

P802.3ah Draft 3.0 Comments

Cl 00 SC P L # 528

Grow, Robert Intel

Comment Type TR Comment Status A ALL

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 U

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 # 500

Grow, Robert Intel

Comment Type TR Comment Status A Cu duplex

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 interchangeably 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 synonymous 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 U

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 deficiencies in the draft as it refers to material that is unchanged from the base standard.

P802.3ah Draft 3.0 Comments

Cl 00 SC P L # 795  
 Thompson, Geoffrey Nortel

Comment Type TR Comment Status A

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 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 # 343  
 Dawe, Piers Agilent

Comment Type TR Comment Status R

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 0 P 1 L 35 # 726  
 James, David JGG

Comment Type TR Comment Status A

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

P802.3ah Draft 3.0 Comments

Cl 00 SC 0 P10 L1 # 730  
James, David JGG

Comment Type **TR** Comment Status **R**

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 P2 L1 # 727  
James, David JGG

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

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 01 SC 1.3 P14 L24 # 512  
Grow, Robert Intel

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

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 1.4 P15 L38 # 732  
James, David JGG

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

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): ...



## P802.3ah Draft 3.0 Comments

==> LLID logical link identifier	==> PAFH PMI aggregation function header
MPCP Multi-Point Control Protocol ==> MPCP multi-point control protoco	PAM Pulse Amplitude Modulation ==> PAM pulse amplitude modulation
OAM Operations, Administration, and Maintenance ==> OAM operations, administration, and maintenance	PMS-TC Physical Media Specific - Transmission Convergence ==> PMS-TC physical media specific - transmission convergence
OAMPDU Operations, Administration, and Maintenance Protocol Data Unit ==> OAMPDU operations, administration, and maintenance protocol data unit	PSD Power Spectral Density ==> PSD power spectral density
ODN Optical Distribution Network ==> ODN optical distribution network	SA Source Address ==> SA source address
OH Overhead ==> OH overhead	SHDSL Single-pair High-speed Digital Subscriber Line ==> SHDSL single-pair high-speed digital subscriber line
OLT Optical Line Terminal ==> OLT optical line terminal	STU-O SHDSL Transceiver Unit - Central Office ==> STU-O SHDSL transceiver unit - central office
ONU Optical Network Unit ==> ONU optical network unit	STU-R SHDSL Transceiver Unit - Remote ==> STU-R SHDSL transceiver unit - remote
ORLT Optical return loss tolerance ==> ORLT optical return loss tolerance	TCM Trellis Coded Modulation ==> TCM Trellis coded modulation
P2P Point to Point ==> P2P point to point	UPBO Upstream power back-off ==> UPBO upstream power back-off
P2PE Point to Point Emulation ==> P2PE point to point emulation	<i>Proposed Response</i> <i>Response Status</i> <b>U</b> ACCEPT IN PRINCIPLE.
P2MP Point to Multi-Point ==> P2MP point to multi-point	Will capitalize abbreviations in a definition to be consistant with 802.3ae (part of base document), Otherwise they will not be.
PAF PMI Aggregation Function ==> PAF PMI aggregation function	For definitons they will not be capitalized
PAFH PMI Aggregation Function Header	

P802.3ah Draft 3.0 Comments

Cl 22 SC 1.4 P21 L1 # 734  
James, David JGG

Comment Type **TR** Comment Status **R**

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 P23 L20 # 747  
Booth, Brad Intel

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

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 22.2.4.2.8 P25 L9 # 793  
Thompson, Geoffrey Nortel

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

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.

P802.3ah Draft 3.0 Comments

Cl 30 SC 30.2.2.1 P32 L1 # 537  
 Grow, Robert Intel

Comment Type **TR** Comment Status **A**  
 oMACControlFunctionEntity is not completely 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 subcluse 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 30.5.1..14 P48 L10 # 543  
 Grow, Robert Intel

Comment Type **TR** Comment Status **A**  
 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 45 SC 45.2.1 P76 L33 # 555  
 Grow, Robert Intel

Comment Type **TR** Comment Status **A**  
 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 45.2.1.13.1 P77 L10 # 556  
 Grow, Robert Intel

Comment Type **TR** Comment Status **A**  
 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 45.2.1.2.1 P73 L33 # 547  
 Grow, Robert Intel

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

P802.3ah Draft 3.0 Comments

Cl 45 SC 45.2.1.3 P73 L 40 # 548  
Grow, Robert Intel

Comment Type TR Comment Status A o

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 56 SC 56.1 P158 L 17 # 760  
Booth, Brad Intel

Comment Type TR Comment Status A

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 connectorization on the GMII will be removed.

P802.3ah Draft 3.0 Comments

Cl 57 SC 57.1.2 P166 L27 # 313

Dawe, Piers Agilent

Comment Type TR Comment Status R

'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 57.4.3.1 P192 L01 # 736

James, David JGG

Comment Type TR Comment Status A

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.

P802.3ah Draft 3.0 Comments

Cl 57 SC 57.4.3.1 P192 L01 # 735  
James, David JGG

Comment Type TR Comment Status R

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.

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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 P196 L16 # 737  
James, David JGG

Comment Type TR Comment Status R

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 P196 L24 # 738  
James, David JGG

Comment Type TR Comment Status A

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.



P802.3ah Draft 3.0 Comments

**Cl 58** SC **Table 58-11** P**229** L**12** # **287**  
 Paul Fitzgerald Circadian Systems

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

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 58-5** P**224** L**16** # **289**  
 Paul Fitzgerald Circadian Systems

**Comment Type** TR **Comment Status** R **TDP**

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** # **786**  
 Booth, Brad Intel

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

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 **Table 59-13** P**269** L**12** # **295**  
 Paul Fitzgerald Circadian Systems

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

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** # **291**  
 Paul Fitzgerald Circadian Systems

**Comment Type** TR **Comment Status** R **TDP**

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** # **293**  
 Paul Fitzgerald Circadian Systems

**Comment Type** TR **Comment Status** R **TDP**

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

P802.3ah Draft 3.0 Comments

Cl 60 SC 60.1 P 286 L 9 # 787  
Booth, Brad Intel

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

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 60.8.11 P 304 L 8 # 300  
Paul Fitzgerald Circadian Systems

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

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 Table 60-5 P 293 L 19 # 296  
Paul Fitzgerald Circadian Systems

Comment Type **TR** Comment Status **R** TDP

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 penalty, then additional tests would have to be added. 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 # 298  
Paul Fitzgerald Circadian Systems

Comment Type **TR** Comment Status **R** TDP

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

P802.3ah Draft 3.0 Comments

Cl 61 SC General P318 L # 558  
 Grow, Robert Intel

Comment Type TR Comment Status R

The management functions of the EFM copper are not specified correctly. Many functions are not defined in Clause 30, and consequently will not be accessible 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 61-20 P361 L # 799  
 Palm, Stephen Broadcom

Comment Type TR Comment Status R

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 64 SC General P450 L # 557  
 Grow, Robert Intel

Comment Type TR Comment Status A

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 acclamation

Cl 65 SC 65.1 P506 L 12 # 794  
 Thompson, Geoffrey Nortel

Comment Type TR Comment Status R

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 consistent with compatibility requirements undertaken by the 802.3ah project.

P802.3ah Draft 3.0 Comments

Cl 65 SC 65.3.1 P528 L14 # 381

Dawe, Piers Agilent

Comment Type TR Comment Status A

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 66 SC 66 P535 L1 # 380

Dawe, Piers Agilent

Comment Type TR Comment Status A

'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](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 66.3.2.2 P540 L41 # 552

Grow, Robert Intel

Comment Type **TR** Comment Status **R**

The true value needs to be better tied to the register bits that define unidirectional being enabled.

*Suggested Remedy*

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.