or, there could be new PHY-specific RSs for these PHYs. Further, if it's clause 22, can I run it at 10 Mb/s for 10PASS-TS? I can't tell from this draft.

SuggestedRemedy

Whatever the situation is, just add a sentence to say it. Get the copper track to correct and better my suggestion: 'EFM electrical {links|connections} use the reconciliation sublayer of clause 22 operating at {10|100} Mb/s.'

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Refered to the Cu track per the request of the commenter

Cl **56** *SC* **56.1.3** *P* **190** *L* **21** # **659**
Dawe, Piers Agilent

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

LX10(long is missing a space

SuggestedRemedy

LX10 (long

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **56** *SC* **56.1.3** *P* **190** *L* **36** # **311**
Dawe, Piers Agilent

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

This sentence reads oddly, I think because port descriptors such as 1000BASE-PX10-D are like adjectives.

SuggestedRemedy

Easy fix - delete 'the' before each '1000BASE-' (four times).

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **56** *SC* **56.1.3** *P* **190** *L* **50** # **313**
Dawe, Piers Agilent

Comment Type **E** *Comment Status* **D** *Refer to Cu*

In the next paragraph we have an informative sentence telling us that 2BASE-TL isn't just a EFM special but has something in common with other standards.

SuggestedRemedy

If it's not too political, insert something similar between 'This PMD' and 'uses passband': perhaps like: This PMD is derived from the VDSL transceiver specified in American National Standard T1.424 and at time of writing, under discussion as G.xxx in ITU-T. It uses passband ...
But get the copper track to write/vet what they want to say.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Refered to the Cu track per the request of the commenter

Cl **56** *SC* **56.1.3** *P* **190** *L* **52** # **314**
Dawe, Piers Agilent

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

only in the wrong place

SuggestedRemedy

Change 'A connection can only be established between' to 'A connection can be established only between'. Or, shorter: 'A connection uses'.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **56** *SC* **56.1.3** *P* **191** *L* **54** # **660**

Dawe, Piers Agilent

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

Double period

SuggestedRemedy

.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Will remove the extra period

Cl **56** *SC* **56.1.3** *P* **191** *L* **8** # **312**

Dawe, Piers Agilent

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

Broken quantity

SuggestedRemedy

Use non-breaking space between 2 and Mb/s.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **56** *SC* **56.1.3** *P* **192** *L* **15** # **316**

Dawe, Piers Agilent

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

We cannot say that 100BASE-LX10 needs a non-traditional PCS. These kinds of ports have been made by multiple NEMs for years - changing the rules now would cause market confusion, obstruct the market which the 100 Mb/s call for interest (folded into EFM) was set up to serve, and possibly cause interoperability problems. That call for interest was told that
'PHY identical to current 100Mbps Std except for a new PMD
- No change to Clause 24
- Retain all state machines, 4B/5B coding etc. of 100BASE-X
o Only need to extend Clause 26, 100BASE-FX PMD, to include SMF'
and
'100BASE-X dual SMF is already happening, and will have applicability even outside EFM
o However, 100BASE-X SMF will be used in the public access application space
o 100BASE-X PCS is transparent to EFM OAM
- Neither "OAM in Frames" nor "OAM on Preamble" require any changes to 100BASE-X PCS'
http://www.ieee802.org/3/smfx_study/index.html
http://www.ieee802.org/3/smfx_study/public/jonsson_1_0302.pdf
We need to honor these expectations.

SuggestedRemedy

Change intersection of 100BASE-LX10 and 66 from M to O or blank. If it needs to be spelled out, add column for clause 24 PCS, PMA, intersection with 100BASE-LX10 being M or O. Can make the header columns much taller (like tables 30-1) to fit the extra column in.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Will be discussed on Monday

Cl **56** *SC* **56.1.3** *P* **192** *L* **15** # **317**
Dawe, Piers Agilent

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

We cannot force 1000BASE-LX10 into an 'access-only ghetto' with a non-traditional PCS. It was intended all along to be an upgraded 1000BASE-LX, a.k.a. a public-standardized 1000BASE-LH. See EFM objectives:
P802.3ah has objectives:
1000BASE-LX extended temperature range optics, and
1000BASE-X up to 10km over SM fiber.
These ports have been made by multiple NEMs for years - changing the rules now would cause market confusion, deprive the traditional Ethernet market of the benefits of standardization, and deprive the access Ethernet market of Ethernet consistency, simplicity and economies of scale. EFM has to accept that traditional Ethernet has got here first and defined the rules.

SuggestedRemedy

Change intersection of 1000BASE-LX10 and 66 from M to O or blank. If it needs to be spelled out, add column for clause 36 and 37 PCS, intersection with 1000BASE-LX10 being M or O. Can make the header columns much taller (like tables 30-1) to fit the extra column in.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Will be discussed on Monday

Cl **56** *SC* **56.1.3** *P* **192** *L* **25** # **359**
Dawe, Piers Agilent

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

This table looks comprehensive but it isn't quite and we mustn't mislead. Need to acknowledge changes to 10G.

SuggestedRemedy

Add a third clause 66 column, title 10 Gb/s RS, and another row, title 10GBASE. Intersection is O. Intersection of OAM and 10G is also O I think. Can make the header columns much taller (like tables 30-1) to fit the extra column in.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Will add a colum for 10G and make it editorially fit as appropriate

Cl **56** *SC* **56.1.3** *P* **192** *L* **9** # **315**
Dawe, Piers Agilent

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

Spelling

SuggestedRemedy

Change 'BAS-' to 'BASE-' several times.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **56** *SC* **56.1.5** *P* **192** *L* **42** # **661**
Dawe, Piers Agilent

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

Don't we construct the standard with management being treated as special - e.g. pervasive? So 56.1.4 shouldn't come betweeen two PHY paragraphs.

SuggestedRemedy

Put the 'Unidirectional transmission' subclause after 56.1.3 (or after 56.1.2)

Proposed Response *Response Status* **W**

PROPOSED REJECT.

The current order seems adequate, its not clear that changing the order adds any value

Cl **56** *SC* **56.1.5** *P* **192** *L* **42** # **662**
Dawe, Piers Agilent

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

Trailing space in title?

SuggestedRemedy

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Will remove it if it is there

Cl **56** *SC* **56.1.5** *P* **192** *L* **45** # **127**
Brown, Benjamin Independent

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

Wrong word

SuggestedRemedy

Replace "necessary for an" with "necessary for a"

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **56** *SC* **56.1.5** *P* **192** *L* **45** # **663**
Dawe, Piers Agilent

Comment Type **E** *Comment Status* **D**
an 1000BASE-

SuggestedRemedy
"a 1000BASE- (sorry, my mistake in my comment)"

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

Cl **57** *SC* *P* *L* # **175**
Braga, Aldobino UNH-IOL

Comment Type **E** *Comment Status* **D**
Lots of broken cross-references.

SuggestedRemedy
Please fix.

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

Some recent projects have left the tedious, time consuming task of fixing Adobe Acrobat cross-references to the IEEE editorial staff.

Cl **57** *SC* **57.1.2** *P* **166** *L* **27** # **99317**
Dawe, Piers Agilent

Comment Type **TR** *Comment Status* **R** *D3.0 #313*
'Don't mess with the legacy Ethernet.'

Section a) is partly unworkable.

This ability, if present, lives in the PCS/PMA, not in the PMDs defined in clauses 58-60. The PCS doesn't know where it is. It doesn't know what wavelength or type of optics is connected to it.

Section a)2) appears to outlaw the legacy PCSs with clause 58, 59, 60 optics. For clause 58 and 59, 100BASE-LX10 and 1000BASE-LX10 like PHYs have been shipping for some time; it's too late to say their PCS/PMAs are not true Ethernet and very bad for the cost-effective, graceful evolution of Ethernet new markets such as subscriber access networks using 'legacy' components, principles and standards. 100BASE-LX10 and 1000BASE-LX10 are not just applicable mainly for subscriber access networks: they are equally at home in 'traditional' campus or telecom-core networks. Further, 1000BASE-LX10 and 1000BASE-LX are interoperable and are intended for attachment to the same PCSs - both old and new and for use in the same kinds of networks: campus and wider. And it doesn't make sense to try to associate the legality of such additional features to network type either: we don't have a watertight definition of a "subscriber access network" nor do we need one. There are just devices and cable plant engineering specs, no definition of who owns the network or anything like that.

Clause 66 RS, PCS and PMA are shown as optional in Table 56-2. That's as it should be (except for 1000BASE-PX-D, PON OLT).

For info, clause 22 has registers for Unidirectional enable and Unidirectional ability.

There is no strong reason to make the PCS unidirectional capability feature mandatory in any situation, as the OAM sublayer that uses it is optional, and the OAM sublayer can still be invoked without it (obviously without all its possible functionality).

57.1.2 needs to be changed to bring it in line with table 56-2 and common sense. These clarifications would still give the OAM supporters what they want: the unidirectional feature would appear in new silicon if it's found useful.

SuggestedRemedy
Change 57.1.2 a) 2) to:
'2) 100BASE-X, 1000BASE-X and 10 Gb/s physical layer devices may be capable of unidirectional operation thus allowing OAM remote fault indication during fault conditions.';
Change a)3) to:
'3) 1000BASE-PX-D physical layer devices, defined in Clause 60 and 66.2, support unidirectional operation in the direction from OLT to ONU that allows OAM remote fault indication from OLT during fault conditions. Unidirectional operation in the other direction is not recommended as it is likely to cause interference to the signals of other ONUs.';
and delete item a) 4).

Proposed Response *Response Status* **U**
REJECT.

See comment #380.

PMDs defined in Clauses 58 and 59 do support unidirectional operation.

Cl **57** *SC* **57.1.2** *P* **196** *L* **30** # **319**

Dawe, Piers Agilent

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

Clauses 58-60 define PMDs, which I don't think are the same as 'physical layer devices'. These particular PMDs (but not all) are oblivious to unidirectional operation. It's the material in 66 that supports it.

SuggestedRemedy

Change 'Subscriber access physical layer devices, defined in Clause 58 and Clause 59,' to '100 Mb/s and 1000 Mb/s {ports|physical layer devices} using the PHY layers defined in 66.1 or 66.2'.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

By removing the references to 58 and 59, the maintenance burden is reduced for future projects that add PMDs, which use the Clause 66 PCS.

However, the existing wording clearly ties "subscriber access" with the PMDs in Clauses 58 and 59, which is the intent of Table 56-2 and 66.1.2 and 66.2.2. Changing the wording, per the suggested remedy, softens this connection and makes it appear as if using Clause 66 PCS/PMA is optional, which is not consistent with the actions of the EFM Task Force.

Upon further review, the overview sections in 58.1 and 59.1 are not consistent and worse, are inaccurate:
- 58.1 refers to 24 or 66.
- 59.1 only mentions 36.

This needs to be remedied.

Cl **57** *SC* **57.1.2** *P* **196** *L* **30** # **318**

Dawe, Piers Agilent

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

Consideration of the issue of what a physical layer device is for, reminds us that the physical layer devices in 58 and 59 are not all just 'subscriber access physical layer devices,'. 100BASE-LX10 and 1000BASE-LX10 are specifically intended for general purpose use (including multimode fiber for the latter). Naturally, because single mode fiber is the same stuff in traditional as in access networks, the same physical layer devices are good for both applications.

SuggestedRemedy

Delete 'Subscriber access' from bullet 2.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

See comment #319, which reworded this sub-bullet.

Cl **57** *SC* **57.1.2** *P* **196** *L* **33** # **320**

Dawe, Piers Agilent

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

Clause 60 defines PMDs, which I don't think are the same as 'physical layer devices'. It's the material in 66 that supports unidirectional operation.

SuggestedRemedy

Change 'physical layer devices, defined in Clause 60,' to '1000 Mb/s point-to-multipoint {ports|physical layer devices} using the PHY layers defined in 36, 60, 65 and 66.2'. Or just '1000BASE-PX-D {ports|physical layer devices}'.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

See the proposed response to comment #319 for further discussion.

For the sake of consistency, the wording in sub-bullet 3 should match sub-bullet 2.

Change 'physical layer devices, defined in Clause 60,' to '1000 Mb/s point-to-multipoint physical layer devices using the PHY layers defined in 36, 60, 65 and 66.2'.

Cl **57** *SC* **57.1.2** *P* **196** *L* **36** # **321**

Dawe, Piers — Agilent

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

The usual problem with 'may'. This could be read as, any other physical layer device might be found to (maybe varying from part to part), any other physical layer device is allowed to, some other types of physical layer device might be found to (consistent by type), some other types of physical layer device are allowed to. By calling out 66.1 and 66.2 in bullet 2, we can make most of these problems go away. We can avoid the confusion point by remaining silent instead of giving non-information. But to be fair to the reader, we need to tell him where unidirectional transmission of frames is not feasible.

SuggestedRemedy

Change bullet 4 to '2BASE-TL, 10PASS-TS, 1000BASE-T and 1000BASE-PX-U do not support unidirectional operation but can support other OAM transport on functional links. 2BASE-TL, 10PASS-TS, 1000BASE-T have specific remote fault signaling mechanisms in the physical layer.'

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Sub-bullet 4 does not want to be a maintained list of port types that don't support unidirectional operation. The suggested remedy isn't a complete list and begs the question of which other ones don't support unidirection mode.

Suggest the following wording change:

"4) Physical layer devices that do not use 66.1 or 66.2 do not support unidirectional operation allowing OAM remote fault indication during fault conditions. Some physical layer devices (e.g., 2BASE-TL and 10PASS-TS) have specific remote fault signaling mechanisms in the physical layer."

See the proposed response to comment #319 for further discussion.

Cl **57** *SC* **57.1.2** *P* **196** *L* **53** # **158**

Braga, Aldobino — UNH-IOL

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

"These objectives support a subset of the user-plane OAM requirements found in Recommendation ITU-TY.1730 - Requirements for OAM functions in Ethernet based networks."

Clauses do not typically have to justify their existence with a document from the ITU-T? The objectives were created independent of this document. Was it the intent of the commenter who posed the question of whether OAM will be used, to have that document referenced in this clause/document?

SuggestedRemedy

Remove the sentence.

Proposed Response *Response Status* **W**

PROPOSED REJECT.

This statement was added as a result of D3.0 comment #165. For convenience, I have included the comment below:

"Given the work by the ITU-T in creating Y.1730 that describes Ethernet OAM requirements, it would make sense that the section that describes the OAM client mentions it. That is, the ITU-T requirements for a much larger scope client indicates several required OAM functions (e.g., loopback, discovery, performance monitoring & continuous connectivity check) that are satisfied by clause 57. This addition will show the relationship with the ITU-T work."

The OAM STF considered this comment in Vancouver and decided to add the referenced statement and add an entry in Annex A - Bibliography.

D3.0 comment #165 was a product (at least in part) of D2.0 comment #980. That comment is also included here for convenience:

"What set of documented requirements is being satisfied by OAM?
The only justification that I can find is the vague "The OAM described in this clause provides data link layer mechanisms that complement applications that may reside in higher layers." (emphasis added).
There is no reference to any particular application, set of applications, documented set of requirements for such applications or protocol/interface to any such thing as an "OAM client". There is no definition of an OAM Client or what standard defines the requirements, interfaces or interoperability parameters for such a client. If such a client is speculated for the future, then there is not even documentation of a commitment for such a project by a standards group."

The remedy for D2.0 comment #980 mentioned "providing appropriate justification/references/information".

The OAM STF felt that the referenced statement served to resolve the D3.0 comment #165 and the older D2.0 comment #980.

Cl **57** *SC* **57.1.2** *P* **196** *L* **54** # **301**
Dawe, Piers Agilent

Comment Type **E** *Comment Status* **D**
Add (hopefully active) link to Annex A.

SuggestedRemedy
Add '[Bn]' or '[B8]' between networks and . IEEE staff to renumber Bn on merge.

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

Cl **57** *SC* **57.2.11.5** *P* **209** *L* **20** # **214**
Martin, David Nortel Networks

Comment Type **T** *Comment Status* **D**
Incorrect terminology?

SuggestedRemedy
Replace "e.g., point-to-multipoint," with "e.g., emulated point-to-point,"

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

Cl **57** *SC* **57.2.12** *P* **209** *L* **52** # **592**
Squire, Matt Hatteras Networks

Comment Type **E** *Comment Status* **D**
We say that unidirectional mode applies when one "end" of a link is non-operational. Its really when one direction of a link is non-operational. Two ends of a link can be fine and one fiber splice could be screwy.

SuggestedRemedy
Change "end" to "direction".

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

Cl **57** *SC* **57.2.2** *P* **199** *L* **20** # **210**
Martin, David Nortel Networks

Comment Type **E** *Comment Status* **D**
Missing punctuation.

SuggestedRemedy
Replace "scope of this standard" with "scope of this standard."

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

Cl **57** *SC* **57.2.5.2.2** *P* **201** *L* **13** # **211**
Martin, David Nortel Networks

Comment Type **E** *Comment Status* **D**
Anal wording suggestion.

SuggestedRemedy
Replace "is the Flags field of the incoming OAMPDU" with "is the entire Flags field of the incoming OAMPDU"

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

Cl **57** *SC* **57.2.6** *P* **203** *L* **21** # **322**
Dawe, Piers Agilent

Comment Type **E** *Comment Status* **D**
issues ?

SuggestedRemedy
issued

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

Cl **57** *SC* **57.2.8.1.2** *P* **204** *L* **27** # **212**
Martin, David Nortel Networks

Comment Type **T** *Comment Status* **D**
Doesn't the DA value have to be the multicast value? Why does it say "individual"?

SuggestedRemedy
Replace "may specify either an individual or a group MAC entity address" with "must specify the multicast group MAC entity address"

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

Since "Good catch" is a baseball phrase, I'll say "Nice save" for the Sens fan.

Cl **57** *SC* **57.2.8.1.2** *P* **204** *L* **30** # **159**

Braga, Aldobino UNH-IOL

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

What exactly is the oam_service_data_unit?

Is it everything between the:
Source Address and the FCS exclusive?
Or the Length/Type and the FCS exclusive?
Or the Subtype and the FCS exclusive?
Or the Code field and the FCS exclusive?

SuggestedRemedy

I'd like to see a statement clearly defining it.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Add sentence as follows:
"The oam_service_data_unit parameter specifies the OAM service data unit to be transmitted within the OAM sublayer entity. This parameter includes the Length/Type, Subtype, Flags, Code and Data/Pad fields."

Cl **57** *SC* **57.2.8.2.2** *P* **205** *L* **10** # **213**

Martin, David Nortel Networks

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

Why does it say "individual" address? Doesn't the DA have to be the multicast address?

SuggestedRemedy

Replace "may be either an individual or a group address" with "must be the multicast group address"

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **57** *SC* **57.2.9** *P* **205** *L* **31** # **324**

Dawe, Piers Agilent

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

Second sentence gives the lie to the first.

SuggestedRemedy

Change first sentence to 'DTEs may support either Active or Passive mode, both or neither.'

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Change first two sentences to read:
"A DTE incorporating the OAM sublayer supports Active and/or Passive mode. When OAM is enabled, a DTE capable of both Active and Passive modes shall select either Active or Passive."

The purpose of the subclause isn't to discuss DTE's that don't support OAM.

Cl **57** *SC* **57.3.2.1.7** *P* **216** *L* **13** # **176**

Braga, Aldobino UNH-IOL

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

This paragraph is incorrect.

Text indicates that Local Stable is only set after local_pdu is set to ANY.

1) A device can't get to the SEND_ANY state where local_pdu is set to ANY, without indicating to the remote device that it is satisfied (done by setting Local Stable).

2) A device can't get to the SEND_ANY state where local_pdu is set to ANY, without knowing the remote is stable. But the remote won't be able to set its Local Stable bit because of #1.

Text differs from the state machine.

3) local_stable which ties to the Local Stable bit is set to true in the SEND_LOCAL_REMOTE_2 state (which is before local_pdu is set to ANY).

SuggestedRemedy

Change the paragraph to read:

"The Local Stable and Local Discovering bits of the Flags field communicate the status of the local Discovery process to the peer. When the OAM Discovery process is started, the local DTE sets the Local Stable and Local Discovering bits to 0x1 indicating OAM Discovery has not completed.

If, after learning of the remote OAM settings, the local OAM client determines it is unsatisfied it sets the Local Stable and Local Discovering bits to 0x0 indicating Discovery cannot successfully complete. If the local OAM client is satisfied, the local DTE sets the Local Stable and Local Discovering bits of the Flags field to 0x2 indicating the Local OAM is satisfied.

When both Local and Remote Stable and Discovering bits are set to 0x2 indicating that both OAM clients are satisfied, the OAM Discovery process has successfully completed and local_pdu is set to ANY. See Table 57-3 for more information."

This brings up another point. The Discovering bit is not really a fitting name since being set to 0 doesn't really mean the Discovery process is done. It's more like an Evaluating bit. When the bit is set to 0 the client has made a decision.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Change paragraph per suggested remedy.

Also, per comment included at end of suggested remedy, change "Discovering" to "Evaluating" to more adequately reflect state. Search and replace Discovering as appropriate. (Note: The encodings remain the same.)

Cl **57** *SC* **57.3.2.2.3** *P* **217** *L* **19** # **163**

Braga, Aldobino UNH-IOL

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

This "shall statement" is redundant, the same "shall" is stated on line 51.
This doesn't make it any more required. But it also doesn't mean it needs to be removed.

SuggestedRemedy

So, Please consider replacing the "shall ensure" with "ensures"

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **57** *SC* **57.3.2.2.3** *P* **217** *L* **23** # **161**

Braga, Aldobino UNH-IOL

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

"If, however, the OAM sublayer entity is configured to not send any OAMPDUs, as indicated by the local_pdu variable set to RX_INFO, the Multiplexer will simply restart the pdu_timer by returning to the RESET state."

The Multiplexer doesn't reset the pdu_timer. The Transmit function does.

SuggestedRemedy

Replace "Multiplexer" with "Transmitter" or "Transmit function"

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

"Multiplexer" will be replaced with "Transmit function".

Cl **57** *SC* **57.3.3.1** *P* **216** *L* **52** # **593**

Squire, Matt Hatteras Networks

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

Replace "forward MAC Client frame or loop back frame from Parser" with "forward a MAC Client frame or loop back a frame from the Parser"

SuggestedRemedy

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **57** *SC* **57.4.2.1** *P* **222** *L* **11** # **157**
Braga, Aldobino UNH-IOL

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

Table 57-3. Search and Replace Error?

There are three instances of "In Local Information TLVs…" within the Flags field. Flags are generic and not specific to Information OAMPDUs with Local Information TLVs.

SuggestedRemedy

Remove "In Local Information TLVs" from:
1) the Reserved field and
2) both Local and Remote Discovering when value is 0x3

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Similar to comment #594.

Cl **57** *SC* **57.4.2.1** *P* **222** *L* **12** # **594**
Squire, Matt Hatteras Networks

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

I think we went overboard with that "In Local Information TLVs..." phrase, especially when this table is about the flags field which is not part of local information TLVs.

SuggestedRemedy

Zap that text about local information TLVs from this table (multiple occurences).

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **57** *SC* **57.4.2.1** *P* **222** *L* **16** # **177**
Braga, Aldobino UNH-IOL

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

The Remote Stable and Discovering bits are copied from the last received OAMPDU.

SuggestedRemedy

Please add a statement to this affect.
Remove the current description if it pleases the editor.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Propose adopting suggested remedy #215.

Cl **57** *SC* **57.4.2.1** *P* **222** *L* **46** # **215**
Martin, David Nortel Networks

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

Need to clarify that the Remote fields [6:5] are filled in from the received Local fields [4:3] - similar to the text in 57.5.2.2 p.231 for the TLVs.

SuggestedRemedy

Add the following "The Remote Stable and Remote Discovering values shall be a copy of the last received Local Stable and Local Discovering values from the remote OAM peer."

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **57** *SC* **57.4.2.2** *P* **223** *L* **03** # **216**
Martin, David Nortel Networks

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

Incorrect reference.

SuggestedRemedy

Replace "The value of the Code field is set by the Multiplexer function for Information OAMPDUs it generates" with "The value of the Code field is set by the Transmit process in the Control function for Information OAMPDUs it generates"

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **57** *SC* **57.4.2.2** *P* **223** *L* **3** # **160**
Braga, Aldobino UNH-IOL

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

"The value of the Code field is set by the Multiplexer function for Information OAMPDUs it generates."

The Code field isn't set by the Mux function on OAM sublayer created OAMPDUs. It is now set by the Transmit function.

SuggestedRemedy

Replace "Multiplexer" with "Transmit"

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **57** *SC* **57.4.3.1** *P* **192** *L* **01** # **99318**

James, David JGG

Comment Type **TR** *Comment Status* **A** *D3.0 #736*

In many cases (often 802 related), the ordering of bits in the OUI is rather ambiguous. As such, the IEEE/RAC requires that standards clearly define the mappings of an example hex field, as is done in the online tutorials.

SuggestedRemedy

Show a clear example of how the OUI is mapped, using an hex example.

Proposed Response *Response Status* **U**

ACCEPT IN PRINCIPLE.

Add a bullet to 57.4.1 to read:

"The bit/octet ordering of any OUI field within an OAMPDU is identical to the bit/octet ordering of the OUI portion of the DA/SA. Additional detail defining the format of OUIs can be found in IEEE Std 802-2001 Clause 9."

Modify Figure 57-14 by removing the bit ordering example.

Modify Table 57-10 by removing the second sentence.

Modify other references as appropriate.

Remove other references to 802-2001 Clause 9.

Cl **57** *SC* **57.4.3.1** *P* **192** *L* **01** # **99319**

James, David JGG

Comment Type **TR** *Comment Status* **R** *D3.0 #735*

The need for uniqueness of an OUI based identifier is best met by utilizing the EUI-48 or EUI-64 definitions, so that each organization doesn't have to understand the context when assigning such numbers to the requesting division.

SuggestedRemedy

Revise the OUI and Vendor Specific Information field to be either 48-bit or 64-bit fields, defined to be an EUI-48 or EUI-64.

Proposed Response *Response Status* **U**

REJECT.

During the November meeting of the RAC (see notes below) the following decisions were established.

- - -
INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS
REGISTRATION AUTHORITY COMMITTEE (RAC)

INTERIM MEETING MINUTES
From: 13 November 2003
Location: Hyatt Regency Albuquerque
Boardroom North
330 Tijeras
Albuquerque, New Mexico

Decision 111303 RAC-04: EUI-48 and 64-bit identifiers are appropriate for instance identification.

Decision 111303 RAC-05: Protocol identifiers in addition to 48 and 64 bits are acceptable to use an OUI followed by N Octet, subject to the constraint for the expected consumption rate, the number space can never be consumed.

- - -

The combination of the OUI and Vendor Specific Information fields does not constitute a unique 56-bit identifier.

The purpose of the Vendor Specific Information field is not instance identification, but rather class identification.

The meaning of the bits in the Vendor Specific Information field is out of scope.

The Vendor Specific Information field _may_ be used to differentiate amongst a vendor's product models and versions. It is not a serial number or anything like unto a serial number.

See also response to comment #737.

Cl **57** *SC* **57.4.3.1** *P* **196** *L* **16** # **99320**

James, David JGG

Comment Type **TR** *Comment Status* **R** *D3.0 #737*

The need for uniqueness of an OUI based identifier is best met by utilizing the EUI-48 or EUI-64 definitions, so that each organization doesn't have to understand the context when assigning such numbers to the requesting division.

SuggestedRemedy

Revise the OUI and following data, so that this starts with an EUI-48 or EUI-64 value. Otherwise, multi-division organizations will have to define their own subparsing conventions, which is prone to error (some have already happened with Japanese vendors and parts of 1394/AVC that do this type of thing).

Proposed Response *Response Status* **U**

REJECT.

Governance of the internal behavior of multi-division organizations is entirely out of scope of the IEEE standards activities.

See also response to comment #735.

Cl **57** *SC* **57.4.3.1** *P* **196** *L* **24** # **99321**

James, David JGG

Comment Type **TR** *Comment Status* **A** *D3.0 #738*

The IEEE/RAC defines OUIs as HEX values. Given the confusion between leftmost being first, or the first transmitted bit being first, any descriptions in terms of bits and/or bit ordering should be removed.

SuggestedRemedy

Eliminate the binary text: the hex values are sufficient.

Proposed Response *Response Status* **U**

ACCEPT IN PRINCIPLE.

See comment #736, which removes the bit ordering example.

Cl **57** *SC* **57.4.3.1** *P* **197** *L* **40** # **99322**

James, David JGG

Comment Type **TR** *Comment Status* **R** *D3.0 #739*

Given the inconsistencies/ambiguities of the OUI definitions within 802.3, any definition should be self-contained, not cross referencing something else.

SuggestedRemedy

Eliminate the OUI cross reference to:

found in IEEE Std 802-2001 Clause 9.

Proposed Response *Response Status* **U**

REJECT.

See comment #736, which moves the reference to 802-2001 Clause 9 to 57.4.1.

Cl **57** *SC* **57.4.3.1** *P* **199** *L* **23** # **99323**

James, David JGG

Comment Type **TR** *Comment Status* **A** *D3.0 #740*

In many cases (often 802 related), the ordering of bits in the OUI is rather ambiguous. As such, the IEEE/RAC requires that standards clearly define the mappings of an example hex field, as is done in the online tutorials.

SuggestedRemedy

Show a figure with the classical HEX-value example.

Proposed Response *Response Status* **U**

ACCEPT IN PRINCIPLE.

Remove second sentence. Also, see #736.

Cl **57** *SC* **57.4.3.1** *P* **200** *L* **09** # **99324**

James, David JGG

Comment Type **TR** *Comment Status* **A** *D3.0 #741*

In many cases (often 802 related), the ordering of bits in the OUI is rather ambiguous. As such, the IEEE/RAC requires that standards clearly define the mappings of an example hex field, as is done in the online tutorials.

SuggestedRemedy

Show a figure with the classical HEX-value example.

Proposed Response *Response Status* **U**

ACCEPT IN PRINCIPLE.

See comment #736, which removes bit ordering examples of OUIs.

Cl **57** *SC* **57.4.3.3** *P* **224** *L* **28** # **553**

Messenger, John ADVA Optical Network

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

D3.1 changed the size of the Variable Leaf field, but this change was omitted from figure 57-12.

SuggestedRemedy

In Figure 57-12, change the following values under "Octets".
For Variable Descriptors #1 and #2, change "2" to "3".
For Variable Leaf, change "1" to "2".

Change the example Variable Leaf value from "0x06" to "0x0006".

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **57** *SC* **57.4.3.4** *P* **226** *L* **15** # **554**

Messenger, John ADVA Optical Network

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

D3.1 changed the size of the Variable Leaf field, but this change was omitted from figure 57-13.

SuggestedRemedy

In Figure 57-13, change the following values under "Octets".
For Variable Container #1, change "7" to "8".
For Leaf, change "1" to "2".

Change the example Leaf value from "0x06" to "0x0006".

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **57** *SC* **57.5.2** *P* **228** *L* **12** # **595**

Squire, Matt Hatteras Networks

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

using "TLV type values" to me indicates we're going to specify the "type" and the "value" in the table.

SuggestedRemedy

Just call it "TLV types"

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **57** *SC* **57.5.2.1** *P* **228** *L* **50** # **550**

Messenger, John ADVA Optical Network

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

The encoding of the OAMPDU configuration is not clearly specified. Table 57-9 shows two objects: a reserved field and an 11-bit Maximum OAMPDU Size field. It needs to be clear that the combination of these two items is treated as a 16-bit number and encoded according to the applicable rule for binary numbers represented in multiple octets (57.4.1 (c)).

SuggestedRemedy

Add sentence to subpoint "g)", end of line 50: "The OAMPDU Configuration field is treated as a 16-bit number and encoded accordingly.", or if preferred, "... and encoded as specified in 57.4.1 (c)".

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Propose adopting the second suggested remedy.

Cl **57** *SC* **57.5.2.1** *P* **229** *L* **21** # **162**

Braga, Aldobino UNH-IOL

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

There are two Reserved bit spaces in this table. Other Local Information TLV fields only have one.

SuggestedRemedy

Remove the Reserved bit at bit 0.
Slide Parser Action and Multiplexer Action down to 1:0 and 2 respectively.
Expand the other Reserved bits to 7:3.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **57** *SC* **57.5.3.1** *P* **232** *L* **10** # **218**

Martin, David Nortel Networks

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

Incorrect cross-reference.

SuggestedRemedy

Replace "this maps to 30.11.1.1.34" with "this maps to 30.11.1.1.35"

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **57** *SC* **57.5.3.1** *P* **232** *L* **15** # **596**
Squire, Matt Hatteras Networks

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

We introduced "a limit that" in the threshold of two event definitions, but not all events, and it makes reading that paragraph much more difficult.

SuggestedRemedy

Remove the recently added "a limit that" from the symbol error event threshold and the errored frame seconds threshold.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Remove "a limit that" from 57.5.3.1 bullet e).

Remove "a limit that" from 57.5.3.4 bullet e).

Cl **57** *SC* **57.5.3.1** *P* **232** *L* **18** # **219**
Martin, David Nortel Networks

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

Incorrect cross-reference.

SuggestedRemedy

Replace "this maps to 30.11.1.1.34" with "this maps to 30.11.1.1.35"

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **57** *SC* **57.5.3.1** *P* **232** *L* **24** # **220**
Martin, David Nortel Networks

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

Add reference to c30 attributes.

SuggestedRemedy

Add "When this event is generated by the local DTE and if Clause 30 is present, this maps to 30.11.1.1.35. When this event is received from the remote DTE and if Clause 30 is present, this maps to 30.11.1.1.42."

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **57** *SC* **57.5.3.1** *P* **232** *L* **26** # **221**
Martin, David Nortel Networks

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

Add reference to c30 local attribute.

SuggestedRemedy

Add "When this event is generated by the local DTE and if Clause 30 is present, this maps to 30.11.1.1.35."

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **57** *SC* **57.5.3.1** *P* **232** *L* **30** # **222**
Martin, David Nortel Networks

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

Add reference to c30 attributes.

SuggestedRemedy

Add "When this event is generated by the local DTE and if Clause 30 is present, this maps to 30.11.1.1.35. When this event is received from the remote DTE and if Clause 30 is present, this maps to 30.11.1.1.42."

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **57** *SC* **57.5.3.1** *P* **232** *L* **6** # **217**
Martin, David Nortel Networks

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

Add reference to c30 local attribute.

SuggestedRemedy

Add "When this event is generated by the local DTE and if Clause 30 is present, this maps to 30.11.1.1.35."

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **57** *SC* **57.5.3.2** *P* **232** *L* **49** # **223**
Martin, David Nortel Networks

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

Add reference to c30 local attribute.

SuggestedRemedy

Add "When this event is generated by the local DTE and if Clause 30 is present, this maps to 30.11.1.1.37."

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **57** *SC* **57.5.3.2** *P* **233** *L* **13** # **226**
Martin, David Nortel Networks

Comment Type **E** *Comment Status* **D**
Add references to the c30 attributes.

SuggestedRemedy
Add "When this event is generated by the local DTE and if Clause 30 is present, this maps to 30.11.1.1.37. When this event is received from the remote DTE and if Clause 30 is present, this maps to 30.11.1.1.43."

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

Cl **57** *SC* **57.5.3.2** *P* **233** *L* **15** # **227**
Martin, David Nortel Networks

Comment Type **E** *Comment Status* **D**
Add reference to c30 local attribute.

SuggestedRemedy
Add "When this event is generated by the local DTE and if Clause 30 is present, this maps to 30.11.1.1.37."

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

Cl **57** *SC* **57.5.3.2** *P* **233** *L* **18** # **228**
Martin, David Nortel Networks

Comment Type **E** *Comment Status* **D**
Add references to c30 attributes.

SuggestedRemedy
Add "When this event is generated by the local DTE and if Clause 30 is present, this maps to 30.11.1.1.37. When this event is received from the remote DTE and if Clause 30 is present, this maps to 30.11.1.1.43."

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

Cl **57** *SC* **57.5.3.2** *P* **233** *L* **53** # **224**
Martin, David Nortel Networks

Comment Type **E** *Comment Status* **D**
Incorrect reference.

SuggestedRemedy
Change "this maps to 30.11.1.1.36" to "this maps to 30.11.1.1.37"

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

Cl **57** *SC* **57.5.3.2** *P* **233** *L* **7** # **225**
Martin, David Nortel Networks

Comment Type **E** *Comment Status* **D**
Incorrect reference.

SuggestedRemedy
Change "this maps to 30.11.1.1.36" to "this maps to 30.11.1.1.37"

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

Cl **57** *SC* **57.5.3.3** *P* **233** *L* **38** # **229**
Martin, David Nortel Networks

Comment Type **E** *Comment Status* **D**
Add reference to c30 local attribute.

SuggestedRemedy
Add "When this event is generated by the local DTE and if Clause 30 is present, this maps to 30.11.1.1.39."

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

Cl **57** *SC* **57.5.3.3** *P* **233** *L* **42** # **230**
Martin, David Nortel Networks

Comment Type **E** *Comment Status* **D**
Incorrect reference.

SuggestedRemedy
Change "this maps to 30.11.1.1.38" to "this maps to 30.11.1.1.39"

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

Cl **57** *SC* **57.5.3.3** *P* **233** *L* **53** # **231**
Martin, David Nortel Networks

Comment Type **E** *Comment Status* **D**
Incorrect reference.

SuggestedRemedy
Change "this maps to 30.11.1.1.38" to "this maps to 30.11.1.1.39"

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

Cl **57** *SC* **57.5.3.3** *P* **234** *L* **11** # **234**
Martin, David Nortel Networks

Comment Type **E** *Comment Status* **D**
Add references to c30 attributes.

SuggestedRemedy
Add "When this event is generated by the local DTE and if Clause 30 is present, this maps to 30.11.1.1.39. When this event is received from the remote DTE and if Clause 30 is present, this maps to 30.11.1.1.44."

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

Cl **57** *SC* **57.5.3.3** *P* **234** *L* **5** # **232**
Martin, David Nortel Networks

Comment Type **E** *Comment Status* **D**
Add references to c30 attributes.

SuggestedRemedy
Add "When this event is generated by the local DTE and if Clause 30 is present, this maps to 30.11.1.1.39. When this event is received from the remote DTE and if Clause 30 is present, this maps to 30.11.1.1.44."

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

Cl **57** *SC* **57.5.3.3** *P* **234** *L* **8** # **233**
Martin, David Nortel Networks

Comment Type **E** *Comment Status* **D**
Add reference to c30 local attribute.

SuggestedRemedy
Add "When this event is generated by the local DTE and if Clause 30 is present, this maps to 30.11.1.1.39."

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

Cl **57** *SC* **57.5.3.4** *P* **234** *L* **32** # **235**
Martin, David Nortel Networks

Comment Type **E** *Comment Status* **D**
Add reference to c30 local attribute.

SuggestedRemedy
Add "When this event is generated by the local DTE and if Clause 30 is present, this maps to 30.11.1.1.41."

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

Cl **57** *SC* **57.5.3.4** *P* **234** *L* **36** # **236**
Martin, David Nortel Networks

Comment Type **E** *Comment Status* **D**
Incorrect reference.

SuggestedRemedy
Change "this maps to 30.11.1.1.40" to "this maps to 30.11.1.1.41".

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

Cl **57** *SC* **57.5.3.4** *P* **234** *L* **45** # **237**
Martin, David Nortel Networks

Comment Type **E** *Comment Status* **D**
Incorrect reference.

SuggestedRemedy
Change "this maps to 30.11.1.1.40" to "this maps to 30.11.1.1.41"

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

Cl **57** *SC* **57.5.3.4** *P* **234** *L* **51** # **238**
Martin, David Nortel Networks

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

Add references to c30 attributes.

SuggestedRemedy

Add "When this event is generated by the local DTE and if Clause 30 is present, this maps to 30.11.1.1.41. When this event is received from the remote DTE and if Clause 30 is present, this maps to 30.11.1.1.45."

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **57** *SC* **57.5.3.4** *P* **234** *L* **53** # **239**
Martin, David Nortel Networks

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

Add reference to c30 local attribute.

SuggestedRemedy

Add "When this event is generated by the local DTE and if Clause 30 is present, this maps to 30.11.1.1.41."

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **57** *SC* **57.5.3.4** *P* **235** *L* **3** # **240**
Martin, David Nortel Networks

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

Add references to c30 attributes.

SuggestedRemedy

Add "When this event is generated by the local DTE and if Clause 30 is present, this maps to 30.11.1.1.41. When this event is received from the remote DTE and if Clause 30 is present, this maps to 30.11.1.1.45."

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **57** *SC* **57.5.3.5** *P* **235** *L* **14** # **241**
Martin, David Nortel Networks

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

Typo.

SuggestedRemedy

Change "the an Organization Specific Event" to "the Organization Specific Event"

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **57** *SC* **57.6.1** *P* **236** *L* **9** # **551**
Messenger, John ADVA Optical Network

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

Tables 57-13 looks similar to the previous tables (57-8 to 57-11) but are in fact not representing the same kind of information. The earlier tables each represent a single object to be encoded in an OAMPDU, but Table 57-13 represents multiple objects. As a result, the table shows elements of the OAMPDU in the opposite order to that in which they are encoded in the OAMPDU. This presentation conflicts with the (correct) order represented in Figure 57-12, page 225.
The "Bits" column is confusing and misleading. It does not properly represent the order of bits on the wire, nor does it assist in working out how to encode the fields into the OAMPDU.

SuggestedRemedy

Remove the "Bits" column. Replace with an "Octets" column having entries of "2" for "Variable Leaf" and "1" for "Variable Branch".

Reverse the order of the rows in the table so that the topmost row represents the earliest field from the table to be encoded into the OAMPDU.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **57** *SC* **57.6.2** *P* **236** *L* **33** # **552**

Messenger, John ADVA Optical Network

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

Table 57-14 looks similar to the previous tables (57-8 to 57-11) but is in fact not representing the same kind of information. The earlier tables each represent a single object to be encoded in an OAMPDU, but Table 57-14 represents multiple objects. As a result, the table shows elements of the OAMPDU in the opposite order to that in which they are encoded in the OAMPDU. This presentation conflicts with the (correct) order represented in Figure 57-13, page 226.
The "Bits" column is confusing and misleading. It does not properly represent the order of bits on the wire, nor does it assist in working out how to encode the fields into the OAMPDU.

SuggestedRemedy

Remove the "Bits" column. Replace with an "Octets" column having entries of "n" for "Variable Value", "1" for "Variable Width", "2" for "Variable Leaf" and "1" for "Variable Branch".

Reverse the order of the rows in the table so that the topmost row represents the earliest field from the table to be encoded into the OAMPDU.

In the description of the "Variable Width" field, refer to bit 7 and bits 6:0, instead of bit 31 and bits 30:24.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **57** *SC* **57.6.2.2** *P* **237** *L* **25** # **180**

Braga, Aldobino UNH-IOL

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

Although the text nicely describes the format of Variable Containers when requesting a package, I can't help but think a table would help make the format clearer.

SuggestedRemedy

Please add a "Variable Container format when requesting a Package" table.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **57** *SC* **57.6.2.3** *P* **237** *L* **42** # **181**

Braga, Aldobino UNH-IOL

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

Although the text nicely describes the format of Variable Containers when requesting an object, I can't help but think a table would help make the format clearer.

SuggestedRemedy

Please add a "Variable Container format when requesting an Object" table.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **57** *SC* **57.6.2.3** *P* **237** *L* **42** # **179**

Braga, Aldobino UNH-IOL

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

Clauses 57.6.2.1 - 57.6.2.3 have a lot of redundant information.

SuggestedRemedy

Place all redundant information in another clause (57.6.2.4).

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **57** *SC* **57.6.2.3** *P* **237** *L* **42** # **178**

Braga, Aldobino UNH-IOL

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

I'm under the impression that new MIB variables are constantly being added. If so, isn't it possible for one OAM device to recognize a package with 'X' variables and another device to recognize that same package with 'Y' variables?

How does one differentiate the beginning of the second Variable Container and unknown attributes within the package? This is an issue when receive more than expected as well as when receiving less then expected.

The addition of new packages would create a similar problem when requesting objects.

SuggestedRemedy

I see two possible fixes.
1) Define an end of package marker (and an end of object marker)
2) Define a package width (and an object width)

Tacking on an "end of" marker would be quicker than trying to calculate the width. Reserved variable errors could be used, but a marker is not an error?

If variable error codes as markers is the way the group wants to go, the following error codes could be used:
0x02
0x03
0x40 (slide current package errors down one)
0x60 (slide current object errors down one)

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

The following changes will be made:

1) Change "Table 57-16 - Variable Error Indications" to "Table 57-16 - Variable Indications".
2) Move 0x40-0x43 to 0x41-0x44.
3) Add 0x40 "End of object marker"
4) Move 0x60-0x63 to 0x61-0x64.
5) Add 0x60 "End of package marker"
6) Modify reference in Table 57-14
7) Modify text/references in 57.6.2.1-57.6.2.3

Cl **57** *SC* **57.7** *P* **241** *L* **8** # **393**

Law, David 3Com

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

The support column options are not correct for a Mandatory item nor a predicated mandatory item.

SuggestedRemedy

A mandatory item (Status = M) should only provide the option 'Yes []' in the Support column. A predicated mandatory item (Status = <item>:M) should only provide the options 'Yes []' and 'N/A []' in the Support column.

The entire PICS should be checked for this.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **57** *SC* **57.7.3.1** *P* **242** *L* **16** # **164**

Braga, Aldobino UNH-IOL

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

OFS9 and OFS10 are the same PICS as those stated in RB2 and RB3

SuggestedRemedy

Please remove whichever PICS entries you like.

But for the sake of consistency:
If you remove OFS9 and OFS10, please move LIT5 to the Reserved bits PICS table?
If you remove RB2 and RB3, can you remove the Reserved bits PICS table and incorporate all the Reserved bits PICS entries into their appropriate sections?

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Let's remove the Reserved bits PICS table and follow the balance of the suggested remedy.

Cl **57** *SC* **57.7.3.3** *P* **244** *L* **11** # **165**

Braga, Aldobino UNH-IOL

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

PDU3: reads "64 octet OAMPDUs"

SuggestedRemedy

Please change "64 octet OAMPDUs" to "OAMPDUs minFrameSize in length"

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **57** *SC* **57.7.3.4** *P* **246** *L* **23** # **166**
Braga, Aldobino UNH-IOL

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

There is no shall associated with this statement.

SuggestedRemedy

Please remove PICS entry LIT6.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **57** *SC* **57.7.3.5** *P* **247** *L* **6** # **167**
Braga, Aldobino UNH-IOL

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

All the PICS entries in this table have been replaced with an all encompassing shall statement.

SuggestedRemedy

Replace RIT1 with:
RIT1 | Remote Information TLV | 57.5.2.2 | Copied from last received Local Information TLV from remote OAM peer.

And delete RIT2 - RIT8

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **57** *SC* **57.7.4** *P* **249** *L* **12** # **242**
Martin, David Nortel Networks

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

Incorrect event name.

SuggestedRemedy

Change "Errored Frame Event Period" to "Errored Frame Event"

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **57** *SC* **57.7.4** *P* **249** *L* **13** # **168**
Braga, Aldobino UNH-IOL

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

Two errors:
1) ET2s Feature should be labeled "Errored Frame Period Event TLV structure"
2) The subclause references for ET2 and ET3 are reversed. (ie. ET2 should be 57.5.3.3 and ET3 should be 57.5.3.2)

SuggestedRemedy

Change the Label for ET2.
Swap the subclause references for ET2 and ET3.

And If its not too much trouble, Swap ET2 and ET3. (Errored Frame Event TLV comes before Errored Frame Period Event TLV in the document)

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **57** *SC* **57.7.4** *P* **249** *L* **19** # **243**
Martin, David Nortel Networks

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

Incorrect event name.

SuggestedRemedy

Change "Errored Frame Event " to "Errored Frame Period Event "

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **57** *SC* **57.7.5** *P* **250** *L* **19** # **169**
Braga, Aldobino UNH-IOL

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

VAR4 Label needs to be more specific

SuggestedRemedy

Please change to:
"Variable Container structure" to "Variable Container structure for an attribute"

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **57** *SC* **57.7.6** *P* **250** *L* **46** # **170**

Braga, Aldobino UNH-IOL

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

RB3 could refer to one of two bits spaces within the Table 57-3.

SuggestedRemedy

Please add the specific bit space it refers to and add another PICS entry for the other reserved bit space. Or as per another comment remove one of the reserved bit spaces.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Per comment #164, the Reserved bits PICS table will be removed and the PICS entries for reserved bits will be incorporated in the respective tables.

Comment #162 removes bit 0 and slides the other bits down.

Cl **57** *SC* **57.7.6** *P* **250** *L* **53** # **173**

Braga, Aldobino UNH-IOL

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

The Reserved Link Event TLV type values for Table 57-12 have no PICS entries:
Table 57-12: 05-FD, FF

SuggestedRemedy

Reserved Link Event TLV types

RIT10 | Type values 0x05-0xFD | Table 57-12 | not to be sent
RIT11 | Type value 0xFF | Table 57-12 | not to be sent

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **57** *SC* **57.7.6** *P* **250** *L* **53** # **171**

Braga, Aldobino UNH-IOL

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

The Reserved Command values for Table 57-5 have no PICS entries:
Table 57-5: 00, 03-FF

SuggestedRemedy

Reserved Loopback commands

RIT6 | Command value 0x00 | Table 57-5 | not to be sent
RIT7 | Command values 0x03-0xFF | Table 57-5 | not to be sent

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **57** *SC* **57.7.6** *P* **250** *L* **53** # **172**

Braga, Aldobino UNH-IOL

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

The Reserved Information TLV type values for Table 57-6 have no PICS entries:
Table 57-6: 03-FD, FF

SuggestedRemedy

Reserved Information TLV types

RIT8 | Type values 0x03-0xFD | Table 57-6 | not to be sent
RIT9 | Type value 0xFF | Table 57-6 | not to be sent

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **57** *SC* **57.7.6** *P* **250** *L* **53** # **174**

Braga, Aldobino UNH-IOL

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

The Reserved Variable Error type values for Table 57-16 have no PICS entries:
Table 57-16: 00, 02-1F, 25-3F, 44-5F, 64-7F

SuggestedRemedy

Reserved Variable Error type values

RIT12 | Type value 0x00 | Table 57-16 | not to be sent
RIT13 | Type values 0x02-0x1F | Table 57-16 | not to be sent
RIT14 | Type values 0x25-0x3F | Table 57-16 | not to be sent
RIT15 | Type values 0x44-0x5F | Table 57-16 | not to be sent
RIT16 | Type values 0x64-0x7F | Table 57-16 | not to be sent

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **58** *SC* **58.1** *P* **218** *L* **9** # **99331**

Booth, Brad — Intel

Comment Type **TR** *Comment Status* **A** *BB D3.0 #780*

Sentence is very disjointed and needs better clarification.

SuggestedRemedy

Change second sentence of paragraph to read:
A 100BASE-LX10 and 100BASE-BX10 PHY (physical layer) device is a combination of a 100BASE-X PCS and PMA with the respective PMD. If the optional OAM is being used, the 100BASE-X PCS and PMA in Clause 66 shall be integrated; otherwise, the Clause 24 100BASE-X PCS and PMA shall be integrated. The management functions may be accessible through the optional Management Interface.

Proposed Response *Response Status* **U**

ACCEPT IN PRINCIPLE.
As this is a PMD clause, a shall is not appropriate in this context.
The second sentence will be changed to:
A PMD is connected to the 100BASE-X PMA of Clause 24 or the 100BASE-X PMA of 66.1, and to the medium through the MDI. A PMD is optionally combined with the management functions that may be accessible through the management interface defined in Clause 22 or by other means.

Cl **58** *SC* **58.1** *P* **252** *L* **8** # **558**

Booth, Brad — Intel

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

The response for D3.0 comments #780, 786 and 787 cause me some concern. The response states that "As this is a PMD clause, a shall is not appropriate in this context." Considering all other 100BASE-X and 1000BASE-X PMDs use shalls in this context, the response is very misleading. In looking through D3.1, I have found no compliance statement related to the port types associated with the PMD. There is nothing within this draft that mandates which PCS/PMA shall be used by the Clause 58, 59 and 60 PMDs to create a compliant port type.

SuggestedRemedy

Reconsider the responses to comments #780, 786 and 787 in D3.0.

Proposed Response *Response Status* **W**

PROPOSED REJECT.

Each one of the clauses 58, 59, and 60, defines only the PMD not a complete port and cannot make requirements outside the PMD.

Cl **58** *SC* **58.10.3.2** *P* **287** *L* **11** # **394**

Law, David — 3Com

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

The support column options doesn't look correct for the predicated optional items.

SuggestedRemedy

Shouldn't the support column be 'Yes [] No [] N/A []' for predicated optional items as it is for item FO4 (see 58.10.3.7), if in this case for example LX is not implemented the answer should be N/A and not Yes or No.

Check this throughout the PICS.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Change support column to 'Yes [] No [] N/A []' for LX3, BD3, and BU3.

Cl **58** *SC* **58.10.3.5** *P* **288** *L* **6** # **334**

Dawe, Piers — Agilent

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

This comment affects 58, 59 and 60.
Consistency:
OM6 in 58 says: With specified filter
OM7 in 59 says: Per 58.7.8 and ANSI/TIA/EIA-526-4A using patch cable per 59.7 and fourth-order Bessel-Thomson receiver
OM6 in 60 says: Eye must be measured with respect to mask and using Bessel-Thomson filter

SuggestedRemedy

Option 1:
Change PICS entries in 59 and 60 to 'With specified filter'.
Option 2: change PICS entries in 58 and 60 to:
Per ANSI/TIA/EIA-526-4A using patch cable per {58.7|59.7} and fourth-order Bessel-Thomson receiver
Option 2: change all three clauses' PICS entries to:
Per ANSI/TIA/EIA-526-4A with test pattern and fourth-order Bessel-Thomson receiver

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Change all three clauses' PICS entries to:
"Per ANSI/TIA/EIA-526-4A with test pattern and fourth-order Bessel-Thomson receiver"

Make consistent across optics clauses.

Cl **58** *SC* **58.2.1.1** *P* **229** *L* **18** # **99332**

Paul Fitzgerald — Circadiant Systems

Comment Type **TR** *Comment Status* **A** *FBT D3.0 #288*

Use of the Optical frame based test pattern of 58.8.1.1 will lead to a broadcast storm and take down the Ethernet network. This pattern is too dangerous to imbed into low-cost test equipment that could be used in the field. It is a recipe for malicious hacking.

SuggestedRemedy

Use valid 100BASE-X signal.

Proposed Response *Response Status* **U**

ACCEPT IN PRINCIPLE.
The broadcast nature of the test patterns is a necessary feature of this testing mechanism to ensure that the statistics in the receiving DTE are properly incremented without having to know the destination address of the receiving DTE. The test pattern will continue to use a broadcast address.

The note that appears in 58.8.1.1 will be replicated in clauses 59 and 60 and 58A

Cl **58** *SC* **58.7** *P* *L* # **325**

Dawe, Piers — Agilent

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

I've recently discovered that 100BASE_X can signal remote fault with a slightly modified idle called far-end fault indication or FEFI (polarity of bits on the line flips every 85 bits). As a port which is not aware that it's being tested is may well emit this unless steps are taken to stop it, by either managing the equipment under test or feeding the port with a 100Mb/s optical signal, neither of which we want to have to do, we should allow extinction ratio, OMA and RINxOMA to be tested with FEFI or pure idle. As it happens, it's a lucky break because there may be more ways to get an eye on the scope with this signal than with pure idle, and the difference won't perturb the measurement.

SuggestedRemedy

In table 58-9, change 'Idle' to 'Idle or far-end fault indication (see Clause 24)';
In 58.7.1.1, extend the sentence thus 'idle pattern (1010... for 4B/5B NRZI) or the nearly identical far-end fault indication.';
In 58.7.4, insert words: '... idle pattern (1010…) or far-end fault indication, that ...'.
In 58.7.5, insert words: idle (10101... for 100BASE-LX10 and 100BASE-BX10) sequence or far-end fault indication.' and 'transmitting the idle pattern or far-end fault indication,'.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **58** *SC* **58.7** *P* **262** *L* **4** # **252**

Jönsson, Ulf — Ericsson

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

"apply to Clauses 58, Clause 59, and Clause 60"

SuggestedRemedy

Change to "apply to Clauses 58, 59, and 60."

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Check with style guide. Make consistent accross optics clauses.

Cl **58** *SC* **58.7.1** *P* **266** *L* **15** # **362**

Dawe, Piers — Agilent

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

There was some issue with how we account for idles in this table.

SuggestedRemedy

Check again and change any of the following as necessary: '13' in table 58-10, '38' in table 58-11, footnote to table 58-11.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Will be changed based on further input. See #253.

Cl **58** *SC* **58.7.7.3** *P* **269** *L* **37** # **664**

Dawe, Piers — Agilent

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

Equation crossed out in change diff file

SuggestedRemedy

Also 58.7.11.2 eqn (58-13)

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

The equation is not crossed out. It is an underline that shows that this equation has been changed from D3.0.

Cl **58** *SC* **Table 58-11** *P* **229** *L* **12** # **99333**

Paul Fitzgerald — Circadiant Systems

Comment Type **TR** *Comment Status* **A** *FBT D3.0 #287*

Use of the Optical frame based test pattern of 58.8.1.1 will lead to a broadcast storm and take down the Ethernet network. This pattern is too dangerous to imbed into low-cost test equipment that could be used in the field. It is a recipe for malicious hacking.

SuggestedRemedy

Substitute with Valid 100BASE-X signal.

Proposed Response *Response Status* **U**

ACCEPT IN PRINCIPLE.
See comment 288

Cl **58** *SC* **Table 58-11** *P* **265** *L* **37** # **253**

Jönsson, Ulf — Ericsson

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

Assuming that the near minimum inter-packet gap (IPG) of 14 octets is the number of plain vanilla idles plus one ESD, we either have to add an extra byte to this field so that it adds up to 39 bytes or remove the footnote.

SuggestedRemedy

Change the number of octets to 38 or remove the footnote

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Will be changed based on further input. See #362.

Cl **58** *SC* **Table 58-5** *P* **224** *L* **16** # **99334**

Paul Fitzgerald — Circadiant Systems

Comment Type **TR** *Comment Status* **R** *TDP D3.0 #289*

The TDP test is not achieving widespread support.

SuggestedRemedy

Change to a Path Penalty Test with a minimum specified amount of dispersion in the test fiber.

Proposed Response *Response Status* **U**

REJECT.
See comment 296

Cl **59** *SC* **59.1** *P* **256** *L* **7** # **99335**

Booth, Brad — Intel

Comment Type **TR** *Comment Status* **A** *BB D3.0 #786*

Second sentence of second paragraph is very disjointed.

SuggestedRemedy

Change second sentence of paragraph to read:
A 1000BASE-LX10 and 1000BASE-BX10 PHY (physical layer) device is a combination of a 1000BASE-X PCS and PMA with the respective PMD. If the optional OAM is being used, the 1000BASE-X PCS and PMA in Clause 66 shall be integrated; otherwise, the Clause 36 1000BASE-X PCS and PMA shall be integrated. The management functions may be accessible through the optional Management Interface.

Proposed Response *Response Status* **U**

ACCEPT IN PRINCIPLE.

As this is a PMD clause, a shall is not appropriate in this context.
The second sentence will be changed to:
A PMD is connected to the 1000BASE-X PMA of Clause 36, and to the medium through the MDI. A PMD is optionally combined with the management functions that may be accessible through the management interface defined in Clause 22 or by other means.

Cl **59** *SC* **59.1.2** *P* **291** *L* **10** # **665**

Dawe, Piers — Agilent

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

"Because of the way the file was recovered, we have some extra blank lines which are throwing up change bars"

SuggestedRemedy

"In many cases in this clause, the anchor for the figure is on a line by itself. Can delete the paragraph-break sign at the end of the previous line to bring it back."

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE. Deferred to Chief editor for resolution prior to publication.

Cl **59** *SC* **59.1.2** *P* **291** *L* **11** # **363**

Dawe, Piers — Agilent

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

Empty line

SuggestedRemedy

Remove unwanted line feed with care. And several more, associated with figures.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE. Deferred to Chief editor for resolution prior to publication.

Cl **59** *SC* **59.1.5.3** *P* **292** *L* **3** # **361**
Dawe, Piers Agilent

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

This needs updating: 'error ratio objective'.

SuggestedRemedy

Change it to 'specified bit error ratio'.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **59** *SC* **59.10.3.5** *P* **318** *L* **23** # **332**
Dawe, Piers Agilent

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

Consistency: 59.10.3.5 OM4 says 'Optical power' while 58.10.3.5 OM4 and 60.10.4.6 OM3 say 'Average optical power'.

SuggestedRemedy

I would go with 'Average optical power' to avoid confusion between average optical power and OMA.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **59** *SC* **59.7.1** *P* **302** *L* **5** # **326**
Dawe, Piers Agilent

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

Are we being too lenient in saying that any valid 8B/10B encoded signal will do for eye mask measurement?

SuggestedRemedy

Consider changing to random pattern test frame.

Proposed Response *Response Status* **W**

PROPOSED REJECT. It is believed that the current text is preferred.

Cl **59** *SC* **59.7.11** *P* **307** *L* **43** # **327**
Dawe, Piers Agilent

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

ref *58.7.10*.

SuggestedRemedy

Make the link and clean up ref * *

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **59** *SC* **59.7.4** *P* **306** *L* **6** # **666**
Dawe, Piers Agilent

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

Two spaces in 'idles. The'?

SuggestedRemedy

?

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **59** *SC* **Table 59-13** *P* **269** *L* **12** # **99336**
Paul Fitzgerald Circadiant Systems

Comment Type **TR** *Comment Status* **A** *FBT D3.0 #295*

Use of the Random pattern test frame Optical frame based test pattern of 58.8.1.1 will lead to a broadcast storm and take down the Ethernet network when broadcast mode is entered. This pattern is too dangerous to imbed into low-cost test equipment that could be used in the field. It is a recipe for malicious hacking.

SuggestedRemedy

Substitute with Valid 1000BASE-X signal.

Proposed Response *Response Status* **U**

ACCEPT IN PRINCIPLE.
See comment 288

Cl **59** *SC* **Table 59-5** *P* **263** *L* **19** # **99337**
Paul Fitzgerald Circadiant Systems

Comment Type **TR** *Comment Status* **R** *TDP D3.0 #291*

The TDP test is not achieving widespread support.

SuggestedRemedy

Change to a Path Penalty Test with a minimum specified amount of dispersion in the test fiber.

Proposed Response *Response Status* **U**

REJECT.
See 296

Cl **59** *SC* **Table 59-8** *P* **266** *L* **27** # **99338**
Paul Fitzgerald Circadiant Systems

Comment Type **TR** *Comment Status* **R** *TDP D3.0 #293*

The TDP test is not achieving widespread support.

SuggestedRemedy

Change to a Path Penalty Test with a minimum specified amount of dispersion in the test fiber.

Proposed Response *Response Status* **U**

REJECT.
See 289

Cl **60** *SC* **60.1** *P* **286** *L* **9** # **99339**
Booth, Brad Intel

Comment Type **TR** *Comment Status* **A** *BB D3.0 #787*

Last sentence of first paragraph seems disjointed.

SuggestedRemedy

Change second sentence of paragraph to read:
A 1000BASE-PX10-D and 1000BASE-PX10-U PHY (physical layer) device is a combination of a 1000BASE-X PCS and PMA with the respective PMD. If the optional OAM is being used, the 1000BASE-X PCS and PMA in Clause 66 shall be integrated; otherwise, the Clause 36 1000BASE-X PCS and PMA as modified by 65.3 shall be integrated. The management functions may be accessible through the optional Management Interface.

Proposed Response *Response Status* **U**

ACCEPT IN PRINCIPLE.

As this is a PMD clause, a shall is not appropriate in this context.
The second sentence will be changed to:
A 1000BASE-PX-U PMD or a 1000BASE-PX-D PMD is connected to the appropriate 1000BASE-X PMA of Clause 66, and to the medium through the MDI. A PMD is optionally combined with the management functions that may be accessible through the management interface defined in Clause 22 or by other means.

Cl **60** *SC* **60.1.5.4** *P* **325** *L* **13** # **360**
Dawe, Piers Agilent

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

This needs updating: 'error rate objective'.

SuggestedRemedy

Change it to 'specified bit error ratio'.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **60** *SC* **60.1.5.4** *P* **325** *L* **13** # **412**
Grow, Robert Intel

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

I believe incorrect usage of "error rate" still exists. Though it is inspecific here, I believe the most common objective in this context that would come to mind is the BER objective of 60.1.1 item d.

SuggestedRemedy

Change "error rate" to "error ratio" per my accepted D3.0 comment #528.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **60** *SC* **60.10.2.2** *P* **347** *L* **4** # **365**
Dawe, Piers Agilent

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

Please make the table full width

SuggestedRemedy

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **60** *SC* **60.10.4.3** *P* **348** *L* **50** # **366**
Dawe, Piers Agilent

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

Orphan title

SuggestedRemedy

Maybe delete any blank line following it?

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **60** *SC* **60.10.4.6** *P* **350** *L* **24** # **330**
Dawe, Piers Agilent

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

OM1 subclause entry has gone wrong somehow.

SuggestedRemedy

Suggest delete it and insert new link to 60.7.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **60** *SC* **60.10.4.6** *P* **350** *L* **26** # **329**
Dawe, Piers Agilent

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

PICS OM2 Value/Comment needs revision to keep in step with simplified text in 60.7.2. Can be the same as in 59.10.3.5. Sorry to make this a TR, but it's easy to do.

SuggestedRemedy

Shorten to:
Per TIA/EIA-455-127 under modulated conditions

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **60** *SC* **60.7.13.1.2** *P* **339** *L* **40** # **328**
Dawe, Piers Agilent

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

Empty line

SuggestedRemedy

Delete any redundant line feed.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **60** *SC* **60.7.3** *P* **337** *L* **16** # **331**
Dawe, Piers Agilent

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

This short subclause needs updating as we have done everywhere else to move the emphasis from the measurement to the conformance. It looks like we avoided 'node' in a specification item because it isn't clearly defined in 1.4.

SuggestedRemedy

Change from:
Optical power shall be measured using the methods specified in ANSI/EIA-455-95 [B7]. This measurement may be made with the node transmitting any valid encoded 8B/10B data stream.
to:
Optical power shall meet specifications according to the methods specified in ANSI/EIA-455-95. A measurement may be made with the port transmitting any valid encoded 8B/10B data stream.
Also, change PICS to: Per TIA/EIA-455-95

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **60** *SC* **60.7.4** *P* **337** *L* **21** # **333**
Dawe, Piers Agilent

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

This comment applies to 59 and 60.
Consistency: 59.10.3.5 OM5 says 'Per ANSI/TIA/EIA-526-4A using patch cable per 59.7 , minimal back reflections and fourth-order Bessel-Thomson receiver', 60.10.4.6 OM4 says 'Measured using the methods specified in ANSI/TIA/EIA-526-4A-1997 [B13]'. Clause 58 has a slightly simpler measurement description (deliberately) so its PICS differs. It seems unnecessary to mention the patch cable again, as it has its own PICS. Editorially, we should mention the Bessel-Thomson receiver in clause and PICS, just clause, or neither - not just PICS. My apologies if we went over all this last time!

SuggestedRemedy

Option 1: Insert words into 58.7.4, 59.7.4, 60.7.4:
'The test receiver has the frequency response as specified for the transmitter optical waveform measurement.'
Use the following for PICS in both 59.10.3.5 OM5 and 60.10.4.6 OM4:
Per ANSI/TIA/EIA-526-4A with minimal back reflections and fourth-order Bessel-Thomson receiver
Option 2: Use the following for PICS in both 59.10.3.5 OM5 and 60.10.4.6 OM4:
Per ANSI/TIA/EIA-526-4A with minimal back reflections
Consider doing 60.7.4 by reference: change contents to:
The measurement extinction ratio procedure for 1000BASE-PX is as defined in 58.7.7.
As long as we are sure they will stay the same.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE. Will decide at meeting. Editor prefers option 1
Note: incorrect reference; 58.7.7 should be 58.7.4

Cl **60** *SC* **60.7.4** *P* **337** *L* **24** # **667**
Dawe, Piers Agilent

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

Two spaces in 'idles. The'?

SuggestedRemedy

?

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **60** *SC* **60.8.11** *P* **304** *L* **8** # **99340**
Paul Fitzgerald Circadiant Systems

Comment Type **TR** *Comment Status* **A** *FBT D3.0 #300*

Requires a test pattern rather than live traffic.

SuggestedRemedy

Use valid or live 1000BASE-X traffic for all stressed receiver conformance tests in

Proposed Response *Response Status* **U**

ACCEPT IN PRINCIPLE.
Replace last sentence with last sentence of 59.9.14 with the appropriate references

---

Cl **60** *SC* **60.9.3** *P* **345** *L* **18** # **364**
Dawe, Piers Agilent

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

Empty line?

SuggestedRemedy

If so, remove unwanted line feed. Also at line 52?

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **60** *SC* **Table 60-5** *P* **293** *L* **19** # **99341**
Paul Fitzgerald Circadiant Systems

Comment Type **TR** *Comment Status* **R** *TDP D3.0 #296*

The TDP test is not achieving widespread support.

SuggestedRemedy

Change to a Path Penalty Test with a minimum specified amount of dispersion in the test fiber.

Proposed Response *Response Status* **U**

REJECT.
TDP is a dispersion based path penalty test and is the more comprehensive of the two. If it were substituted by path pealty, then additional tests would have to be adderd. TDP testing has been under development for ~3 years in 10G and is accepted in this community. An alternative testing mechanism would need considerable scrutiny before it could be implemented.

Cl **60** *SC* **Table 60-8** *P* **296** *L* **31** # **99342**
Paul Fitzgerald Circadiant Systems

Comment Type **TR** *Comment Status* **R** *TDP D3.0 #298*

The TDP test is not achieving widespread support.

SuggestedRemedy

Change to a Path Penalty Test with a minimum specified amount of dispersion in the test fiber.

Proposed Response *Response Status* **U**

REJECT.
See # 296

Cl **61** *SC* **61** *P* *L* # **370**
Dawe, Piers Agilent

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

Surprisingly, nowhere in the draft is there a statement of which RS the 2BASE-TL and 10PASS-TS PHYs connect to. Even if the editors believe that it's 'obviously' clause 22, that doesn't mean it's the case: one would not obviously expect low-speed PHYs to use the 10G MDIO clause 45, but they do. Or, there could be new PHY-specific RSs for these PHYs. Further, if it's clause 22, can I run it at 10 Mb/s for 10PASS-TS? I can't tell from this draft.

SuggestedRemedy

Whatever the situation is, explain it at appropriate length in 61, and provide the chief editor with a single sentence for the end of 56.1.2.2. Correct and better my suggestion: 'EFM electrical {links|connections} use the reconciliation sublayer of clause 22 operating at {10|100} Mb/s.' Thanks!

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
To be discussed with comment #410.

Subclause 61.1.4.1.2 already says:
"The 10PASS-TS and 2BASE-TL PCS is specified to work with a MAC operating at 100 Mb/s using the MII as defined in Clause 22." Therefore there is no need to add text to Clause 61.

Add following sentences to the end of 56.1.2.2:
"EFM Copper links use the MII of Clause 22 operating at 100 Mb/s.
This is described in 61.1.4.1.2."

Cl **61** *SC* **61** *P* **353** *L* **1** # **201**

Beck, Michael — Alcatel Bell nv

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

Clause title is inaccurate.

SuggestedRemedy

Change Clause title to:
61. Physical Coding Sublayer (PCS), Transmission Convergence (TC) sublayer, and common specifications, type 10PASS-TS and type 2BASE-TL

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **61** *SC* **61.1** *P* **354** *L* **20** # **376**

Beili, Edward — Actelis Networks

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

The draft text calls the CO - "centralized distribution equipment" and CPE - "line termination equipment owned or controlled by a subscriber ". In the xDSL world (see ITU-T 993.1 and 995.1 for example) the CO side is called Line Termination (LT) and the CPE side is called Network Termination (NT). In addition in some cases the CPE may be owned and controlled by an operator (carrier).

SuggestedRemedy

Replace lines 20-21 with:
"between centralized line termination equipment, such as a Central Office (CO), and network termination equipment at the remote customer premises (Customer Premises Equipment, CPE)."

Proposed Response *Response Status* **W**

PROPOSED REJECT.
The existing text was written to cover the case of a completely privately owned EFM-network as well as a typical operator/subscriber deployment.

The term "network termination equipment", often used in xDSL related litterature, is not appropriate for our use. The CPE-side modem may include a MAC bridge which connects to other Ethernet PHYs (e.g., 10/100BASE-T). In that case, the Ethernet network extends to both sides of the CPE, so it is not terminated at the CPE. This is different from traditional ATM deployments, in which the CPE indeed terminates the ATM network and passes the payload on to the subscriber.

Cl **61** *SC* **61.1.1** *P* **354** *L* **44** # **508**

Schneiderheinze, Burkart — Infineon Technologies

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

term 3.4.1. is not a register, it is a bit

SuggestedRemedy

change text to 'parts of register 3.4'

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **61** *SC* **61.1.1** *P* **354** *L* **45** # **579**

Cravens, George — Mindspeed

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

Register 3.73 also applies.

SuggestedRemedy

Change "... 3.60 through 3.72 specified in ..."

to: "... 3.60 through 3.73 specified in ..."

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
Change "... 3.60 through 3.72 specified in ..."
to: "... 3.60 through 3.73 specified in ..."

In Table 45-58, replace second occurrence of 3.72 with 3.73. Replace "3.73 through 3.32767 - Reserved" with "3.74 through 3.32767 - Reserved".

Cl **61** *SC* **61.1.1.** *P* **354** *L* **45** # **445**

Schneiderheinze, Burkart — Infineon Technologies

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

wrong register number

SuggestedRemedy

change 3.72 to 3.73 (or accordingly, if any registers are added or removed during the meeting)

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.
See also comment #579.

Cl **61** *SC* **61.1.2** *P* **354** *L* **54** # **420**

Barry, O'Mahony Intel

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

Unclear what "without interference" means.

SuggestedRemedy

Delete these two words.

Proposed Response *Response Status* **W**

PROPOSED REJECT.
This exact wording was chosen for consistency with the definition in IEEE Std 802.3-2002 subclause 1.4.135.

Cl **61** *SC* **61.1.3** *P* **356** *L* **30** # **421**

Barry, O'Mahony Intel

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

Figure 61-1 references T1.424/Trial-Use, while Clause 62 was changed in D3.1 to reference ANSI T1.424.

SuggestedRemedy

Align Figure 61-1 with Clause 62 by deleting words "Trial-Use" from Figure.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **61** *SC* **61.1.4.1** *P* **356** *L* **30** # **422**

Barry, O'Mahony Intel

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

hyphen between "data" and "interface" unnecessary.

SuggestedRemedy

remove it.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **61** *SC* **61.1.4.1.1** *P* **357** *L* **6** # **559**

Booth, Brad Intel

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

I'm a bit concerned about how this is worded. MII is an exposed interface; therefore, it is a compliant point. There is no statement about compliance with that point. MII also includes the management interface, but you make no compliance statement about including or excluding it (only that these ports do not utilize the management interface).

SuggestedRemedy

Change the text to read:
10PASS-TS and 2BASE-TL may make use of the MII specified in Clause 22. It is highly recommended that 10PASS-TS and 2BASE-TL management interface utilize the MDIO interface as specified Clause 45.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
To be discussed with comment #580 and #509.

Change the text to read:
"10PASS-TS and 2BASE-TL specify the optional use of the MII electrical interface as defined in Clause 22 (see also 61.1.5.2). 10PASS-TS and 2BASE-TL do not unitilize the MII management interface as described in 22.2.4. The use of the MDIO interface specified in Clause 45 or an equivalent management interface is recommended."

Cl **61** *SC* **61.1.4.1.1** *P* **357** *L* **7** # **580**

Cravens, George Mindspeed

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

Optional support for the Clause 45 management interface needs to be mentioned since it is declared that the clause 22 management interface will not be supported.

SuggestedRemedy

Change the end of the sentence from: "described in 22.2.4."

to: "... described in 22.2.4, but may optionally utilize the management interface described in Clause 45."

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
See resolution of comment #559.

Cl **61** *SC* **61.1.4.1.1.** *P* **357** *L* **7** # **509**

Schneiderheinze, Burkart
Infineon Technologies

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

not clear whether and how 10PassTS and 2BASE-TL utilizes another management interface

SuggestedRemedy

add a note that management interface according to clause 45.1 (extensions to MDIO with MMD concept) will be used instead

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
See resolution of comment #559.

Cl **61** *SC* **61.1.4.1.2** *P* **357** *L* **15** # **410**

Grow, Robert
Intel

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

I commend those responsible for inclusion of this note in Clause 61 for their honesty. It is though unconcionable if any member of the Task Force voted to recirculate this document if they knew it was incomplete in implementing changes required by D3.0 comment resolution. A sponsor ballot recirculation is not the time to be asking the group to help fix a problem.

I agree with the editor's note suggestion that the current draft is inconsistent with Clause 22, at a minimum the first paragraph of 22.2.2.9.

SuggestedRemedy

I would recommend adding a subclause to 61 (and any other new clause if required) that describes the divergence from the MII specification. Specifically state that unlike other PHY layers (e.g., 100BASE-T), CRS is not always deasserted when both the receive and transmit medium are idle. CRS may be asserted by the PHY to reduce the effective MAC rate to that of the PHY.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
To be discussed with comment #370.

Remove the Editor's Note from 61.1.4.1.2.

In 61.1.4.1.1 change:
"10PASS-TS and 2BASE-TL specify the use of the MII electrical interface as defined in Clause 22. 10PASS-TS and 2BASE-TL do not utilize the MII manangement interface as described in 22.2.4."
to:
"10PASS-TS and 2BASE-TL specify the use of the MII electrical interface as defined in Clause 22 operating at 100 Mb/s. Notwithstanding the specifications in 22.2.2.9, CRS may be asserted by a full-duplex EFM Copper PHY to reduce the
effective MAC rate to that of the PHY.
10PASS-TS and 2BASE-TL do not utilize the MII manangement interface as described in 22.2.4. It is highly recommended that 10PASS-TS and 2BASE-TL utilize the MDIO management interface as specified Clause 45."

Add following sentence to 61.2.1.2.1:
"CRS is forced to the value of the carrierSense variable (see 61.2.1.3.2)"

Cl **61** *SC* **61.1.4.1.2** *P* **357** *L* **20** # **556**

Grow, Robert Intel

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

MAC does not check CRS. The MAC uses carrierSense which is mapped from CRS (see note in 22.2.1.3.3).

SuggestedRemedy

Prior to transmission, the MAC checks the carrierSense variable (mapped from the MII signal CRS), and will not transmit another frame as long as CRS is asserted.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **61** *SC* **61.1.4.1.4** *P* **357** *L* **54** # **510**

Schneiderheinze, Burkart Infineon Technologies

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

abbreviation IB not clear

SuggestedRemedy

add an entry for IB (indicator bits??) to the abbreviation list

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **61** *SC* **61.1.5.3** *P* **358** *L* **51** # **511**

Schneiderheinze, Burkart Infineon Technologies

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

accdg. to clause 45.2.3.19 PME Avail. Register, the PME Avail must only allow the connection to 1 MII prior enabling the links

SuggestedRemedy

add a note that the same PME may not be listed in different PME avail. register at line start up

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
To be discussed by CuSTF in Clause 45 session.

Cl **61** *SC* **61.1.5.3.1** *P* **359** *L* **4** # **583**

Cravens, George Mindspeed

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

There are three MMDs discussed, the PCS, TC, and PMA/PMD (shown in Figure 61-3 and discussed as the PME).

SuggestedRemedy

Change the second sentence from:
"... assume that only two MMDs are used: PCS (MMD=3), and TC (MMD=TBD)."

to: "... assume that only three MMDs are used: PCS (MMD=3), TC (MMD=6), and PMA/PMD (MMD=1, shown as PME in Figure 61-3)."

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **61** *SC* **61.1.5.3.1** *P* **359** *L* **5** # **581**

Cravens, George Mindspeed

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

The TC MMD is 6.

SuggestedRemedy

Change TBD to 6.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.
See also comment #446.

Cl **61** *SC* **61.1.5.3.1.** *P* **359** *L* **5** # **446**

Schneiderheinze, Burkart Infineon Technologies

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

MMD undefined

SuggestedRemedy

change MMD = TBD to MMD = 6

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.
See also comment #581.

Cl **61** *SC* **61.1.5.3.2** *P* **361** *L* **33** # **512**
Schneiderheinze, Burkart Infineon Technologies

Comment Type **T** *Comment Status* **D**
accdg. to 45.2.3.19 1 PME may only be aggregatable to 1 MII

SuggestedRemedy
add a note that this connectivity reflects the reset capability and has to be limitied as described in 45.2.3.19 before enabling the links, applies to example b as well

Proposed Response *Response Status* **W**
PROPOSED ACCEPT IN PRINCIPLE.
To be discussed by CuSTF in Clause 45 session.

Cl **61** *SC* **61.1.5.3.2.** *P* **359** *L* **38** # **447**
Schneiderheinze, Burkart Infineon Technologies

Comment Type **E** *Comment Status* **D**
Register numbering changed

SuggestedRemedy
change x.3.46 and x.3.47 to x.3.62 and x.3.63. This appiles also to Tables 61-1, 61-2, 61-3

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

Cl **61** *SC* **61.1.5.3.3** *P* **361** *L* **49** # **448**
Schneiderheinze, Burkart Infineon Technologies

Comment Type **E** *Comment Status* **D**
Register numbering changed

SuggestedRemedy
change x.3.48 and x.3.49 to x.3.64 and x.3.65. This appiles also to Tables 61-4, 61-5, 61-6

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

Cl **61** *SC* **61.1.5.3.3** *P* **362** *L* **44** # **513**
Schneiderheinze, Burkart Infineon Technologies

Comment Type **E** *Comment Status* **D**
footnote applies to all 3 table

SuggestedRemedy
put the footnote a to all 3 tables

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

Cl **61** *SC* **61.10.4.4** *P* **408** *L* **33** # **203**
Beck, Michael Alcatel Bell nv

Comment Type **T** *Comment Status* **D**
PICS entries of former subclause 61.3.12 (now 61.4.8) seem to be out-of-date.

SuggestedRemedy
Look for occurrences of the verb "shall" in subclause 61.4.8, and create a PICS entry for each of them. PICS entries HS-8 and HS-9 may become obsolete.

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

Cl **61** *SC* **61.2.1.1** *P* **363** *L* **24** # **584**
Cravens, George Mindspeed

Comment Type **E** *Comment Status* **D**
Add the variable name and cross-reference for MII receive during transmit.

SuggestedRemedy
Add the following after the sentence on line 23 (ends with while the MAC is transmitting.):

See MII receive during transmit, Clause 45.2.3.18.

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

Cl **61** *SC* **61.2.2** *P* **365** *L* **39** # **423**
Barry, O'Mahony Intel

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

SuggestedRemedy
delete 1 "PME"

Proposed Response *Response Status* **W**
PROPOSED ACCEPT.
See also comment #601 and #449.

Cl **61** *SC* **61.2.2** *P* **365** *L* **39** # **601**
Squire, Matt Hatteras Networks

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

SuggestedRemedy
PME

Proposed Response *Response Status* **W**
PROPOSED ACCEPT.
See also comment #423 and #449.

Cl **61** *SC* **61.2.2.** *P* **365** *L* **39** # **449**
Schneiderheinze, Burkart Infineon Technologies

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

typo: Change PMEPME to PME

SuggestedRemedy

as described

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.
See also comments #601 and #423.

Cl **61** *SC* **61.2.2.3** *P* **368** *L* **34** # **450**
Schneiderheinze, Burkart Infineon Technologies

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

Excessive capitalization ;-) : change AGGREGATION to Aggregation

SuggestedRemedy

as described

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **61** *SC* **61.2.2.4.1** *P* **369** *L* **6** # **451**
Schneiderheinze, Burkart Infineon Technologies

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

Description of expected sequence number: The second part of the first paragraph and the second paragraph are repeated some lines below (line 33, 42) literally.

SuggestedRemedy

remove sentences 'As fragments are received, …' and 'In addition to the expected sequence number …'

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **61** *SC* **61.2.2.4.2** *P* **369** *L* **43** # **453**
Schneiderheinze, Burkart Infineon Technologies

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

(anyQueueNonEmpty = TRUE) * (noFragmentProcessed = TRUE) (see state diagram) and the description in page 370, line 31 (any PME queue has been non-empty for maxDifferentialDelay bit times without any fragment being processed) are not completely equivalent: it does matter which queue is non empty

SuggestedRemedy

Combine (anyQueueNonEmpty = TRUE) * (noFragmentProcessed = TRUE) to just one transition condition:
noFragmentsProcessed_Timer
variable of type boolean that indicates whether at least one active queue has been non-empty for maxDifferentialDelay bit times at the bit rate of the PMD associated with that queue. Each fragment processed on any queue restarts all per-queue timers.
TRUE if a timeout of maxDifferentialDelay bit times has expired
FALSE if the timeout of maxDifferentialDelay bit times has not yet expired

remove variable anyQueueNonEmpty (page 369, line 27)
change state diagram accordingly

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **61** *SC* **61.2.2.4.2** *P* **369** *L* **43** # **452**
Schneiderheinze, Burkart Infineon Technologies

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

The transition conditions 'noFragmentsProcessed' and 'oneQueueNonEmpty' depend on the expiration of timers. To make this more obvious, add '_timer' to the variables.

SuggestedRemedy

change to 'noFragmentsProcessed_Timer' and to 'oneQueueNonEmpty_Timer' in 61.2.2.4.2. and in Figure 61-11

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **61** *SC* **61.2.2.4.2** *P* **370** *L* **10** # **455**
Schneiderheinze, Burkart Infineon Technologies

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

smallestFragmentSequenceNumber is missing

SuggestedRemedy

add smallestFragmentSequenceNumber: smallest sequence number of fragments at the head of per-PME queues
remove space in figure 61-11

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **61** *SC* **61.2.2.4.2** *P* **370** *L* **2** # **454**

Schneiderheinze, Burkart — Infineon Technologies

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

Definition of oneQueueNonEmpty:
TRUE if at least one active queue has been non-empty for at least maxDifferentialDelay bit times
FALSE if all active queues have been non-empty for less than maxDifferentialDelay bit times
The FALSE condition is not the correct inverting of the TRUE condition (e.g. in the case that all queues are empty neither TRUE nor FALSE are fulfilled).

SuggestedRemedy

Change to 'FALSE otherwise'

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **61** *SC* **61.2.2.4.4.** *P* **370** *L* **36** # **456**

Schneiderheinze, Burkart — Infineon Technologies

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

description for overflow misleading:
change '… causes an overflow ...' to '… causes an frame length overflow …'.
This frame length overflow error is described in chapter 61.2.2.7.3.
If a buffer overflow in frame buffer (after reassembly) should be counted (like TC_PAF_Overflow does for fragment buffer), this error condition needed to be defined additionally.

SuggestedRemedy

change '… causes an overflow ...' to '… causes an frame length overflow …'

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
Replace
"causes an overflow …"
with
"causes a frame length overflow …"

Cl **61** *SC* **61.2.2.5** *P* **371** *L* **48** # **514**

Schneiderheinze, Burkart — Infineon Technologies

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

not clear what exactly 'significantly' means

SuggestedRemedy

add that therefore no extra buffer size per PME needs to be foreseen

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
Replace:
"Differences in electrical length will not contribute significantly to the differential latency."
With:
"Differences in electrical length will not contribute significantly to the differential latency; no additional per-PME buffer size is required for this variation."

Cl **61** *SC* **61.2.2.6** *P* **372** *L* **38** # **457**

Schneiderheinze, Burkart — Infineon Technologies

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

A maxFragmentSize fragment is currently 512+2 octets for header = 514 octets long. But receive buffer size definition is based on 512 octets.
Furthermore 514 is not dividable by 4 as required in c).

SuggestedRemedy

remove 'not' in a and b: min 64 and max 512 _including_ PAF header.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **61** *SC* **61.2.2.6** *P* **372** *L* **39** # **602**

Squire, Matt — Hatteras Networks

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

What value does (d) add? According to 61.2.2.5, latency has to be controlled to meet restriction (a) in 61.2.2.5. Whats so special about 512-octets? What about 511-octets - is that really much different?

Anyway, it is redundant and misleading.

SuggestedRemedy

Remove (d).

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
Remove (d) as a requirement, but replicate the content in the
form of an informative NOTE, to avoid new comments about the apparent incompatibility of the different requirements.

Cl **61** *SC* **61.2.2.7.** *P* **373** *L* **10** # **458**
Schneiderheinze, Burkart Infineon Technologies

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

Typo:framgent

SuggestedRemedy

fix it

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **61** *SC* **61.2.2.7.3.** *P* **374** *L* **3** # **459**
Schneiderheinze, Burkart Infineon Technologies

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

One error condition is currently not handled: while packet assembly function is between frames a fragment with neither SoP nor EoP is received.
Signal PAF_Lost can also be used for that condition, but we need a new variable missingStartOfPacket in the state diagram.

SuggestedRemedy

page 374, line 3: remove 'the EndOfPacket bit asserted and'.
in 61.2.2.4.2 and in Figure 61-11: add missingStartOfPacket

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **61** *SC* **61.2.2.8.3** *P* **375** *L* **5** # **515**
Schneiderheinze, Burkart Infineon Technologies

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

accdg. to 45.2.6.3.1 the remote_discovery_register is not a register, but a variable which is only defined for the -R ports, neither aggregation_state_register

SuggestedRemedy

add these 2 registers to Clause 45 (PCS part, valid only for -R devices, read only, can be only modified using remote address) or add a note that these 2 'registers' are variables

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
To be discussed by CuSTF in Clause 45 session.

Cl **61** *SC* **61.2.2.8.4** *P* **375** *L* **37** # **516**
Schneiderheinze, Burkart Infineon Technologies

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

no remote discovery register as real register with dedicated address defined in clause 45

SuggestedRemedy

define clause45.3 (PCS) remote_discovery_register (valid only for CPE types, read only, can only be modified using remote accesses)

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
To be discussed by CuSTF in Clause 45 session.

Cl **61** *SC* **61.2.3** *P* **376** *L* **49** # **517**
Schneiderheinze, Burkart Infineon Technologies

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

wrong cross ref

SuggestedRemedy

update to 45.2.3.17.1

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **61** *SC* **61.2.3** *P* **377** *L* **39** # **518**
Schneiderheinze, Burkart Infineon Technologies

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

no definition of remote_discovery_register given clause 45

SuggestedRemedy

define remote_discovery_register and assign address

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
See also comment #515. To be discussed by CuSTF in Clause 45 session.

Cl **61** *SC* **61.2.3.** *P* **377** *L* **1** # **460**
Schneiderheinze, Burkart Infineon Technologies

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

wrong Gamma-Signal name

SuggestedRemedy

change RxErr to Rx_Err

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **61** *SC* **61.2.3.** *P* **377** *L* **44** # **461**
Schneiderheinze, Burkart Infineon Technologies

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

wrong cross reference

SuggestedRemedy

change to 45.2.6.3.1

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **61** *SC* **61.3.1** *P* **379** *L* **4** # **390**
kimpe, marc Adtran

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

Comment applies to table 61-9. It was our initial intention to keep the gamma interface identical to G.993.1. It appears that signals have been added. I can understand the extra functionality needed for the optional PAF aggregation. I do not understand the need for the TC_link_state bit.

SuggestedRemedy

Either remove TC_link_state or use one of the existing gamma interface signal to carry its functionality

Proposed Response *Response Status* **W**

PROPOSED REJECT.

This signal has been present in the draft since D1.2, perhaps earlier.

This signal is needed because the PAF needs to know the status of the link state. The addition of the signal preserves layering.

Cl **61** *SC* **61.3.2** *P* **379** *L* **27** # **519**
Schneiderheinze, Burkart Infineon Technologies

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

term PMD PME not correct

SuggestedRemedy

remove PMD

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **61** *SC* **61.3.2.1** *P* **380** *L* **13** # **520**
Schneiderheinze, Burkart Infineon Technologies

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

PMA_PMD Type: accodg. to Cl45.2.1.12 a PM can support CPE and CO operation, coding however does not allow operation of -O and -R device

SuggestedRemedy

define coding for all 6 different scenarios

Proposed Response *Response Status* **W**

PROPOSED REJECT.

This signal is used to communicate the operating mode of the PMD during Showtime. It preserves laying and is used, for example, to control the selection of the TC-CRC.

Cl **61** *SC* **61.3.2.2.** *P* **380** *L* **28** # **462**
Schneiderheinze, Burkart Infineon Technologies

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

typo

SuggestedRemedy

change clt_t to clk_t

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **61** *SC* **61.3.3.1** *P* **382** *L* **32** # **463**
Schneiderheinze, Burkart Infineon Technologies

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

'No new fragment shall be transmitted when TC_link_state = FALSE (TC_link_state is defined in 61.3.3.7). If a fragment is being transmitted when TC_link_state becomes false, the End of Frame codeword completing the fragment shall not contain an S symbol after the end of the fragment'
does not describe the behaviour correctly, since the state machine was changed to react immediately on TC_link_state changes.

SuggestedRemedy

Change to 'If a fragment is being transmitted when TC_link_state becomes false, the transmission of the fragment is aborted immediately.'

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

See comment #202

Cl **61** *SC* **61.3.3.3.** *P* **385** *L* **8** # **464**

Schneiderheinze, Burkart Infineon Technologies

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

In the 2BASE-TL polynomial there is a mistake: in the first part terms x^^20 and x^^23 have to be removed.

SuggestedRemedy

remove terms

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **61** *SC* **61.3.3.5.1** *P* **387** *L* **5** # **521**

Schneiderheinze, Burkart Infineon Technologies

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

reference to clause 45 register bit missing

SuggestedRemedy

add cross ref of reset to register 3.6.xx (reset bit definition still missing - see different comment addressing this issue)

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **61** *SC* **61.3.3.5.1.** *P* **387** *L* **12** # **465**

Schneiderheinze, Burkart Infineon Technologies

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

FourUnequivocalSyncs:
the definition used in D3.0 is covered fully by a) and b).
c) is a new requirement compared to D3.0, that additionally makes the sync detection algorithm far more complicated than necessary.

SuggestedRemedy

remove c)

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Note that the current (a) and (b) do not cover the case where the syncs are not all separated by 64 bytes.

However, (c) appears incorrect. Condition (c) should have 3 syncs in it (just as (b) does); however, the length of the sequence as defined in (a) is not long enough to include 3 syncs that are not all separated by 64 bytes. This is why it only includes 2 syncs. However, it appears that (a) needs to be revised slightly so that a longer (c) sequence could be included. The new definitions would read as follows:

(a) the sequence is of the form <data><sync><data><sync><data><sync><data><sync>, where each <sync> is 0F16 or F016 and each <data> is 64 octets of any value;

(b) the pattern <sync><data><sync><data><sync> occurs nowhere in the sequence, where <sync> and <data> are as defined in (a), unless the <sync> values are coincident with those in (a);

(c) the patterns <sync><data1><sync><data><sync>, or <sync><data><sync><data1><sync>, occur nowhere in the sequence, where <sync> is as defined in (a) and <data1> is 129 octets of any value, unless the <sync> values are coincident with those in (a).

Cl **61** *SC* **61.3.3.5.2** *P* **387** *L* **44** # **200**

Beck, Michael Alcatel Bell nv

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

Figure 61-17 is not introduced by a "shall"-statement.

SuggestedRemedy

Change text to: The receiver shall implement the sync detect state machine shown in Figure 61-17.
Add corresponding PICS entry.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **61** *SC* **61.3.3.7.1** *P* **389** *L* **22** # **130**

Brown, Benjamin Independent

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

Missing variable definition

SuggestedRemedy

Add a definition for TC_synchronized (used in state SYNC_IDLE) - probably copy from 61.3.3.7.2. This variable is now defined 3 different times in 5 pages. If it wasn't so late in the process, I'd recommend combining all the variable definitions for all 3 state diagrams (61-17, 61-18, and 61-19). This may be more than you want to take on at this late date. Just be careful how this variable is described so there is no conflicting definitions.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **61** *SC* **61.3.3.7.1** *P* **390** *L* **34** # **202**

Beck, Michael Alcatel Bell nv

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

In Figure 61-18, a change in variable TC_link_stateCHANGE causes an abrupt change in the transmitted pattern, forcing the remote to lose sync. This behavior may be unwanted.

SuggestedRemedy

Remove k <= 0 from state INIT.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Needs discussion in STF. Remove k=0 from INIT, or perhaps enter state ABORT_FRAGMENT instead.

See comment #463

Cl **61** *SC* **61.3.3.7.1.** *P* **389** *L* **35** # **466**

Schneiderheinze, Burkart Infineon Technologies

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

The transmit fifo described here needs to be flushed in case of loosing sync (can be done e.g. in the INIT state), otherwise the transmission might start with an incomplete fragment after regaining sync

SuggestedRemedy

add appropriate hint here

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Add buffer flush to INIT state.

See comments #202 & #463 also.

Cl **61** *SC* **61.3.3.7.2.** *P* **391** *L* **28** # **470**

Schneiderheinze, Burkart Infineon Technologies

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

Rx_EoP not used any more in state diagram

SuggestedRemedy

remove Rx_EoP definition

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Elevated from "E" to "T"

Needs discussion in STF.

Add Rx_EoP control (in desciption of sendOctetToPAF). Or note that RX_EoP behavior is defined in referenced G.993.1 specification.

Cl **61** *SC* **61.3.3.7.2.** *P* **391** *L* **54** # **471**

Schneiderheinze, Burkart Infineon Technologies

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

definition of decode(octet B) can be simplified: between 0 and 63: valid C(k), greater or equal 64: not valid C(k).
other values are not used in state diagram

SuggestedRemedy

change definition accordingly

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

It appears that decode() is just used to set kmax in DECODE1 and DECODE2.

Cl **61** *SC* **61.3.3.8** *P* **392** *L* **25** # **522**

Schneiderheinze, Burkart Infineon Technologies

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

remote TC synchronized will be passed to clause 45 and missing in management entitiy list

SuggestedRemedy

add remote TC synchronized and cross reff to 45.2.6.10

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Note the state machine variable is remote_TC_out_of_sync (i.e., the inverse of the Clause 45 bit). Note also that reference on page 391, line 21 is incorrect (should be 45.2.6.10).

Correct text accordingly.

Cl **61** *SC* **61.4.1** *P* **392** *L* **45** # **427**

Barry, O'Mahony Intel

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

G.994.1 will be updated at the April SG15 meeting.

SuggestedRemedy

Update reference to G.994.1 (see Q4/15 liaison). Also update in Clause 1.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **61** *SC* **61.4.3** *P* **394** *L* **54** # **208**

Beck, Michael Alcatel Bell nv

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

Toneset V43 was created in ITU, as a reaction to the liaison of the IEEE EFM Task Force (DFW, TX, 10-13 March 2003) to ITU, stating that IEEE for 10PASS-TS had chosen B43 for the MCM line code, and "B4" for the SCM line code (B4 was a new toneset proposed by IEEE to ITU).

In a liaison to the IEEE EFM Task Force, ITU proposed to replace the B4 toneset by toneset V43 as a common toneset to be used for both SCM and MCM

As SCM is not anymore in consideration for 10PASS-TS, the need for a new toneset B4 or V43 in the US0-DS1 band has disappeared. Therefore, we propose to replace the toneset V43 by the tonesets currently under discussion in ITU.

SuggestedRemedy

Align the definition of mandatory tonesets in 10PASS-TS with a possible liaison to IEEE from ITU as a result of SG15/Q4 March 8-12, San Francisco meeting.

In the absence of a liaison from ITU, following resolution is proposed:

Table 61-13:

D43 (a)
US: 9, 17, 25; max pwr -1.65 dBm
DS: 257 383 511; max pwr -3.65 dBm

E43 (a)
US: 37, 45, 53; max pwr -1.65 dBm
DS: 257 383 511; max pwr -3.65 dBm

F43 (a,b)
US: 944, 999, 1037; max pwr -16.65 dBm
DS: 257 383 511; max pwr -3.65 dBm

a) In some jurisdictions it may be necessary to limit the maximum downstream power level, for example -23.65 dBm/carrier where the PSD is limited to -60 dBm/Hz.
b) It is expected that the sufficient power back-off is applied to the upstream tones of short lines to avoid excessive crosstalk into adjacent pairs during the handshake.

Table 61-14: D43, E43 and F43 are mandatory tonesets for 10PASS-TS. Add note: "Note 1: In some jurisdictions the use of a particular toneset may be prohibited for regulatory reasons."

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Proposed response pending results of March 8-12 Q4/15 meeting.

Cl **61** *SC* **61.4.3** *P* **395** *L* **17** # **413**

Barry, O'Mahony Intel

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

Table 61-15 is a duplicate of Table 3/G.994.1.

This comment is submitted on behalf of ITU-T Q4/15. Q4/15 in their liaison requests that we reference the table in G.994.1 instead of reproducing it.

SuggestedRemedy

Delete Table 61-15; insert reference to Table 3/G.994.1.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
Delete Table 61-15; insert reference to Table 3/G.994.1.
Depending on the resolution of comment #208, Table 61-13 may also be replaced by a reference.

Cl **61** *SC* **61.4.8** *P* **396** *L* **30** # **523**

Schneiderheinze, Burkart Infineon Technologies

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

Not necessarily all CLR messages have to be preceded by MR/REQ-CLR message (i.e. -R initiated start up)

SuggestedRemedy

rephrase sentence that each CLR message might be preceded by MR/REQ-CLR message

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
Change NOTE 2 to:
"In the transactions specified in this subclause, each CLR message may be preceded by MR/REQ-CLR messages. Each CL message is followed by an ACK(1). These messages are not shown in the diagrams."

Cl **61** *SC* **61.4.8.1** *P* **396** *L* **48** # **524**

Schneiderheinze, Burkart Infineon Technologies

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

remote discovery accesses only valuable if CPE sets PME Aggregation Discovery SPar(2) bit to 1(PAF available)

SuggestedRemedy

add this note

Proposed Response *Response Status* **W**

PROPOSED REJECT.
The first sentence of this subclause reads:
"2BASE-TL-R and 10PASS-TS-R PHYs shall assert the PME Aggregation Discovery SPar(2) bit in all G.994.1 CLR messages, if and only if its local PAF_available bit is set."
This implies the information requested by the commenter.

Cl **61** *SC* **61.4.8.1** *P* **398** *L* **7** # **525**

Schneiderheinze, Burkart Infineon Technologies

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

A CLR message sent by the -R device is always followed by a CL (not a CLR message)

SuggestedRemedy

rename CLR to CL on line 7, 25, 43

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **61** *SC* **61.4.8.3** *P* **399** *L* **30** # **419**

Barry, O'Mahony Intel

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

As it currently stands, even with changes made to D3.1, the text leaves the behavior of the PHYs when the PMA/PMD Link Control bit is set to one in the "-R "10P/2B Link Control register (Table 45-10a) undefined. In fact, it states it is out of scope. This needs to be fixed. Also, not all values of PMA/PMD type selection are supported in all cases.

SuggestedRemedy

Modify the text beginning at line 30 to read as follows:

If the PMA/PMD link control bit is set to 1 in the -O device (Table 45–10a), or discovery register operations are initiated (Table 45–59b), or link partner aggregation register operations are initiated (Table 45–59c), the -O device initiates G.994.1 startup procedures by transmitting C-TONES.

If the PMA/PMD link control bit is set to 1 in the -R device (Table 45–10a), the -R device initiates G.994.1 startup procedures by transmitting R-TONES-REQ.

NOTE—"-R" device initiated start-up is outside the scope of this standard. {delete Note}

At the conclusion of G.994.1 startup, the "-R" device shall begin G.994.1 transactions by transmitting an MR message.

If the G.994.1 session was initiated by the PMA/PMD link control bit (signifying that the link is to be brought up) in either the "-O" or "-R" device, then the "-O" device shall respond with an MS message specifying the configured mode of operation. However, if the PMA/PMD type selection bits in the "-O" device are set to the value 0011 or 0100, and a capabilities exchange has not previously taken place, the "-O" device shall instead respond with an REQ-CLR so that a capabilities is performed. Following the final message of the capabilities exchange (i.e., an ACK(1)), the "-R" device once again sends an MR message. The "-O" device shall respond with an MS message specifying the configured mode of operation.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **61** *SC* **61.4.8.3** *P* **399** *L* **30** # **526**

Schneiderheinze, Burkart Infineon Technologies

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

4 chapters beginning at line 30 just specify certain parts out of the entire activation, these parts do not consider experiences made in the past when bringing up systems controlled by g.994.1 sessions

SuggestedRemedy

remove 4 chapters and replace them by the following text:
'The first g.994.1 session after Power Up, no matter whether this is a discovery operation, a Partner aggregationregister operation or a PMA/PMD link operation, should use the g.994.1 -R initiated startup and send a CLR message. Following sessions may be initiated either by the -O device (i.e. wake up out of silence) or by the -R device (i.e. silence period expired).
At the conclusion of the first g.994.1 startup session after power up, the -R device shall begin following g.994.1 transactios with a CLR or MR message. After silence periods (silence timer expired, or wake up scenario) the -R device shall begin g.994.1 transactions with an MR message.
If the g.994.1 session was initiated by the PMA/PMD link control bit (see 45.2.1.11) preceding discovery operation and/or partner aggregation register operation, then the -o device shall respond with an MS message specifiying the configured mode of operation, otherwise with an REQ-CLR'

Proposed Response *Response Status* **W**

PROPOSED REJECT.
The use of -R initiated startup is addressed by comment #419. The motivation for the other proposed changes is unclear. Needs discussion in the CuSTF.

Cl **61** *SC* **61.4.8.3** *P* **399** *L* **45** # **527**

Schneiderheinze, Burkart Infineon Technologies

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

depending on the g.994.1 message the -o device received before, the -o device has to respond aedequately

SuggestedRemedy

change the part of the sentence in the following way:'.., then the -O device shall respond with and REQ-CLR (MR received before) or with a CL message (CLR received before).

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **61** *SC* **61.4.8.3** *P* **399** *L* **48** # **528**

Schneiderheinze, Burkart Infineon Technologies

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

Cleardown condition not correct. Aggregation has 3 different stage, and each link can be in a different stage. Between the stages there might be some breaks where no actions takes place on this link (none of the 3 mentioned bits set). In this breaks no clear down process shall be started

SuggestedRemedy

Remove entire sentence, see different comment which is asking for dedicated clear down bit in register 45.1.30 (chapter 45.2.11)

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
Needs discussion in CuSTF.

Cl **61** *SC* **61.6** *P* **400** *L* **17** # **209**

Beck, Michael — Alcatel Bell nv

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

61.6, "MDI specifications", states that "local regulations may dictate interface characteristics in addition to or in place of some or all of these requirements".

61.8, "Environmental specifications", states that "the specific requirements of the network operator or the local authority having jurisdiction shall prevail in all cases".

These statements override the specific requirements of Clause 62 and Clause 63, and may impact the performance of EFM Copper systems. There is no text to warn the implementer/user that this may result in non-compliance with this standard.

SuggestedRemedy

Add the following informative text to 61.7 "System considerations"

NOTE---It is recognized that an EFM Copper system may have to comply with additional requirements and/or restrictions outside the scope of this standard (see 61.6 and 61.8 for examples) in order to be allowed to be connected to a public infrastructure in a certain geographic area or regulatory environment. These additional requirements and/or restrictions may prohibit operation under certain profiles, or degrade the performance of the system when working under certain profiles. If this is the case, the system is not compliant with this standard, as compliant systems support all profiles (see Annex 62A for 10PASS-TS and Annex 63A for 2BASE-TL) and meet all performance guidelines (see Annex 62B for 10PASS-TS and Annex 63B for 2BASE-TL).
A compliant CPE-side system cannot distinguish a CO-side system designed to operate under a limited set of profiles from a fully compliant CO-side system, as the selection of profiles is under control of the CO-side. A CPE-side system designed to operate under a limited set of profiles cannot be guaranteed to correctly interoperate with compliant CO-side systems.
It is recommended that vendors of systems that support a limited set of profiles provide PICS forms to indicate which profiles are supported, in order to allow users to assess the impact on interoperability.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **61** *SC* **61.7** *P* **400** *L* **23** # **289**

Dawe, Piers — Agilent

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

only in the wrong place

SuggestedRemedy

Change 'Both EFM Copper port types are only defined for full duplex operation,' to 'Both EFM Copper port types are defined for full duplex operation only,'.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **61** *SC* **Figure 61-14** *P* **381** *L* **39** # **128**

Brown, Benjamin — Independent

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

Wrong symbol

SuggestedRemedy

After the FCS is inserted, the following symbol should be "Z" not "S", as is described by the hex value pointing to this symbol

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **61** *SC* **Figure 61-15** *P* **384** *L* **9** # **129**

Brown, Benjamin — Independent

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

The base number "16" isn't showing up clearly - only the "1" is showing up

SuggestedRemedy

Either change the width of the box so the "16" shows up or drop the subscript base entirely, perhaps adding a note at the bottom of the figure stating that all octets other than Dx are in hexadecimal notation.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
Given the limited amount of space in the little rectangles, the editor favors dropping the subscripts in this Figure, and adding a note at the bottom of the figure stating that all octets other than Dx are in hexadecimal notation.

Cl **61** *SC* **Figure 61-18** *P* **390** *L* **29** # **131**

Brown, Benjamin — Independent

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

I think you made this change at my suggestion back in January but I'm not sure I like the ramifications. Whenever TC_link_state changes to FALSE, the 64/65-octet boundary changes since the variable k is reset to 0 immediately upon this occurrence.

SuggestedRemedy

Remove the k<=0 assignment from state INIT

Create a parallel state to INIT that keeps the k<=0 assignment. Add a global input to this state for "BEGIN" then copy the definition of BEGIN from 61.3.3.5.1 to 61.3.3.7.1. Modify state names as desired.

BEGIN wants to assign a value to k. TC_link_state changing to FALSE should not change the value for k.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.
See also comment #202.

Cl **61** *SC* **Figure 61-18** *P* **390** *L* **34** # **467**

Schneiderheinze, Burkart Infineon Technologies

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

add 'Reset'-Transition into state 'INIT'

SuggestedRemedy

add 'Reset'-Transition into state 'INIT'

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **61** *SC* **Figure 61-18** *P* **390** *L* **43** # **469**

Schneiderheinze, Burkart Infineon Technologies

Comment Type **T** *Comment Status* **D** *Upgraded to 'T' by Editor*

In state END_DATA: k:=k+1 needs to be done because of the transmission of C(k). The incrementation of k for each octet was already done in PULL_PAF_DATA2. It does functionally not matter, but it would be better understandable if k:=k+1 was done in END_FRAGMENT.

SuggestedRemedy

move 'k:=k+1' from END_DATA to END_FRAGMENT

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **61** *SC* **Figure 61-18** *P* **390** *L* **45** # **468**

Schneiderheinze, Burkart Infineon Technologies

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

As transmitZ() is defined it sends Y when k=1.
Therefore UPDATE_K and IDLE need to be exchanged (k:=k+1 before transmitZ()).

SuggestedRemedy

Change order of UPDATE_K and IDLE.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **61** *SC* **Figure 61-19** *P* **393** *L* **11** # **473**

Schneiderheinze, Burkart Infineon Technologies

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

In state OUT_OF_FRAG_POS_1, only correct symbols shall reset remote_TC_out_of_sync to FALSE

SuggestedRemedy

"In state OUT_OF_FRAG_POS_1, change the assignment of remote_TC_out_of_sync to:
IF (B=D1) THEN remote_TC_out_of_sync <= TRUE
ELSE IF (B=50) or (B=0) THEN remote_TC_out_of_sync <= FALSE"

Proposed Response *Response Status* **W**

PROPOSED REJECT.
If an incorrect symbol is received, we don't know if the remote TC is out of sync or not. Resetting remote_TC_out_of_sync is as good a guess as any.

Cl **61** *SC* **Figure 61-19** *P* **393** *L* **34** # **134**

Brown, Benjamin Independent

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

When an improper value is decoded from C in state DECODE1, the packet is never errored or terminated across the PAF. In fact, if you follow the state diagram through states COUNT_CODING_VIOL, CODING_VIOLATION, CHECK_SYNC3, DECODE2 and END_OF_FRAGMENT, it is possible that 2 packets could be munged together across the MII without an error indication at all.

Consider 1 packet that ends early in a 64/65 octet code word and a second packet that starts immediately after it in the same code word. The second packet ends in the following code word. When the first code word is received, the "C" character is corrupted so that the state diagram takes the path described above. It counts the coding violation then spins through the remainder of the first code word while in state CODING_VIOLATION. In state DECODE2, it sees a valid "C" character and so transitions to state END_OF_FRAGMENT. The PAF would see the end of the second packet in place of the end of the first packet but RX_ERR would not be set.

SuggestedRemedy

Set RxErr and RxEOP in state COUNT_CODING_VIOL or perhaps in a brand new state between state DECODE1 and COUNT_CODING_VIOL.

Then, if a clean start of packet wasn't detected, why bother receiving the end of the packet? When leaving state DECODE2 because of a valid "C" character implying EOP, go somewhere to read the remainder of the packet but don't give that packet to the PAF.

By the way - why doesn't this state diagram set RxEOP anywhere?

Proposed Response *Response Status* **W**

PROPOSED REJECT.
TC_coding_error is set in state "COUNT_CODING_VIOL".
Subclause 61.2.2.7.1 says: "If the TC detects an error in the encapsulation, it asserts Rx_Err on the Gamma-interface."
An errored fragment would hence be discarded in the PAF because Rx_Err is set during reception.

The statement at the beginning of 61.3.3.7 applies:
"Only the signals that affect the operation of the state machines are explicitly mentioned in the state diagrams. Other signals are to
be set and read in accordance with the specifications of the gamma-interface (see 61.3.1) and the alpha(beta)-interface
(see 61.3.2) ."

Cl **61** *SC* **Figure 61-19** *P* **393** *L* **34** # **133**

Brown, Benjamin Independent

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

Decoded C values other than 0-63 are all treated the same. There is no reason to decode to specific values for Z, Y, or S.

SuggestedRemedy

On page 391, remove the second to last and third to last sentences in the definition for "decode(octet B)"

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

See comment #471

Cl **61** *SC* **Figure 61-19** *P* **393** *L* **37** # **132**

Brown, Benjamin Independent

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

aquireSync function in state LOSS_OF_SYNC2 is unnecessary. This function is preformed by the state diagram in Figure 61-17. This state diagram is always running in parallel with Figure 61-19 and does not require a specific function call to make it operate.

SuggestedRemedy

Remove this function call from this state and remove its definition from page 391.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **61** *SC* **Figure 61-19** *P* **393** *L* **4** # **472**

Schneiderheinze, Burkart Infineon Technologies

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

RxErr is set in states START_FRAGMENT, LOSS_OF-SYNC1 and CHECK_SYNC2. Setting it to FALSE in START_FRAGMENT and setting it to TRUE in LOSS_OF_SYNC1 is correct, but it has also to be set to TRUE for every coding violation (see 61.2.2.7.1.) and for every CRC error, not just in state CHECK_SYNC2. Additionally, it has to be renamed to Rx_Err.

SuggestedRemedy

Rename to Rx_Err and set/reset whereever appropriate, or remove this variable completely from the state diagram

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
Rename to Rx_Err and remove completely from the state diagram.

Cl **61** *SC* **Figure 61-19** *P* **393** *L* **43** # **135**

Brown, Benjamin Independent

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

Clean up state END_OF_FRAGMENT

SuggestedRemedy

Replace contents of state END_OF_FRAGMENT with the following:

remote_TC_out_of_sync <= FALSE
B <= receiveOctet()
if k=kmax then RxEop <= TRUE
sendOctetToPAF(B)
k <= k+1

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

The Suggested Remedy has following drawbacks:

-receiveOctet() must not be called if k>kmax (e.g., k=1 and kmax=0, in case the fragment ended with the last octet of the previous codeword); therefore, the function call must be conditional to the "IF k<=kmax" statement.

-The statement "k := k+1" outside the THEN block of the "IF k<=kmax" statement may cause interpretation problems due to the assumed simultaneity of actions within a state.

However, in the current state diagram k is increased even if no octet was read (IF k>kmax), which is incorrect.

The state should be corrected by removing the ELSE block.

Cl **61** *SC* **Figure 61-3** *P* **359** *L* **23** # **582**

Cravens, George Mindspeed

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

The TC is mentioned in the paragraph preceeding the figure, but is not shown in the figure.

Add a TC block above each of the PME blocks in the diagram, with connections to the MDC & MDIO lines labeled "Address 0.6".

Also, since Clause 45 shows address x.1 going to the PMA/PMD, the PME blocks might want to add "(PMA/PMD)". {Do not delete the PME label, since it helps the reader follow the discussion that follows in this clause.}

SuggestedRemedy

Add a TC block above each of the PME blocks in the diagram, with connections to the MDC & MDIO lines labeled "Address 0.6".

Also, since Clause 45 shows address x.1 going to the PMA/PMD, the PME blocks might want to add "(PMA/PMD)". {Do not delete the PME label, since it helps the reader follow the discussion that follows in this clause.}

Proposed Response *Response Status* **W**

PROPOSED REJECT.
As shown in Figure 61-2, the PME consists of PMD, PMA and TC.

Cl **61** *SC* **Figure 61-8** *P* **367** *L* **18** # **404**

Law, David 3Com

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

The signal RX_DV is output by the PHY an therefore must be driven by one of the PHY state machines - that is it has to be an output and appear as an assignment within some of the states. The only place that RX_DV seems to appear however is as an input to this state diagram which doesn't seem correct.

SuggestedRemedy

Add the control of RX_DV to one of the state diagrams for this PHY.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
In 61.2.1.3.4, add the following sentence to the definition of the function transferFrame(): "RX_DV is sourced by the EFM Copper PHY in accordance with 22.2.2.6."

Cl **61** *SC* **General** *P* **318** *L* # **99325**

Grow, Robert Intel

Comment Type **TR** *Comment Status* **R** *D3.0 #558*

The management functions of the EFM copper are not specified correctly. Many functions are not defined in Clause 30, and consequently will not be accessable through OAM, as OAM functions are defined in terms of the Clause 30 MIB. Ethernet SNMP functions are also traditionally defined in terms of Clause 30 and not directly into any specific interface type.

SuggestedRemedy

Rewrite the clause and supporting clauses consistent with 802.3 specification approaches. State diagrams reference register definitions, where relevant. Clause 30 references register bits and state diagrams. OAM points to the Clause 30 MIB, not internal functions of Clause 61. If something is expected to be in an SNMP MIB, it should have the capability specified in Clause 30.

Proposed Response *Response Status* **U**

REJECT.
The Copper Sub Task Force has deliberately chosen to divide registers into two categories.

A first category of objects has either only internal significance or allows a level of detailed control not ordinarily needed for normal operation. The registers for these objects can be read/written by means of the Clause 45 MDIO or an equivalent interface, if implemented. It's not expected that these parameters would be set via an SNMP agent.

A second category of objects controls the macroscopic behavior of the EFM Copper devices in terms of discrete, well-defined and testable profiles. These profiles are defined in Annex 62A (10PASS-TS) and Annex 63A (2BASE-TL) and can be controlled by means of dedicated Clause 30 managed objects.

In some cases, equivalent managed objects may appear in Clause 45 and Clause 30. These objects require manageability regardless of the way in which OAM is implemented.

Cl **61** *SC* **Table 61-12** *P* **383** *L* **36** # **587**

Cravens, George Mindspeed

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

Add a column in the table for the Character function name.

SuggestedRemedy

Add a column in the table with each character's function name:

Z Idle
Ck Data
Y Idle, Out of Sync
R Reserved

Proposed Response *Response Status* **W**

PROPOSED REJECT.
Z, Ck, Y and R are the names of the different characters. Giving them another "plain English" name, may cause confusion with the names assigned to the different types of codewords in Table 61-11.

Cl **61** *SC* **Table 61-20** *P* **361** *L* # **99326**

Palm, Stephen Broadcom

Comment Type **TR** *Comment Status* **R** *D3.0 #799*

Why is Table 61-20 included as it appears to be identical to Table 10/G.994.1

SuggestedRemedy

Delete Table; Reference G.994.1

Proposed Response *Response Status* **U**

REJECT.
The table is included because footnote b to Table 61-20 is more specific than the corresponding footnote in ITU-T Recommendation G.994.1.

Cl **61A** *SC* **61A.2** *P* **590** *L* **30** # **535**

Schneiderheinze, Burkart Infineon Technologies

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

use of PMI

SuggestedRemedy

replace PMI with PME

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **61A** *SC* **61A.2** *P* **590** *L* **40** # **533**
Schneiderheinze, Burkart Infineon Technologies

Comment Type **E** *Comment Status* **D**
last 3 actions in PME aggregation phase (MR, MS, ACK) are optional

SuggestedRemedy
mark them as optional

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

Replace transactions A:B in two places with just transaction B.

Mark transaction B at end of PME aggration phase as optional (e.g., may go immediately to line startup instead).

Change "PMI" to "PME".

Cl **61A** *SC* **61A.2** *P* **590** *L* **46** # **426**
Barry, O'Mahony Intel

Comment Type **T** *Comment Status* **D**
label "MR (contains already correct hs values)" is incorrect, as the MR message contains no parameters.

SuggestedRemedy
Move the "(contains already correct hs values)" notation to the subsequent MS message.

Also, in the two "timeout" notes on right side, change "R-TONES" to "R-TONES-REQ".

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

Cl **61A** *SC* **61A.2** *P* **590** *L* **47** # **534**
Schneiderheinze, Burkart Infineon Technologies

Comment Type **E** *Comment Status* **D**
MR never contains any parameter

SuggestedRemedy
remove 'appendix' of MR in the first MR message in the Line Startup

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

See comment #426

Cl **61A** *SC* **61A.2** *P* **591** *L* **5** # **204**
Beck, Michael Alcatel Bell nv

Comment Type **E** *Comment Status* **D**
Typo: aplpha

SuggestedRemedy
Replace "aplpha" with "alpha".

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

Cl **61A** *SC* **61A.2** *P* **591** *L* **5** # **474**
Schneiderheinze, Burkart Infineon Technologies

Comment Type **E** *Comment Status* **D**
typos: aplpha and regsiter

SuggestedRemedy
fix them

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

Cl **61A** *SC* **61A.3** *P* **591** *L* **14** # **536**
Schneiderheinze, Burkart Infineon Technologies

Comment Type **T** *Comment Status* **D**
Exampe encapsulation still up to date?? (i.e. transmission of Y Codeword?)

SuggestedRemedy
? Discuss it on the floor

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

Add footnote that the test cases assume that the remote TC is always synchronized.

Cl **61A** *SC* **Figure 61A-3** *P* *L* # **475**
Schneiderheinze, Burkart Infineon Technologies

Comment Type **E** *Comment Status* **D**
PMI not replaced by PME 5 times in figure 61A-3

SuggestedRemedy
replace PMI by PME

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

Cl **61B** *SC* *P* *L* # **477**

Schneiderheinze, Burkart — Infineon Technologies

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

PMI not replaced by PME about 50 times in Annex 61B

SuggestedRemedy

replace PMI by PME

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **61B** *SC* **61B.2** *P* **596** *L* **15** # **414**

Barry, O'Mahony — Intel

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

Table 61B-1 is a duplicate of Table 10/G.994.1.

This comment is submitted on behalf of ITU-T Q4/15. Q4/15 in their liaison requests that we reference the table in G.994.1 instead of reproducing it.

SuggestedRemedy

Delete Table 61B-1; insert reference to Table 10/G.994.1 in 61.4.5. Move footnote b from Table 61B-1 to 61.4.5 (this footnote places additional detail on the operation of the "Silent period" bit, above what is specified in G.994.1.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **61B** *SC* **61B.2** *P* **597** *L* **1** # **207**

Beck, Michael — Alcatel Bell nv

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

With the recent adoption by ITU-T Q4/15 of SPar(1) codepoints for aggregation discovery, the need for EFM-specific SPar(1) codepoints has disappeared. The commenter has proposed to add NPar(2) codepoints to the handshake trees of G.993.1 and G.991.2 to select the TPS-TC developed by IEEE 802.3ah.

SuggestedRemedy

Assuming that the codepoints proposed in MC-029.doc were adopted by ITU-T Q4/15, replace the 10PASS-TS and 2BASE-TL handshake trees by references to the following codepoints:
- G.994.1 SPar(1) codepoints for aggregation discovery
- Existing G.994.1 SPar(1) codepoints for G.991.2 and G.993.1 in combination with the new "EFM-TC" NPar(2) to select 2BASE-TL and 10PASS-TS, respectively.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Proposed response pending results of March 8-12 Q4/15 meeting.

Cl **61B** *SC* **61B.3.1** *P* **597** *L* **37** # **537**

Schneiderheinze, Burkart — Infineon Technologies

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

correct data rate is 5696 kb/s not 5696 b/s

SuggestedRemedy

change accordingly

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **61B** *SC* **61B.3.1** *P* **599** *L* **15** # **205**

Beck, Michael — Alcatel Bell nv

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

Table 61B-4 seems to contain SPar codepoints, while the title says NPar. Which is it?

SuggestedRemedy

Change table title to "SPar(2) coding...". Check octet numbering.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
NPARs indicate a capability but with no additional parameters. SPARs indicated a capability but with additional parameters at the next lower level. "Downstream Training Parameters", "Downstream training rates - 16-TCPAM" and "Downstream training rates - 32-TCPAM" need to be SPARs because they have additional parameters. Therefore delete the last three items from Table 61B-4, and insert them into Table 61B-5, pushing all the
rest of the codepoints down.

Final result:
NPAR(2) Octet 1
Leave as is

NPAR(2) Octet 2
Regenerator silent period
SRU
Diagnostic Mode
<Rest of octet reserved for use by IEEE>

SPAR(2) Octet 1 (currently says octet 3 for some reason)
2BASE-TL Downstream training parameters
2BASE-TL Downstream training rates - 16-TCPAM
2BASE-TL Downstream training rates - 32-TCPAM
2BASE-TL Upstream training parameters
2BASE-TL Upstream training rates - 16-TCPAM
2BASE-TL Upstream training rates - 32-TCPAM

SPAR(2) Octet 2
2BASE-TL Downstream PMMS parameters
2BASE-TL Downstream PMMS rates
2BASE-TL Upstream PMMS parameters
2BASE-TL Upstream PMMS rates
2BASE-TL Downstream framing parameters
2BASE-TL Upstream framing parameters

SPAR(2) Octet 3
PMI Aggregation Discovery
PMI Aggregation
Variable Silent Period

Cl **61B** *SC* **61B.3.1** *P* **599** *L* **17** # **538**

Schneiderheinze, Burkart — Infineon Technologies

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

term npar in g.994.1 always means that this parameter has no subparameters

SuggestedRemedy

move 2 2BASE-TL code points to SPAR section and begin numbering of SPARs with octet #1

Proposed Response *Response Status* **W**

ACCEPT IN PRINCIPLE.
See resolution of comment #205.

Cl **61B** *SC* **61B.3.1** *P* **600** *L* **12** # **417**

Barry, O'Mahony — Intel

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

This comment is submitted on behalf of ITU-T Q4/15.

Table 61B-6 in the 2BASE-TL tree defines a "PMI Aggregation Discovery" and "PMI Aggregation" bits. In their liaison, Q4/15 notes they have recently defined similar functionality beneath a Level 1 SPar "bonding" bit in Table 9.0.2.

Table 61B-93 defines a similar bit in the 10PASS-TS tree.

SuggestedRemedy

Remove "PMI Aggregation Discovery" and "PMI Aggregation" bits from Tables 61B-6 and 61B-93. Remove suclauses 61B.3.2.4, 61B.3.2.5, 61B.3.2.7, & 61B.3.2.8.

Update references in 61.4.8 as appropriate; specify that "TDIM bonding" bit shall be set to zero; move footnote (a) from Table 61B-6 to body of 61.4.8.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **61B** *SC* **61B.3.1** *P* **600** *L* **16** # **416**

Barry, O'Mahony — Intel

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

This comment is submitted on behalf of ITU-T Q4/15.

Table 61B-6 in the 2BASE-TL tree defines a "variable silent period" bit; a footnote describes its functionality. In their liaison, Q4/15 notes they have recently defined similar functionality in a Level 1 SPar bit in Table 11.0.4.

Table 61B-92 defines a similar bit in the 10PASS-TS tree.

SuggestedRemedy

Remove definitions of the variable silent period bit from Tables 61B-6 and 61B-92. Add reference to Table 11.0.4/G.994.1 in 61.4.5

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.
See also comment #381.

Cl **61B** *SC* **61B.3.2.1** *P* **601** *L* **11** # **206**

Beck, Michael — Alcatel Bell nv

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

The Table caption ends with a hyphen, which is part of the expression "16-TCPAM". This could be confusing, and it is definitely visually unpleasant.

SuggestedRemedy

Replace hyphen with a non-breaking hyphen in this table and the 15 following ones.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **61B** *SC* **61B.3.2.4** *P* **621** *L* **21** # **380**

Beili, Edward — Actelis Networks

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

The ITU-T Q4/SG15 has agreed to adopt PMI aggregation discovery and PMI aggregation parameters codepoints from 802.3ah into G.994.1 (G.Handshake) at the recent meeting in Singapore. Since G.994.1 is referenced by the EFM standard, there's no point for duplicating these code points.

SuggestedRemedy

Remove relevant tables from 61B.3.2 and 61B.4.2, PMI Aggregation Discovery and PMI Aggregation bits from tables 61B-6 and 61B-93. Reference G.994.1 instead.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
See resolution of comment #417.

Cl **61B** *SC* **61B.3.2.6** *P* **626** *L* **1** # **381**

Beili, Edward — Actelis Networks

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

The ITU-T Q4/SG15 has agreed to adopt Variable Silence parameters codepoints from 802.3ah into G.994.1 (G.Handshake) at the recent meeting. Since G.994.1 is referenced by the EFM standard, there's no point for duplicating these code points. Note also that zero value of Variable silence period, currently defined in D3.1, stands for 640sec, and any other value n=1..63 stands for n x 10 sec, while ITU-T defines (n+1) x 10 sec for n=0..63.

SuggestedRemedy

- Remove 61B.3.2.6 and 61B.4.2.1 and Variable silence bit from tables B1B-6 and 61B-92. Reference G.994.1 instead.
- Modify 45.2.1.11.2 and 45.2.1.11.3 to use (n+1) x 10 sec for n=0..63 definition.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

See comment #416

Cl **61B** *SC* **61B-2** *P* **597** *L* **1** # **415**

Barry, O'Mahony — Intel

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

Table 61B-2 is a duplicate of Table 11.0.3/G.994.1.

This comment is submitted on behalf of ITU-T Q4/15. Q4/15 in their liaison requests that we reference the table in G.994.1 instead of reproducing it.

SuggestedRemedy

Delete Table 61B-2; insert reference to Table 11.0.3/G.994.1.

Proposed Response *Response Status* **W**

PROPOSED REJECT.

61B.2 states:
"The SPar(1) codepoints to be used by 2BASE-TL and 10PASS-TS transceivers are specified in ITU-T Rec-ommendation G.994.1. The EFM-specific codepoints are shown in Table 61B-2 for information only."

This means that the EFM Draft defines the Spar(1) codepoints by reference. A copy of the table is shown for information only.

Cl **61B** *SC* **Table 61B-7** *P* **600** *L* **34** # **603**

Squire, Matt — Hatteras Networks

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

We should align the upstream/downstream training parameters with the E-SHDSL training parameters.

SuggestedRemedy

Include analagous tables to E-SHDSL downstream training and upstream training parameters NPAR(3) octets 2, 3, & 4.

Proposed Response *Response Status* **W**

PROPOSED REJECT.
In setting the training parameters, G.shdsl.bis has to take into account the legacy G.shdsl annex A and annex B parameters. For annex A & B, every rate between 192 & 2304 has a bit reserved in the G.hs exchange which makes it is very inefficient. The method defined in EFM is much more efficient in terms of flexibility and the number of octets exchanged. This comment is rejected because it goes half way: either adopt then entire SHDSL.bis tree or design a tree that is better than the ITU tree.

Cl **62** *SC* **56.1.3** *P* **190** *L* **50** # **371**

Dawe, Piers — Agilent

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

Please assist the chief editor with an informed remedy to this comment (repeated):
In the next paragraph we have an informative sentence telling us that 2BASE-TL isn't just a EFM special but has something in common with other standards.

SuggestedRemedy

If it's not too political, insert something similar between 'This PMD' and 'uses passband': perhaps like: This PMD is derived from the VDSL transceiver specified in American National Standard T1.424 and at time of writing, under discussion as G.xxx in ITU-T. It uses passband ...
But get the copper track to write/vet what they want to say.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
Replace:
"EFM introduces a new distinct PMD based on Multiple Carrier Modulation (MCM, also referred to as Discrete Multi-Tone or DMT). This PMD uses passband signaling, and supports a nominal full duplex data rate of 10 Mb/s, hence the identifier 10PASS-TS."
With:
"10PASS-TS is a passband signaling system derived from the Very-high-speed Digital Subscriber Line (VDSL) standard defined in American National Standard T1.424, using Multiple Carrier Modulation (MCM, also referred to as Discrete Multi-Tone or DMT). This PHY supports a nominal full duplex data rate of 10 Mb/s, hence the identifier 10PASS-TS."

Cl **62** *SC* **62.1.2** *P* **410** *L* **14** # **401**

Law, David — 3Com

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

Are the objectives described here the PHY objectives or just the PMA and PMD objectives.

SuggestedRemedy

If these are just for the PMA and PMD suggest that text '... for the 10PASS-TS' be changed to read 'for the 10PASS-TS PMA and PMD'.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
Apply this change to Clause 62 and Clause 63.

Cl **62** *SC* **62.3.2** *P* **414** *L* **32** # **428**

Barry, O'Mahony — Intel

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

Last sentence of paragraph duplicates that in subclause 62.2.2.

SuggestedRemedy

Delete sentence.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **62** *SC* **62.3.4.2** *P* **416** *L* **11** # **588**

Ed Eckert — Ikanos Communication

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

Managing CE length is imperative to getting the best use of available bandwidth per environment (short vs long loops). In the current draft, there is an unnecessary restriction on the value of m which determines the CE lenght. In recognition of this, there are new proposals to do this for VDSL2.

SuggestedRemedy

Either: (1) the restrictive text be removed and the reference to 8.2.3.1 of MCM-VDSL stand as the entire text for subclause 62.3.4.2, or (2) that the sentence read: "The cyclic extension length is specified by the value of the parameter m. In 10PASS-TS, the default value of m=20 is mandatory. Values of m=10 and m=40 shall be supported options. Support for other values is out of scope."

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
Needs discussion in the CuSTF.
It is brought to the attention of the commenter that other values of the CE can already be negotiated between link partners with the currently defined handshake parameters (see Table 61B-105, Table 62-6 and Table 62-8). However, support for values other than m=20 is outside the scope of the current draft.
If new values for m are added to the draft, new management objects are needed to read/write these values. Additionally, an algorithm may be needed to automatically select the optimal m-value based on other configured or detected parameters.

Cl **62** *SC* **62.3.4.9.4** *P* **420** *L* **33** # **429**
Barry, O'Mahony Intel

Comment Type **E** *Comment Status* **D**
typo: "10PASS-TS-C"

SuggestedRemedy
change to "10PASS-TS-O"

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

Cl **62B** *SC* *P* *L* # **478**
Schneiderheinze, Burkart Infineon Technologies

Comment Type **E** *Comment Status* **D**
PMI not replaced by PME 4 times in Annex 62B

SuggestedRemedy
replace PMI by PME

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

Cl **63** *SC* *P* *L* # **476**
Schneiderheinze, Burkart Infineon Technologies

Comment Type **E** *Comment Status* **D**
PMI not replaced by PME twice in clause 63

SuggestedRemedy
replace PMI by PME

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

Cl **63** *SC* **63.1.1** *P* **434** *L* **8** # **529**
Schneiderheinze, Burkart Infineon Technologies

Comment Type **E** *Comment Status* **D**
register space not correct

SuggestedRemedy
change address space to 3.60 to 3.73

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

Cl **63** *SC* **63.1.1** *P* **434** *L* **9** # **530**
Schneiderheinze, Burkart Infineon Technologies

Comment Type **E** *Comment Status* **D**
wrong address space

SuggestedRemedy
correct address space from 1.30-1.42 and 1.80 to 1.100

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

Cl **63** *SC* **63.2.2.3** *P* **438** *L* **23** # **531**
Schneiderheinze, Burkart Infineon Technologies

Comment Type **E** *Comment Status* **D**
mapping of Loop/Line attenuation missing

SuggestedRemedy
dd an entry with loop attenuation Octet #4

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

Cl **63** *SC* **63.2.2.3** *P* **439** *L* **2** # **532**
Schneiderheinze, Burkart Infineon Technologies

Comment Type **T** *Comment Status* **D**
unclear how to map 7 bytes to 22 bit as defined in clause 22.2.4.3.1

SuggestedRemedy
??Discuss it on the floor

Proposed Response *Response Status* **W**
PROPOSED ACCEPT IN PRINCIPLE.
Add a note to map SHDSL defined vendor ID into EFM defined vendor ID. Details to be discussed by CuSTF.

Cl **63** *SC* **63.3.2.4.2** *P* **442** *L* **26** # **379**

Beili, Edward — Actelis Networks

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

A 2BaseTL-R Phy is mandatory required to sustain up to 20mA of wetting (sealing) current. The original purpose for such high current was to support Metallic Loop Test (MLT), a leftover from telephony days, which is not relevant in this case since 2BaseTL-O doesn't have provision for the MLT. Most carriers today use less than 5mA of wetting current for corrosion prevention. In addition to that, 1000 Ohm resistive termination can be pretty bulky (over 4W), requiring special protection. Note also that wetting current support may not be required in many cases, while demanding bigger isolation magnetic and complicated over-voltage protection from the Phy implementations.

SuggestedRemedy

- Make wetting current an optional requirement for 2BaseTL (modifying also PICS proforma in subclause 63.4.4.2 lines 28 and 31).
- Modify clauses 63.3.2.4.2 and 63.3.2.5.2 as follows:
"The 2BASE-TL-R shall be capable of sustaining 5 mA of wetting (sealing) current. The maximum rate of change of the wetting current shall be no more than 5 mA per second. NOTE-The -R device cannot be guaranteed to operate correctly if more than 5 mA (tip to ring) is sourced."

Proposed Response *Response Status* **W**

PROPOSED REJECT.
See also comment #255.
Wetting current values were chosen to be consistent with what is currently defined in SHDSL.

Cl **63** *SC* **63.3.2.4.2** *P* **442** *L* **28** # **255**

Squire, Matt — Hatteras Networks

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

The specification of wetting current in 2BASE-TL differs somewhat from G.SHDSL in that here we're specifing a DC resistance, where the G.991.2 specs specify more on potential differences. We should have similar wording to G991.2 for consistency.

SuggestedRemedy

Replace 63.3.2.4.2 with

The STU-R (or SRU-R) shall be capable of drawing between 1.0 and 20 mA of wetting (sealing) current from the remote feeding circuit. The maximum rate of change of the wetting current shall be no more than 20 mA per second. The STU-C (or SRU C) may optionally supply power to support wetting current. When enabled, this power source should produce a nominal -48 V potential measured at ring with respect to tip. The maximum voltage of the power source (if provided) should be limited to -56.5 V. The minimum voltage should be high enough to ensure a voltage of at least -39 V at the inputs of the STU-R (or SRU-R) measured at ring with respect to tip. In no case shall the wetting current source apply a potential greater than -72 V between ring and tip. The potential at tip with respect to ground should be zero or negative.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
To be discussed by CuSTF, including merits of optional vs mandatory .

Note the current text was inserted in the text by the STF as a result of comment #142 against the last draft.

If adopted by STF, edit text to remove SRU-R (repeaters out of scope) and replace STU-R and -C by 2-BASE-TL notation.

Cl **63A** *SC* **63A.4** *P* **664** *L* **52** # **539**

Schneiderheinze, Burkart — Infineon Technologies

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

wrong cross ref

SuggestedRemedy

change to 45.2.1.39

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **63A** *SC* **63A.4** *P* **665** *L* **26** # **540**

Schneiderheinze, Burkart — Infineon Technologies

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

2BASE-TL PMD register settings were changed

SuggestedRemedy

adjust table 63A-2 accordingly

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
1.81.14:8 to 1.82.1:0 would be set such that
min rate = max rate = profile rate.
step = 0 ,
power and constellation per the profile.
1.83.14:8 to 1.88.1.0 set to 0

Cl **63B** *SC* **63.b4** *P* **672** *L* **7** # **391**

kimpe, marc — Adtran

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

Comment applies to table 63-B2. To stay consistent with the objectives of 2Base-TL, the margin should be changed from 6 to 5.

SuggestedRemedy

Change margin requirement from 6 to 5 dB.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **63B** *SC* **63B.3** *P* **670** *L* **35** # **541**

Schneiderheinze, Burkart — Infineon Technologies

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

reference specifiy 3 different test for 2048 kBit/s

SuggestedRemedy

change to plural (tests)

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **63B** *SC* **63B.3** *P* **670** *L* **37** # **542**

Schneiderheinze, Burkart — Infineon Technologies

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

tests are called B-1 - B-4

SuggestedRemedy

change accordingly

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **64** *SC* **64.1** *P* **450** *L* **21** # **561**

Cravens, George — Mindspeed

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

Missing "s".

SuggestedRemedy

Change "... the ONU then transmit frames at wire speed ..."

To "... the ONU transmits frames at wire speed ..."

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **64** *SC* **64.1** *P* **450** *L* **5** # **560**

Cravens, George — Mindspeed

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

The P2MP medium IS as passive optical network (we're beyond the "under consideration" point).

Delete the words "under consideration"

SuggestedRemedy

Delete the words "under consideration"

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **64** *SC* **64.1** *P* **450** *L* **54** # **562**
Cravens, George Mindspeed

Comment Type **E** *Comment Status* **D**
Should say "provisioning" (not provision).

SuggestedRemedy
Change provision to provisioning

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

Cl **64** *SC* **64.1** *P* **451** *L* **15** # **563**
Cravens, George Mindspeed

Comment Type **T** *Comment Status* **D**
Since this subclause is the overview, the word "shall" probably isn't intended since "shall" implies normative text and generally requires a corresponding PICS entry. This also makes the last sentence of the sub-clause consistant with the rest of the sub-clause (there are no other "shalls" in this sub-clause).

NOTE: This is really an editorial comment, but since it deals with the magic word "shall", I classified it as "technical".

SuggestedRemedy
Change the "shall be" to "is" as shown:

The Multi-point MAC Control fucntionality is implemented for subscriber access decives ...

Proposed Response *Response Status* **W**
PROPOSED REJECT.

The text intended to say that unlike MAC Control sublayer, which is optional, the Multi-point MAC Control is mandatory for all P2MP devices.

Cl **64** *SC* **64.1.2** *P* **452** *L* **39** # **183**
Kramer, Glen Teknovus

Comment Type **E** *Comment Status* **D**
missing period at the end of a sentence

SuggestedRemedy
fix per comment

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

Cl **64** *SC* **64.1.4** *P* **454** *L* **5** # **565**
Cravens, George Mindspeed

Comment Type **T** *Comment Status* **D**
The newly generated Annex 4A should also be referenced for the underlying MAC sublayer.

SuggestedRemedy
Change "... service interface specified in 4.3.2."

To "... service interface specified in 4.3.2 or 4A.3.2."

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

Only one clause (either 4.3.2 or 4A.3.2) should be reference, but not both.

Cl **64** *SC* **64.2..4** *P* *L* # **411**
Grow, Robert Intel

Comment Type **E** *Comment Status* **D**
D3.1 introduces new text with misuse of error rate instead of error ratio.

SuggestedRemedy
Change "error rate" to "error ratio"

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

Location: page 461, line 44

Cl **64** *SC* **64.2.1** *P* **455** *L* **21** # **546**
Lynskey, Eric UNH-IOL

Comment Type **E** *Comment Status* **D**
Multiplexing control should now be Multi-Point Transmission Control. There are 4 instances of this in the clause: page 455 line 21, page 455 line 47, page 457 line 18, and page 457 line 32.

SuggestedRemedy
Replace all instances of multiplexing control with multi-point transmission control.

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

Cl **64** *SC* **64.2.1** *P* **455** *L* **45** # **566**
Cravens, George Mindspeed

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

Move the leading "or" to the end of the previous item.

SuggestedRemedy

Change item a) to "... MA_DATA.request or,"
and item b) to "A protocol processing block ..."

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **64** *SC* **64.2.1.1** *P* **455** *L* **51** # **136**
Brown, Benjamin Independent

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

Extra word

SuggestedRemedy

Replace "field. is" with "field."

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **64** *SC* **64.2.1.1** *P* **456** *L* **4** # **567**
Cravens, George Mindspeed

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

The received timestamp value is used to calculate the round trip time.

Need to insert the word "timestamp" between received and value.

SuggestedRemedy

Change "... it uses the received value to create ..."
to "... it uses the received timestamp value to create ..."

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **64** *SC* **64.2.1.1** *P* **456** *L* **49** # **568**
Cravens, George Mindspeed

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

timestamp drift error occurs when the gaurdThreshold is exceeded, not just "some predefined threshold". Also, insert cross-reference.

For the second and third occurance of "some predefined threshold", the cross-reference is not needed, but replace "some predefined threshold" with gaurdThreshold.

SuggestedRemedy

Change "... OLT's and ONU's clocks exceeds some predefined threshold."

To "... the OLT's and the ONU's clocks exceeds gaurdThreshold (see 64.2.2.1).

For the second and third occurance of "some predefined threshold", the cross-reference is not needed, but replace "some predefined threshold" with gaurdThreshold.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **64** *SC* **64.2.2** *P* **457** *L* **19** # **570**
Cravens, George Mindspeed

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

transmitPending[n] should also be included.

SuggestedRemedy

insert "transmitPending[n]," after transmitEnable[n], in line 19.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **64** *SC* **64.2.2** *P* **457** *L* **3** # **569**
Cravens, George Mindspeed

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

The first paragraph says the same thing four times. Rewrite as a single sentence.

SuggestedRemedy

Replace the first paragraph with:

The purpose of the multi-point transmission control is to allow only one of the multiple MAC clients to transmit to its associated MAC and subsequently to the RS layer at one time by only asserting one transmitENABLE signal at a time.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **64** *SC* **64.2.2.2** *P* **459** *L* **48** # **572**

Cravens, George — Mindspeed

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

The "existance of a more accurate timebase" needs to be defined more clearly.

As Figure 64-11 shows, the localTime variable is reloaded with the received timestamp value for every MAC Control Frame with a timestamp opcode.

The last sentence also seems to contradict Figure 64-11, since the value of the variable may change any time a MAC Control Frame with the timestamp opcode is received, so "highly undesirable and unspecified" seems like a rather nasty feature.

If changing the localTime variable can cause "highly undesirable and unspecified" behavior, then the ONU Control Parser state machine (figure 64-11) must be changed to prevent such an occurance.

SuggestedRemedy

Change the sentence starting on line 48 ("It is periodically ...") to the following:

It is reloaded with the received timestamp value (from the OLT) by the Control Parser (see Figure 64-11).

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **64** *SC* **64.2.2.3** *P* **460** *L* **28** # **137**

Brown, Benjamin — Independent

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

Variable list should be in alphabetical order

SuggestedRemedy

Move newRTT before nextTxTime
Page 461, move transmitInProgress before transmitPending

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **64** *SC* **64.2.2.3** *P* **461** *L* **24** # **138**

Brown, Benjamin — Independent

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

There are several instances where states are referred to. Here is one, referring to the TransmitFrame state. Page 462, line 2, refers to the forwarding state as does page 484, line 38. Are these real states? What state diagram (or anything else) does this refer to? I searched for these states and couldn't find them

SuggestedRemedy

Be more specific about what state diagram is being referenced or change the wording to not imply particular states.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Use the following text

page 461: "This variable indicates that the Multi-point MAC Control instance j is in a process of transmitting a frame."

page 462: "This function selects the next Multi-point MAC Control instance allowed to initiate transmission of a frame."

page 484: ?

Cl **64** *SC* **64.2.2.3** *P* **461** *L* **3** # **545**

Lynskey, Eric — UNH-IOL

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

The timestampDrift variable is defined as a boolean, so it cannot take on an actual value. The last sentence should be deleted.

SuggestedRemedy

Remove the sentence "The timestampDrift value is represented in units of time_quanta."

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **64** *SC* **64.2.2.4** *P* **461** *L* **40** # **139**

Brown, Benjamin — Independent

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

When referencing a subclause, you don't need to use the word "subclause"

SuggestedRemedy

Replace "in subclause 65.2.3" with "in 65.2.3"

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **64** *SC* **64.2.2.4** *P* **461** *L* **46** # **140**

Brown, Benjamin Independent

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

missing word

SuggestedRemedy

Replace "formula used" with "formula is used"

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **64** *SC* **64.2.2.4** *P* **461** *L* **46** # **184**

Kramer, Glen Teknovus

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

Missing word

SuggestedRemedy

insert word 'is' before 'used'

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **64** *SC* **64.2.2.4** *P* **462** *L* **15** # **185**

Kramer, Glen Teknovus

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

inconsistent subscripts for transmitPending variable. In figure 64-3, a 1-based array is used. Here is 0-based array is used.

SuggestedRemedy

Change subscripts to 1 through N to be consistent with Figure 64-3. Make the same change in Figure 64-9.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **64** *SC* **64.2.2.4** *P* **462** *L* **6** # **547**

Lynskey, Eric UNH-IOL

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

The SelectFrame() function is used to select one out of n frames to be transmitted for a given multi-point MAC control instance. There could be several MAC Control frames along with client frames. This function chooses one to pass to the control multiplexer. Subclause 62.1 page 455 line 21 says that MAC control frames are given priority over client frames, but that does not seem to be supported in the definition of this function.

SuggestedRemedy

Modify the definition of the function to read: This function returns the active interface when multiple interfaces are used to signal to a single block. If both MAC client and MAC Control interfaces be signaling at the same time, the function will return an active MAC Control interface. The result is not specified for the case where multiple MAC Control interfaces signal at the same time, except that one of these interfaces will be made active.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Problems:

1. Whatever the SelectFrame() function returns is not used anywhere.
2. Control Multiplexor cannot control MA_DATA and MA_CONTROL interfaces.

Editor suggests the following text:

This function enables the interface, which has a pending frame. If multiple interfaces have frames waiting at the same time, only one interface will be enabled. The selection criteria is not specified, except for the case when some of the pending frames have Length/Type = MAC_Control. In this case, one of the interfaces with a pending MAC Control frame shall be enabled.

Cl **64** *SC* **64.2.2.7** *P* **467** *L* **1** # **548**

Lynskey, Eric UNH-IOL

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

This is a comment against figure 64-13. This state diagram will transmit any frame that it is passed as long as transmitAllowed is TRUE. It is possible that multiple TransmitFrame function calls have been made by any number of MAC
Control blocks or the MAC Client. This state diagram does not appear to prioritize these in any way or deal with what happens if more than one frame wants to be sent at the same time. Specifically, there is also no SelectFrame function in this diagram. The transmitAllowed variable is controlled by the Gate Processing block in Figure 64-29. This variable will bet set to TRUE when the START TX state is entered. Figure 64-22, the ONU Discovery processing state diagram, generates the necessary TransmitFrame function calls during the discovery process.

Looking at these three diagrams, I cannot find anything that would necessarily prevent the MAC from transmitting a MAC client frame during the discovery process. This could be a significant problem by allowing an unregistered device to transmit client frames, and to allow the device to transmit frames greater than 64 bytes in length.

SuggestedRemedy

Some sort of priority function needs to be added to this diagram that will only allow the ONU to send MAC Control frames during the discovery process and that will prioritize MAC Control frames in the appropriate manner. Will try to work on some text before meeting.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Add the following text to TRANSMIT READY state:

SelectFrame()

Cl **64** *SC* **64.3** *P* **468** *L* **8** # **574**

Cravens, George Mindspeed

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

Report messages are not broadcast since they come from the ONUs.

SuggestedRemedy

Change: "broadcast in the network"

to: "sent upstream from the ONU to the OLT."

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **64** *SC* **64.3.2.3** *P* **469** *L* **15** # **125**

Choi, Su-il ETRI

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

This caluse describes OLT may support multicast by using additional multicast MACs. Additional multicast MACs require additional LLIDs and filtering rules. However, multicast channel configuration as well as filtering and marking of frames for multicast isn't defined in Clause 65.1.3.3.2

SuggestedRemedy

Suggest a solution for multicast channel configuration as well as filtering and marking of frames for multicast. Attached file "choi_p2mp_1_0304.pdf" suggests a new variable "LGID(logical group identifier)" for grouping of some logical ports (LLIDs). Attached file "choi_p2mp_2_0304.pdf" shows the changes of the draft based on the suggested multicast solution.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

This is a significant change at a very late stage. The decisison is pending group discussion.

Cl **64** *SC* **64.3.3** *P* **469** *L* **45** # **186**

Kramer, Glen Teknovus

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

This subclause is inconsistent in naming MPCP messages. In various places it uses Register_Req and REGISTER_REQ.

SuggestedRemedy

Use REGISTER_REQ for consistency

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **64** *SC* **64.3.3.3** *P* **473** *L* **24** # **576**

Cravens, George — Mindspeed

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

To allow wraparound of both a and b when comparing their values, "split horizon" calculations must be used.

Generically, "a is less than b" is defined as
"a < b =< a + ((maxvalue of A + 1)/2).

See 61.2.2.4, page 369 for an example.

SuggestedRemedy

Change the last two sentences (Starting with "The comparison is made ...")

to use the above language (or similar verbage that gets the point across).

Proposed Response *Response Status* **W**

PROPOSED REJECT.

Suggested text is even more confusing. As an example, consider 4-bit values for a and b.

A = 14, b = 2

we have:
14 < 2 <= 14 + (15+1)/2
14 < 2 <= 6
So is it true or false?

Existing text is correct. It assumes that a and b can be no more than half cycle apart (which is (maxvalueA+1)/2).

Same example (in binary now):
a = 1110
b = 0010
a - b = 1100 ==> MSB(1100)=1 ==> a < b

Cl **64** *SC* **64.3.3.4** *P* **473** *L* **40** # **577**

Cravens, George — Mindspeed

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

Missing "g"

SuggestedRemedy

Change "sendin" to "sending"

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **64** *SC* **64.3.3.4** *P* **473** *L* **40** # **141**

Brown, Benjamin — Independent

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

typo

SuggestedRemedy

replace "sendin" with "sending"

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **64** *SC* **64.3.3.5** *P* **473** *L* **50** # **142**

Brown, Benjamin — Independent

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

MACR and MACI aliases are used in the state diagrams but are not defined anywhere.

SuggestedRemedy

Add the following aliases alphabetically in this subclause:

MACI - Alias for MA_CONTROL.indication
MACR - Alias for MA_CONTROL.request

Proposed Response *Response Status* **W**

PROPOSED REJECT.

These abreviations were moved to section 64.1.5 State diagram conventions

Cl **64** *SC* **64.3.3.5** *P* **473** *L* **53** # **143**

Brown, Benjamin — Independent

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

Each of these primitives is followed by a list of parameters not operand lists. I debated over suggesting a major rewording of this section so that rather than define each primitive multiple times, you simply reference the primitive in 2.3.3.2 then here describe only the operand lists for each opcode. I decided not to push this as I think what you have here is adequate. However, since you are describing service primitives, the items in each primitive are parameters not operand lists.

SuggestedRemedy

For each primitive here, in 64.3.4.5 and 64.3.5.5, replace "This primitive takes the following operand list" with "This primitive takes the following parameters"

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **64** *SC* **64.3.3.5** *P* **474** *L* **54** # **188**
Kramer, Glen Teknovus

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

Incorect sentence.

SuggestedRemedy

Remove word 'is'. The same typo is on page 475, line4

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **64** *SC* **64.3.3.6** *P* **477** *L* **20** # **189**
Kramer, Glen Teknovus

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

inconsistent use of variable start. It is also refered to as start_time and startTime.

SuggestedRemedy

Use 'start' on line 20 and line 24

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **64** *SC* **64.3.3.6** *P* **479** *L* **15** # **187**
Kramer, Glen Teknovus

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

Figure 64-21: ONU_timer is used incorrectly. It starts when the OLT sends GATE message to an ONU and is set for 10 msec. However, there is no requirement that the grant start time should be less than 10 msec away. This could lead to continuous ONU's registratiuon and geregistration cycles.

SuggestedRemedy

ONU_timer is not necessary at all. OLT can easily calculate the end time of the grant. If a REGISTER_ACK is not received by this time, then deregister the ONU.

place the following code in state WAIT FOR REGISTER_ACK:
grantEndTime = start[0] + length[0] + RTT

use the following label for the transition from WAIT FOR REGISTER_ACK to DEREGISTER:
localTime = grantEndTime

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **64** *SC* **64.3.5.3** *P* **487** *L* **37** # **578**
Cravens, George Mindspeed

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

The values of A and B (used in the max() an min functions) must not be able to rollover, or the definition needs to be changed to require split horizon calculations.

See comment on 64.3.3.3

SuggestedRemedy

If the values of A and B are not capable of rollover, then this should be stated.

If the values of A and B are capable of rollover, then the definition of the max{} and min{} functions needs to be rewritten to require split horizon calculations.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Functions min(a,b) amd max(a,b) are not used anywhere in the state diagrams and should be removed.

However, state diagrams use a<b, a>b, a<=b, a>=b to compare cyclic time values in many places. Of these functions, only the a<b is defined.

Add definitions for the rest of them in terms of a<b:

a>b is the same as !(a<b or a=b)
a>=b is the same as !(a<b)
a<=b is the same as !(a>b)

Move all definitions to section 64.1.5 State diagram conventions

Cl **64** *SC* **64.3.5.6** *P* **490** *L* **1** # **668**
Dawe, Piers Agilent

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

Line with just a full stop

SuggestedRemedy

?

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **64** *SC* **64.3.6.1** *P* **493** *L* **44** # **544**

Lynskey, Eric UNH-IOL

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

No definitions for laser_on_time and laser_off_time. Per 64.3.5.1 I think you want to user laserOnTime and laserOffTime.

SuggestedRemedy

Change to laserOnTime and laserOffTime

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **64** *SC* **64.3.6.1** *P* **493** *L* **47** # **123**

Choi, Su-il ETRI

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

Because Grant #n Length includes laser_on_time, syncTime, and laser_off_time, the condition "Grant #n Start Time < Grant #n+1 Start Time" is not sufficient for consecutive grants within the same GATE MPCPDU.

SuggestedRemedy

Change above condition as "Grant #n Start Time + Grant #n Length < Grant #n+1 Start Time". And, append additional condition as "When Grant #n Start Time + Grant #n Length > Grant #n+1 Start Time, then Grant #n+1 Start Time is ignored and Grant #n+1 Length is added to the Grant #n Length."

Proposed Response *Response Status* **W**

PROPOSED REJECT.

During previous discussions, the task force has decided that grants to the same LLID may overlap. (See state diagram 64-29)

Cl **64** *SC* **64.3.6.1** *P* **494** *L* **8** # **549**

Lynskey, Eric UNH-IOL

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

The GATE MPCPDU should not have a variable size and should be given a fixed size that contains 4 grants. The actual size of the frame will be 64 bytes no matter how many grants are there. The number of grants is already contained in a field, and for all the grants that aren't included in the frame the contents of the start time and length fields should be set to zero.

This should help with the problem of assigning the start and length values in figures 64-27 and 64-28 when they don't really exist. Currently, if you only want to send a single grant, the contents of grants 2, 3, and 4 will be filled with PAD by the MAC, the contents of which are unspecified.

SuggestedRemedy

Fix the length of the GATE MPCPDU so that there will always be 13 bytes of pad added by the MAC. The contents of unused fields should be set to zero.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Editor would like to fix the field locations; however, there is a problem with position of the syncTime field. In the discovery GATE, this filed is located immediately following the first grant. In normal GATE, there is the second grant following the first grant.

This problem would not have existed, if separate formats were specified for discovery GATE and normal GATE.

This comment is pending further discussion.

Cl **64** *SC* **Figure 64-12** *P* **466** *L* **24** # **573**

Cravens, George Mindspeed

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

Is the OLT Control Multiplexer really intended to filter transmit frames to prevent unsupported opcodes from being transmitted?

This seems very wrong, and may cause major headaches in the future since this would prevent a compliant design from ever supporting any new opcodes. Since PICS entry SM4 makes compliance mandatory, a "user friendly" design that allows upper layers to send whatever opcodes they desire would be non-compliant.

Also, if the filtering function is to remain, how is the errant frame flushed? It seems that simply returning to the Init state without setting transmitinProgress true and doing a dummy TransmitFrame() may cause undesirable results (a clogged MAC client).

This is potentially very broken, and probably deserves a TR comment, but I'll call it a "T".

SuggestedRemedy

Either:
1) (MUCH preferred) Delete the condition "(supported opcode)" from the two exit transitions from the PARSE OPCODE state.

or:

2) (Seems ungood) Make sure that when the Control Multiplexer filters transmit frames (based on opcodes), that the handshaking is done properly so that the offending frame is not stuck in the MAC client.

Also, if Tx frames are going to be dropped, an error must be signalled/counted somewhere (silently dropping frames is VERY bad and REALLY annoys those who have to debug the system), and a NOTE should be added to make it very clear that this is the intended (and in fact, mandated) behavior of the device.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Use proposal #1

Cl **64** *SC* **Figure 64-13** *P* **467** *L* **19** # **575**

Cravens, George Mindspeed

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

Same as the comment on Figure 64-12, only this time, for the ONU:

Is the ONU Control Multiplexer really intended to filter transmit frames to prevent unsupported opcodes from being transmitted?

This seems very wrong, and may cause major headaches in the future since this would prevent a compliant design from ever supporting any new opcodes. Since PICS entry SM5 makes compliance mandatory, a "user friendly" design that allows upper layers to send whatever opcodes they desire would be non-compliant.

Also, if the filtering function is to remain, how is the errant frame flushed? It seems that simply returning to the Init state without setting transmitinProgress true and doing a dummy TransmitFrame() may cause undesirable results (a clogged MAC client).

This is potentially very broken, and probably deserves a TR comment, but I'll call it a "T".

SuggestedRemedy

Either:
1) (MUCH preferred) Delete the condition "(supported opcode)" from the two exit transitions from the PARSE OPCODE state.

or:

2) (Seems ungood) Make sure that when the Control Multiplexer filters transmit frames (based on opcodes), that the handshaking is done properly so that the offending frame is not stuck in the MAC client.

Also, if Tx frames are going to be dropped, an error must be signalled/counted somewhere (silently dropping frames is VERY bad and REALLY annoys those who have to debug the system), and a NOTE should be added to make it very clear that this is the intended (and in fact, mandated) behavior of the device.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Accept proposal #1.

Cl **64** *SC* **Figure 64-3** *P* **453** *L* **46** # **564**

Cravens, George Mindspeed

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

The arrow for ReceiveFrame(...) should be pointing into the Control Parser (not out as shown).

SuggestedRemedy

Change the arrow for ReceiveFrame(...) to an "up" arrow (pointing into the Control Parser block).

Proposed Response *Response Status* **W**

PROPOSED REJECT.

This comment re-appears every several meetings. The arrows for TransmitFrame(...) and for ReceiveFrame(...) both point down to emphasize that these functions are called by MAC Control. Please, refer to Figure 31-2.

Cl **64** *SC* **figure 64-6** *P* **457** *L* **45** # **571**

Cravens, George Mindspeed

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

The Arrow for RecieveFrame(...) should be pointing into the Control Parser Block.

SuggestedRemedy

Change the arrow for ReceiveFrame() to an "up" arrow (pointing into the Control Parser block).

Proposed Response *Response Status* **W**

PROPOSED REJECT.

See #564

Cl **64** *SC* **General** *P* **450** *L* # **99316**

Grow, Robert Intel

Comment Type **TR** *Comment Status* **A** *D3.0 #557*

The specification of the multi-point MAC protocol is a convoluted and confusing perversion of the 802.3 MAC. P2MP defines its own MAC protocol and reference to the Clause 4 MAC is confusing and does the implementer a disservice in choosing that indirect specification method.

SuggestedRemedy

Simplify the specification of P2MP by defining its MAC protocol directly.

Proposed Response *Response Status* **U**

ACCEPT IN PRINCIPLE.

A general purpose, not a P2MP-specific, thin full-duplex MAC clause or normative annex will be added per resolution of the P2MP/OAM motion adopted on 01/13/2004.

The combination of MPCP as specified in clause 64 with this thin MAC will simplify the specification of P2MP as requested by the commenter.

Passed by acclaimation

Cl **65** *SC* **65.1** *P* **506** *L* **12** # **99307**

Thompson, Geoffrey Nortel

Comment Type **TR** *Comment Status* **R** *D3.0 #794*

The entire concept of this extension to emulate point-to-point operation seems to be a violation of the following text extracted from the Overview and Architecture, IEEE Std 802 clause 6.2.1 Service access points (SAPs)
"The MAC sublayer provides a single MAC service access point (MSAP) as an interface port to the LLC sublayer in an end station."
AND
"The Physical layer provides an interface port to a single MAC station,..."
This also seems to be a violation of the 5 Criteria commitment in Compatibility paragraph 1.

SuggestedRemedy

Alter draft to remain within original commitment.

Proposed Response *Response Status* **U**

REJECT.

The statements "The MAC sublayer provides a single MAC service access point (MSAP) as an interface port to the LLC sublayer in an end station." AND "The Physical layer provides an interface port to a single MAC station,. . . " do not have a 'shall' and therefore are not a requirement for 802 networks.

P2P emulation concept is required for interworking with 802 Networks, and is consistant with compatibility requirements undertaken by the 802.3ah project.

Cl **65** *SC* **65.1.3.2** *P* **511** *L* **37** # **368**

Dawe, Piers — Agilent

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

This use of SPD clashes with the definition of SPD in 1.4.261 (it's the /S/ you refer to in 65.1.3.2.1).

SuggestedRemedy

Use a different name for your 'SPD'.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
Rename SPD to SLD, Start LLID Delimiter

Cl **65** *SC* **65.1.3.3.2** *P* **514** *L* **11** # **124**

Choi, Su-il — ETRI

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

In subclause 64.3.2.3, additional multicast MACs are described roughly. This means that multicast MACs require multicast_llid individually. However, each ONU checks only the match of SCB_LLID(0x7FFF).

SuggestedRemedy

Add additional comparison as "..., or the received logical_link_id matches 0x7FFF or one of the multicast_llids, then ..."

Proposed Response *Response Status* **W**

PROPOSED REJECT.
Proposed new feature is past deadline for new feature addition.

Cl **65** *SC* **65.2.2.1** *P* **516** *L* **1** # **669**

Dawe, Piers — Agilent

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

Line with just a full stop

SuggestedRemedy

Take out preceding line feed?

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **65** *SC* **65.2.2.2** *P* **517** *L* **30** # **191**

Kramer, Glen — Teknovus

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

Typo in section title

SuggestedRemedy

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **65** *SC* **65.2.2.2** *P* **517** *L* **31** # **670**

Dawe, Piers — Agilent

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

Strange character (pipe?) just before 'Detailed'

SuggestedRemedy

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **65** *SC* **65.2.2.2.1** *P* **517** *L* **51** # **543**

Lynskey, Eric — UNH-IOL

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

Typo for variable name. Subclause 64.5.3.1 refers to it as laserOnTime.

SuggestedRemedy

Change laser_on_time to laserOnTime

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **65** *SC* **65.2.2.2.1** *P* **517** *L* **52** # **190**

Kramer, Glen — Teknovus

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

The size of the FIFO buffer shall be such that the total data delay through the PHY (including delays introduced by optional FEC function and PMA sublayer) is equal to DelayBound.

This statement is incorrect and may result in data transmission before the laser is fully turned on. This approach will only work if Data Detector could detect data before FEC encoder (but it is not the case).

SuggestedRemedy

Remove this sentense.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **65** *SC* **65.2.2.3** *P* **518** *L* **54** # **671**

Dawe, Piers — Agilent

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

"Line with just a full stop, empty line"

SuggestedRemedy

Take out preceding two line feeds?

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **65** *SC* **65.2.2.3** *P* **520** *L* **23** # **672**

Dawe, Piers — Agilent

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

Reed Solomon or Reed-Solomon?

SuggestedRemedy

Choose one

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
Reed-Solomon

Cl **65** *SC* **65.2.3** *P* **519** *L* **36** # **192**

Kramer, Glen — Teknovus

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

If FEC is implemented, the Data Detector block performs rate adaptation by disabling MAC transmission to provide the necessary space at the end of the Ethernet frame for the parity octets.

Theis statement is incorrect. Data Detector does not control MAC anymore

SuggestedRemedy

Remove this sentence

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **65** *SC* **65.2.3.3.4** *P* **522** *L* **54** # **673**

Dawe, Piers — Agilent

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

1. On line by itself

SuggestedRemedy

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
Remove line.

Cl **65** *SC* **65.2.3.3.4** *P* **523** *L* **46** # **182**

Lior Khermosh — Passave

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

For a device with FEC the PCS does not see the unprotected Idles. AS long as there is no S_FEC the FEC layer generates Idles for the PCS (That at least was at diagram 65-13 state FILL_SEARCH_SFEC_TFEC and should be added there again) so that this state can not happen and there is no generation of FALSE_CARRIER. The remark for non-FEC devices is valid.

SuggestedRemedy

Remove the remark for in lines 46-48. Add the transmission of Idles to the diagram 65-13/14 when no S_FEC is received.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **65** SC **65.3** P **532** L **37** # **674**
Dawe, Piers Agilent

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

Two spaces between 'PMA and 'for'?

SuggestedRemedy

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **65** SC **65.3.1** P **528** L **14** # **99308**
Dawe, Piers Agilent

Comment Type **TR** *Comment Status* **A** *D3.0 #381*

Need to define the PMA primitive for laser control shown in fig 65-4.

SuggestedRemedy

In sub-subclause, for PX-U PMA (see another comment), define this PMA primitive for laser control formally:

'The following additional primitives is defined:
....'
The semantics of the service primitive are x(y). Explanation, When generated, effect of receipt.

Proposed Response *Response Status* **U**

ACCEPT IN PRINCIPLE.
Consistent with previous discussions PMA tunneling of the signal need not be explicitly stated, consistent with SD. The figure 65-4 is to be redrawn to show PMD_SIGNAL.request() primitive going around PMA sub-layer.

Cl **65** SC **65.3.1** P **532** L **43** # **323**
Dawe, Piers Agilent

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

Need to define PMA primitive. It's just housekeeping, but I've been made to do it in other projects. This should clear my TR 381 against D3.0. Thanks!

SuggestedRemedy

Insert new subclause:
65.3.1.1, Physical Medium Attachment (PMA) sublayer interfaces
In addition to the primitives of Clause 36, the following primitive is defined:
PMD_SIGNAL.request is received from the PCS and passed in timely fashion and without modification to the PMD. The semantics are PMD_SIGNAL.request(tx_enable). The tx_enable parameter can take one of two values, ON or OFF. This primitive controls PMD emission of light. It is generated by the PCS's data detector (see 65.2.2.2.3) and the effect of its receipt is defined in 60.1.5.3.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **65** SC **65.3.2** P **533** L **1** # **367**
Dawe, Piers Agilent

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

typo

SuggestedRemedy

-U should be -D.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **65** SC **65.4.2.2** P **534** L **39** # **675**
Dawe, Piers Agilent

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

Font size not consistent

SuggestedRemedy

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **65** SC **65.4.4** P **535** L **39** # **676**
Dawe, Piers Agilent

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

Other clauses have attached the copyright release to the second level subclause title e.g. 65.4

SuggestedRemedy

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **65** SC **65.4.4.7** P **537** L **22** # **369**
Dawe, Piers Agilent

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

Need another PICS entry for OLT's CDR lock timing

SuggestedRemedy

Add another PICS entry.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **66** *SC* *P* *L* # **375**

Thompson, Geoffrey Nortel

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

Changes have been made for 100 Mb/s that violate the compatibility promises commited to in the 5 Criteria presentation that added 100 M to the project:

Compatibility

100BASE-X PCS & PMA assumed, and the 802.3 MAC

- No changes whatsoever to the MAC
- PHY identical to current 100Mbps Std except for a new PMD
- No change to Clause 24
- Retain all state machines, 4B/5B coding etc. of 100BASE-X
  - o Only need to extend Clause 26, 100BASE-FX PMD, to include SMF
  - o Physical medium compatibility through SMF
- Compatible with existing 1000BASE-LX
- Provides upgrade paths to higher speeds and multiple wavelengths, with fiber plant untouched

SuggestedRemedy

Remove all changes to 100BASE-X other than PMD optical changes to bring the proposal back into line with the 5 Criteria Compatibility promises made when 100 M was added to the project.

Proposed Response *Response Status* **W**

PROPOSED REJECT.

Promises made by a presenter back in St. Louis are in no way binding on the group. The text referenced is from a presentation by Ulf Jonsson, made at a Call For Interest, archived in the file:

http://www.ieee802.org/3/smfx_study/public/jonsson_1_0302.pdf

It was never adopted by the task force, and is not binding on the task force.

The baseline presentation on the subject is archived in the file:

http://www.ieee802.org/3/efm/baseline/jonsson_1_0502.pdf

This presentation also assumes that the 100BASE-X PCS is retained unchanged, but decisions to modify the PCS have been made since the baseline was adopted, and these are reflected in the approved text of the draft.

The PAR and 5 Criteria for EFM never claimed that the 100BASE-X PCS would be retained unchanged. The changes that we have made to the 100BASE-X PCS for the sake of unidirectional OAM PDU transmission were approved by the WG in the course of the WG ballot. This change was approved in Italy in September of 2003 in the following presentation:

http://www.ieee802.org/3/efm/public/sep03/frazier_1_0903.pdf

Cl **66** *SC* **66** *P* **535** *L* **1** # **99312**

Dawe, Piers Agilent

Comment Type **TR** *Comment Status* **A** *D3.0 #380*

'Don't mess with the legacy Ethernet.'

The 'required' aspect of this clause is unworkable, as it tries to make a tight association between PMD type, network type ('access' vs. 'campus') and e.g. PCS functionality. See my comment against 57.1.2 for more explanation.

Further, this clause affects 10G Ethernet, which doesn't seem to be part of 'Ethernet in subscriber access' at all - which subscribers get access to that sort of 'broadband' access!? And it tries to do it in a way which is controversial (see TRs against previous drafts) and doesn't make sense to me.

The proposed changes would encourage pointless and misleading behaviour which is presently forbidden: transmitting to a station which is sending 'remote fault' or 'far end fault indication' - saying it can't hear you. If this is forbidden now, we would need a reason to overturn the rules.

Clause 66 RS, PCS and PMA are shown as optional in Table 56-2. That's as it should be (except for 1000BASE-PX-D, PON OLT).

SuggestedRemedy

See attached file for proposed revision of clause 66, including reasons why.
http://www.ieee802.org/3/efm/public/comments/d3_0/pdfs/dawe_2_0104.pdf ?

Proposed Response *Response Status* **U**

ACCEPT IN PRINCIPLE.

If you want to use the 1000BASE-LX10, or other EFM specific PHY types, then the PHY must use the PCS/RS defined in this clause. If you don't use this PCS/RS then the PHY type is not specified.

The PMD can be fully compliant with 802.3ah and it depends on how it is used to determine what its PHY type is called.

Changes to make

Accept text changes to last paragraph before 66.1

66.2.1 - replace "regardless of the value of link_status" with "regardless of whether the PHY has determined that a valid link has been established"

Same change to 66.2.2

Cl **66** *SC* **66** *P* **539** *L* **1** # **677**
Dawe, Piers Agilent

Comment Type **E** *Comment Status* **D**
10Gb/s needs a space

SuggestedRemedy
"10 Gb/s. Also title of 66.3, twice in 66.3.1, three times in 66.3.2, title of 66.4, once in 66.4.1, several more…"

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

Cl **66** *SC* **66** *P* **540** *L* **1** # **557**
Booth, Brad Intel

Comment Type **TR** *Comment Status* **D**
Paragraph makes use of "should" and "must". IEEE 802.3 tries to avoid the use of such words.

SuggestedRemedy
Change "should" in 2nd sentence to "may". In the 3rd sentence, change second and third "should" to be "shall". In the 4th sentence, change both "must" to be "shall". Change "should" in 5th sentence to be a "shall".

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

I'm okay with accepting these changes but these 5 new shall statements require a new PICS entry.

Add a new subclause before 66.4.4.1 with title: "Maintaining compatibility with 802.1 protocols"

Add a PICS table identical to the others in this section with the following entry:
MC1 - Unidirectional mode enabled - 66 - Full duplex and disable AutoNeg and (enable OAM or 1000BASE-PX-D) and not 1000BASE-PX-U - M - Yes[ ], No[ ]

Cl **66** *SC* **66** *P* **540** *L* **8** # **340**
Dawe, Piers Agilent

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

SuggestedRemedy
part

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

Cl **66** *SC* **66.0** *P* **540** *L* **8** # **144**
Brown, Benjamin Independent

Comment Type **E** *Comment Status* **D**
wrong word

SuggestedRemedy
Replace "pert" with "part"

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

Cl **66** *SC* **66.1.1** *P* **540** *L* **19** # **342**
Dawe, Piers Agilent

Comment Type **TR** *Comment Status* **D**
Unidirectional is of very minor use even for OAM. It doesn't 'support subscriber access networks', they'll work without it. In general it duplicates PHY layer mechanisms that will do a better job of protection switching, being hardware oriented and so can be faster. It can't work on some PHYs so it's not as generic as hoped. But maybe having both mechanisms is useful for managing complex multi-hop networks - which can exist in "traditional campus/industrial/core/metro markets too. There's nothing 'subscriber access' specific about this need.
100BASE-X optical has a suitable remote fault indication (FEFI) already, and 100BASE-LX10 type ports have been shipping for years. Let's not foul it up with a new feature, which itself need not be mandatory.

SuggestedRemedy
Change 'This subclause specifies changes to the 100BASE-X PCS and PMA for support of subscriber access networks.' to
'This subclause specifies optional variations to the 100BASE-X PCS and PMA for unidirectional transport of OAM frames.'

Proposed Response *Response Status* **W**
PROPOSED REJECT.

There is insufficient support in the task force or working group to change this feature from mandatory to optional.

Cl **66** *SC* **66.1.1** *P* **540** *L* **20** # **341**
Dawe, Piers Agilent

Comment Type **TR** *Comment Status* **D**
Please state the much less contentious proximate technical reason for these proposed changes. As in the clause title...

SuggestedRemedy
Change 'for support of subscriber access networks.' to 'for unidirectional transport of OAM frames'.

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

Cl **66** *SC* **66.1.1** *P* **540** *L* **21** # **343**

Dawe, Piers Agilent

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

We should not talk about 'changes to the existing': clause 24 isn't changing, and when this draft standard is ratified, clauses 24 and 66 will both be 'existing' on an equal footing.
It doesn't seem right to call mainstream Ethernet 'legacy' as if it's losing market traction and is going to be replaced by ATM or EFM or something.

SuggestedRemedy

Change 'These are changes to the existing 100BASE-X PCS and PMA for legacy ethernet as described in Clause 24.'
to: 'These are variations on the 100BASE-X PCS and PMA defined in Clause 24.'

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **66** *SC* **66.1.1** *P* **540** *L* **21** # **349**

Dawe, Piers Agilent

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

Isn't Ethernet a proper name?

SuggestedRemedy

Give it a capital letter, here, in 66.2.1 and elsewhere.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **66** *SC* **66.1.2** *P* **540** *L* **26** # **345**

Dawe, Piers Agilent

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

Re 'transmit data from the MII' could be misleading: as the PCS has an MII, if it transmits from the MII, the PCS is transmitting towards its own MAC. Remember the semantic difficulty with XAUI 'transmitting' in two directions.

SuggestedRemedy

Delete 'from the MII'. Similarly 'from the GMII' in 66.2.2.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **66** *SC* **66.1.2** *P* **540** *L* **26** # **344**

Dawe, Piers Agilent

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

Removing duplication and contentious (marketing?) claim.

SuggestedRemedy

Change 'The 100BASE-X PCS and PMA for subscriber access networks shall conform to the requirements of the 100BASE-X PCS specified in 24.2 and the 100BASE-X PMA specified in 24.3 with the following exception: The 100BASE-X PCS for subscriber access networks has the ability ...'
to: 'A unidirectional capable 100BASE-X PCS and PMA shall conform to the requirements of the 100BASE-X PCS specified in 24.2 and the 100BASE-X PMA specified in 24.3 with the following exception: they have the ability ...'

Proposed Response *Response Status* **W**

PROPOSED REJECT.

It needs to be made clear that it is mandatory that all subscriber access PHYs that could otherwise use Clause 24 shall instead use the 66.1 PCS/PMA.

Cl **66** *SC* **66.1.2.2** *P* **540** *L* **50** # **373**

Thompson, Geoffrey Nortel

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

I believe that the current organization of the text is confusing to many who are not intimately familiar with 10BASE-T.

Having the text in a single paragraph confuses that the functions of collision detection and transmit disable are a single function rather than 2 entirely separate functions.

Insert a paragraph split as indicated below.

SuggestedRemedy

"Collision detection is implemented by noting the occurrence of carrier receptions during transmissions, following the model of 10BASE-T. The indication of link_status ..."

SHOULD BE SPLIT INTO TWO PARAGRAPHS, I.E.:

"Collision detection is implemented by noting the occurrence of carrier receptions during transmissions, following the model of 10BASE-T.

The indication of link_status..."
(A Maint Request has been entered to fix this in the current standard.)

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **66** *SC* **66.1.2.3** *P* **541** *L* **51** # **346**

Dawe, Piers Agilent

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

If we agree that OAM frames indicating remote fault embedded in PHY layer RF are good, or acceptable, for 10G then the same is true for 100BASE-X, except it's called FEFI rather than RF.
I do think that fast, hardware oriented, already standardized, protection switching will be needed in access networks in particular to carry time-sensitive traffic like voice and video, especially on the slower link types.
As FEFI is optional, the remedy below behaves as the current draft 3.1 when FEFI is turned off. Conveniently, 100BASE-FX doesn't have auto-negotiation. Not sure if we need a whole nibble of guard band (see suggested remedy); willing to optimise that.

SuggestedRemedy

Change 'Far-End Fault Generate simply passes tx_code-bits to the TX process when signal_status=ON or when mr_unidirectional_enable=TRUE. When signal_status=OFF and mr_unidirectional_enable=FALSE, it repetitively generates each cycle of the Far-End Fault Indication until signal_status is reasserted or mr_unidirectional_enable is set to TRUE.'
to:
'Far-End Fault Generate simply passes tx_code-bits to the TX process when signal_status=ON. When signal_status=OFF and mr_unidirectional_enable=FALSE, it repetitively generates each cycle of the Far-End Fault Indication until signal_status is reasserted or mr_unidirectional_enable is set to TRUE. When signal_status=OFF and mr_unidirectional_enable=TRUE, it repetitively generates each cycle of the Far-End Fault Indication, interrupted by any frames, until signal_status is reasserted. There is least one nibble (5 bits on the line) of ONEs between a ZERO in the Far-End Fault Indication stream and the start of stream delimiter to avoid error propagation'. Change the Far-End Fault Generate state diagram accordingly.

Proposed Response *Response Status* **W**

PROPOSED REJECT.

Your suggested remedy is incomplete. There would need to be an additional signal added between the Transmit state diagram (Figure 24-8) and the Far-End Fault Generate state diagram (Figure 24-16) to tell the latter state machine when the former machine was generating a packet. There is no obvious signal currently in existence to do this. At this point in the process, making a change of this magnitude without adequate review is unwise as it could potentially break the PCS/PMA interface.

Cl **66** *SC* **66.2.1** *P* **542** *L* **41** # **347**

Dawe, Piers Agilent

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

Similarly to one of my comments against 66.1.1: Unidirectional is less valuable than avoiding retrospective changes, allowing 1000BASE-LX10 to be used in traditional Ethernet, allowing CO Ethernet equipment to straddle the divide between traditional Ethernet and access Ethernet, not fragmenting the market, and not causing possible interoperability problems. This new way of signaling RF has to be optional and should not if practicable foul up the existing way. Also, stating the much less contentious proximate technical reason for these proposed changes.

SuggestedRemedy

Change 'This subclause specifies changes to the 1000BASE-X PCS for support of subscriber access networks.' to
'This subclause specifies optional variations to the 1000BASE-X PCS for unidirectional transport of OAM frames.'

Proposed Response *Response Status* **W**

PROPOSED REJECT.

There is insufficient support in the task force or working group to change this feature from mandatory to optional.

Cl **66** *SC* **66.2.1** *P* **542** *L* **42** # **348**

Dawe, Piers Agilent

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

We should not talk about 'changes to the existing': clause 36 isn't changing, and when this draft standard is ratified, clauses 36 and 66 will both be 'existing' on an equal footing.
It doesn't seem right to call mainstream Ethernet 'legacy' as if it's losing market traction and going to be replaced by ATM or EFM or something.
Also, should give clause 37 a mention.

SuggestedRemedy

Change 'These are changes to the existing 1000BASE-X PCS for legacy ethernet as described in Clause 36.'
to: 'These are variations on the 1000BASE-X PCS defined in Clause 36 and Clause 37.'

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **66** *SC* **66.2.1** *P* **542** *L* **43** # **350**

Dawe, Piers Agilent

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

Need to add a statement saying when this mode or type is applicable. It can't be required for 1000BASE-LX10, there's too much stuff out there. If it causes an interop problem, it shouldn't be allowed on 1000BASE-LX10 because that's meant to be connected to 1000BASE-LX.

SuggestedRemedy

Add sentence 'They are optional for P2P 1000BASE-X PHYs, mandatory for 1000BASE-PX-D and optional but to be used with caution for 1000BASE-PX-U.' or: 'They are optional for 1000BASE-LX10 and 1000BASE-BX10, mandatory for 1000BASE-PX-D, optional but to be used with caution for 1000BASE-PX-U and not applicable to other PHY types.' or: 'They are optional for 1000BASE-BX10, mandatory for 1000BASE-PX-D, optional but to be used with caution for 1000BASE-PX-U and not applicable to other PHY types.'

Proposed Response *Response Status* **W**

PROPOSED REJECT.

There is insufficient support in the task force or working group to change this feature from mandatory to optional.

Cl **66** *SC* **66.2.2** *P* **542** *L* **46** # **351**

Dawe, Piers Agilent

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

Removing duplication and contentious (marketing?) claim.

SuggestedRemedy

Change 'The 1000BASE-X PCS for subscriber access networks shall conform to the requirements of the 100BASE-X PCS specified in 24.2 and the 100BASE-X PMA specified in 36.2 with the following exception: The 100BASE-X PCS for subscriber access networks has the ability ...'
to: 'A unidirectional capable 1000BASE-X PCS shall conform to the requirements of the 100BASE-X PCS specified in 36.2 with the following exception: it has the ability ...'

Proposed Response *Response Status* **W**

PROPOSED REJECT.

It needs to be made clear that it is mandatory that all subscriber access PHYs that could otherwise use Clause 36 shall instead use the 66.2 PCS.

Cl **66** *SC* **66.2.2.3** *P* **543** *L* **25** # **352**

Dawe, Piers Agilent

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

If we agree that OAM frames indicating remote fault embedded in PHY layer RF are good, or acceptable, for 10G then the same is true for 1000BASE-X, except it's called /C/ ordered_sets rather than RF.
I do think that fast, hardware oriented already standardized, protection switching will be needed in access networks in particular to carry time-sensitive traffic like voice and video, especially on the slower link types. But having investigated it I see why you were tempted to cut the Gordian knot and get away from clause 37 altogether!
The remedy below behaves as the current draft 3.1 when autoneg is turned off.

SuggestedRemedy

Change 66.2.2.3 so that when signal_status=OFF and mr_unidirectional_enable=TRUE, the PHY will transmit /C/, or a mix of /C/ and /I/, interrupted with OAM frames.
Ensure that the reception of this can be used simply to inhibit transmission of client frames (and any protection action) rather than triggering a repeated autoneg activity. Describe modifications to figure 37-6 to achieve this.

Proposed Response *Response Status* **W**

PROPOSED REJECT.

There is insufficient support in the task force or working group to support this kind of a change.

Cl **66** *SC* **66.3.1** *P* **543** *L* **53** # **353**

Dawe, Piers Agilent

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

Removing duplication and contentious (marketing?) claim. Also I thought there was still some debate about whether this (10G) modification should be optional or forbidden - and we have consensus that it's not mandatory.

SuggestedRemedy

Change 'This subclause specifies changes to the 10Gb/s RS for support of subscriber access networks. These are changes to the existing 10Gb/s RS for legacy ethernet as described in Clause 46.' to
'This subclause specifies optional variations to the 10Gb/s RS defined in Clause 46, for unidirectional transport of OAM frames.'

Proposed Response *Response Status* **W**

PROPOSED REJECT.

There is insufficient support in the task force or working group to change this feature from mandatory to optional.

Cl **66** *SC* **66.3.1** *P* **543** *L* **54** # **678**
Dawe, Piers Agilent

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

Isn't Ethernet a proper name?

SuggestedRemedy

Leave it in capitals.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **66** *SC* **66.3.2.2** *P* **540** *L* **41** # **99313**
Grow, Robert Intel

Comment Type **TR** *Comment Status* **R** *D3.0 #552*

The true value needs to be better tied to the register bits that define unidirectional being enabled.

SuggestedRemedy

TRUE; Unidirectional capability enabled (register bits 0.1 = 1 and 1.7 = 1, see Clause 22)

Proposed Response *Response Status* **U**

REJECT.

This is the RS. Clause 22 registers have never been used to represent variables or anything else in an RS. While the RS is part of the physical layer, it is not part of the PHY.

Cl **66** *SC* **66.4.2.2** *P* **545** *L* **41** # **354**
Dawe, Piers Agilent

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

Font size, right hand cell.

SuggestedRemedy

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **66** *SC* **66.4.2.2** *P* **545** *L* **41** # **357**
Dawe, Piers Agilent

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

Need to make this mandatory for 1000BASE-PX-D (OLT).

SuggestedRemedy

Insert new row:
*OLT 1000BASE-PX-D 66.2.1 PCS is part of a 1000BASE-PX-D O Yes [ ] No [ ] Add another status to *GIG, OLT:M.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

This is picked up by new PICS entry added from comment #557

Cl **66** *SC* **66.4.2.2** *P* **545** *L* **41** # **356**
Dawe, Piers Agilent

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

Get the marketing claims out of the PICS tables!

SuggestedRemedy

Change 'Device supports functionality required for XXX YYY for subscriber access networks' to 'Device has unidirectional capability' (three times).

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

See response to comment #355

Cl **66** *SC* **66.4.2.2** *P* **545** *L* **43** # **355**
Dawe, Piers Agilent

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

Identification needs to agree with clause title.

SuggestedRemedy

Change 'for Operations, Administration, and Management (OAM)' to 'for unidirectional transport'. Also in title of 66.4.4.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Also in title of 66.4

Cl **67** *SC* **67.1** *P* **550** *L* **43** # **335**
Dawe, Piers Agilent

Comment Type **E** *Comment Status* **D**
This isn't grammatical: 'Number of PHY segment'

SuggestedRemedy
Maybe 'Number of PHYs per segment'?

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

Will fix the grammar

Cl **67** *SC* **67.3** *P* **552** *L* **32** # **336**
Dawe, Piers Agilent

Comment Type **E** *Comment Status* **D**
Too many blank lines

SuggestedRemedy
Take out any duplicate carriage feeds.

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

Cl **67A** *SC* **67A.2** *P* **678** *L* **12** # **339**
Dawe, Piers Agilent

Comment Type **E** *Comment Status* **D**
Unnecessary line feeds within cells

SuggestedRemedy
Please remove them: lines 12 and 14.

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

Cl **67A** *SC* **67A.2** *P* **678** *L* **39** # **337**
Dawe, Piers Agilent

Comment Type **E** *Comment Status* **D**
Too many blank lines

SuggestedRemedy
Take out any duplicate carriage feeds.

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

Cl **67A** *SC* **67A.2** *P* **678** *L* **39** # **338**
Dawe, Piers Agilent

Comment Type **E** *Comment Status* **D**
Double reference: 67A.2 66A.3

SuggestedRemedy
Delete '66A.3'.

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

Cl **99** *SC* *P* *L* # **122**
Michelle Turner IEEE-SA

Comment Type **E** *Comment Status* **D**
Upon editorial review of IEEE P802.3ah/D3.1, I have the following comments.

For further guidance in preparing an IEEE Standard, here's the URL for access to the on-line version of the IEEE Standards Style Manual:
http://standards.ieee.org/guides/style/index.html

In the introduction, change the designation to read IEEE P802.3ah instead of IEEE Std 802.3ah. It appears throughout the front matter the document is already referred to as IEEE Std 802.3ah-20xx. It should be IEEE P802.3ah.
Please note* The Replace function in Amendments and Corrigendum will only be reserved for figures and tables. It is expected that this rule will be in place by June.
At the time of RevCom submittal please remember to supply a separate electronic file for each graphic in TIFF, GIF, EPS, or WMF formats. At this same time, please be sure to supply a list of names and addresses for all members of the working group. This will ensure that each member gets a complimentary copy of the standard upon publication.

SuggestedRemedy

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

After discussion with the IEEE Project Editor, we will provide any graphical files upon publication.

Also, many thanx for the hard copy review of the entire document for style.

Cl **99** *SC* *P* **2** *L* **1** # **589**

Dr. David V. James

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

Either delete this header, or provide a sentence that states how the blank space will be filled.

SuggestedRemedy

Proposed Response *Response Status* **O**

Cl **99** *SC* *P* **2** *L* **1** # **590**

Dr. David V. James

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

Excess capitalization

SuggestedRemedy

IEEE-SA Trademark Usage/Compliance Statement
==>
IEEE-SA trademark usage/compliance statement

Proposed Response *Response Status* **O**

Cl **99** *SC* *P* **ii** *L* # **406**

Grow, Robert Intel

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

Page ii is still there, and it is still obsolete.

SuggestedRemedy

Delete the page per my D3.0 comment that was accepted.

Proposed Response *Response Status* **O**

Cl **99** *SC* *P* **iv** *L* **7** # **407**

Grow, Robert Intel

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

802.3ak is now approved and published.

SuggestedRemedy

Change "xx" to "04" (the year of publication).

Proposed Response *Response Status* **O**

Cl **99** *SC* **99** *P* **1** *L* **20** # **257**

Dawe, Piers Agilent

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

The working title of this amendment to 802.3 appears to have been copied from 802.3ae but this project is much different; it is not defining a whole new set of layers at a new-to-Ethernet speed, but defining many extensions and options that must join into the existing layers without creating problems.

Now, near the end of the project when I hope all the half duplex MAC churn has died down, is the time to revise a working title chosen for D0.9, to reflect where the draft and project has actually ended up.
The title could be now more accurate in several ways. It needs to mention the significant, useful additions that will be applied to "legacy Ethernet" (non-subscriber access networks). While wordsmithing a suggested remedy I noticed that we haven't precisely changed Media Access Control Parameters, (much? at all?), but have introduced a new MPMC sublayer. Also there is a new OAM transport layer and optional changes to an RS. The suggested remedies make at least four changes which should be considered one by one:
1 Include OAM in title;
2 Include MPMC in title;
3 Include RS in title;
4 Include other (networks);
5 Delete 'MAC parameters'.
Why is this a TR? Because some PHYs in this document were always intended as dual use, in access and traditional Ethernets. Hence the other (networks).

SuggestedRemedy

Change 'Media Access Control Parameters, Physical Layers and Management Parameters for subscriber access networks' to:

Physical layers and reconciliation sublayer, Operations, Administration, and Maintenance (OAM) and multi-point MAC control sublayers, and management parameters for subscriber access and other networks

If this is too long, it could be shortened, e.g.:

Physical layers, OAM and multi-point MAC control sublayers, reconciliation sublayer and management parameters for subscriber access and other networks

and if we have changed MAC parameters, we can leave that bit in.

Proposed Response *Response Status* **O**

Cl **99** *SC* **99** *P* **1** *L* **34** # **258**
Dawe, Piers Agilent

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

We should be positive not tentative about what we are doing. Also, it is no longer the case that: 'This draft also introduces the concept of Ethernet Passive Optical Networks ...'. The first draft said the same, so this one doesn't!

SuggestedRemedy

Change to:

This draft also specifies Ethernet Passive Optical Networks ...

Proposed Response *Response Status* **O**

Cl **99** *SC* **99** *P* **1** *L* **9** # **256**
Dawe, Piers Agilent

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

Title repeats itself and is very hard to read - needs line feeds to break it up. Also doesn't quite follow style of base document or latest amendment (802.3ak).

SuggestedRemedy

Change to:
Draft Amendment to:<C/R>
IEEE Standard for Information technology<long dash><C/R>
Telecommunications and information exchange between systems<long dash><C/R>
Local and metropolitan area networks<long dash><C/R>
Specific requirements<C/R>
Part 3: Carrier sense multiple access with collision detection (CSMA/CD) access method and physical layer specifications<C/R>
<C/R>
Draft amendment: <title of this amendment>

Proposed Response *Response Status* **O**

Cl **99** *SC* **99** *P* **8** *L* **12** # **260**
Dawe, Piers Agilent

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

Rogue Capitals

SuggestedRemedy

subscriber access networks Also on line 31.

Proposed Response *Response Status* **O**

Cl **99** *SC* **99** *P* **8** *L* **4** # **259**
Dawe, Piers Agilent

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

ammended

SuggestedRemedy

amended

Proposed Response *Response Status* **O**

Cl **99** *SC* **99** *P* **9** *L* **9** # **262**
Dawe, Piers Agilent

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

Where does the 'List of special symbols' go? I looked at published pdfs for 802.3-2002 and 802.3ae and couldn't see it.

SuggestedRemedy

I think Frame allows an end-matter book component as well as a "front matter" one. If so, consider moving these two pages to an end-matter file, and add an entry into the contents list so that a careful reader will know that it's there. This will simplify the IEEE editors' task.
Also, please add a table entry for the non-breaking space, to help future generations of editors.

Proposed Response *Response Status* **O**

Cl **99** *SC* **99** *P* **9** *L* **9** # **261**
Dawe, Piers Agilent

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

Isn't Ethernet a proper name? It deserves a capital letter.

SuggestedRemedy

Ethernet Also on line 25.

Proposed Response *Response Status* **O**

Cl **A** *SC* *P* **140** *L* **29** # **600**

Squire, Matt Hatteras Networks

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

The reference to Y.1730 looks pretty short. Should be expanded to normal reference style.

SuggestedRemedy

Unfortunately, I don't have the full reference. Hopefully someone at the meeting will.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE. See comment 300

Cl **A** *SC* **A** *P* **140** *L* **29** # **300**

Dawe, Piers Agilent

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

Title of Y.1730.

SuggestedRemedy

Requirements for OAM functions in Ethernet based networks, dated 2004. Also, better to swap 'ITU-T' and 'Recommendation' around.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **A** *SC* **A** *P* **186** *L* **6** # **655**

Dawe, Piers Agilent

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

Extend the instructions

SuggestedRemedy

Add 'and renumber the definitions as required.'

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.