

P802.3ah Draft 3.0 and 3.1 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 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!

Suggested Remedy

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 # 374

Thompson, Geoffrey Nortel

Comment Type TR Comment Status R

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 relatively 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

Suggested Remedy

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 procedurally as a separate standard.

Proposed Response Response Status U

REJECT.

This issue has been discussed several times in the past. The scope and content of the draft is properly aligned with the approved PAR. The content of the draft as it currently stands has been approved by the balloting group. The commenter's suggested remedy is therefore clearly at odds with the consensus opinion of the task force that wrote the draft, the working group that approved the PAR and reviewed the draft, and the ballot group that approved the draft.

P802.3ah Draft 3.0 and 3.1 Comments

Cl 00 SC P L # 372
 Thompson, Geoffrey Nortel

Comment Type TR Comment Status R

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 U

REJECT.

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

Cl 00 SC 0 P1 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 P10 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 P2 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

P802.3ah Draft 3.0 and 3.1 Comments

Cl 01 SC 1.4 P15 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.

Suggested Remedy

- 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

P802.3ah Draft 3.0 and 3.1 Comments

Cl 01 SC 1.4 P16 L8 # 591

Dr. David V. James

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

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. You 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 irrelevant: 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 **U**

REJECT.

The editor-in-chief has worked closely with the IEEE staff editor to ensure that the draft
 adequately conforms with the IEEE style guide.

Cl 01 SC 1.4 P17 L5 # 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

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

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Cl 22 SC 1.4 P21 L1 # 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 P23 L20 # 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 22.2.4.2.8 P25 L9 # 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.

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Cl 56 SC 56.1 P158 L17 # 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 57 SC 57.4.3.1 P192 L01 # 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.

P802.3ah Draft 3.0 and 3.1 Comments

Cl 57 SC 57.4.3.1 P192 L01 # 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 P196 L16 # 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 P196 L24 # 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 P197 L40 # 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 P199 L23 # 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.

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Cl 57 SC 57.4.3.1 P200 L09 # 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 58 SC 58.1 P218 L9 # 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 P252 L8 # 558

Booth, Brad Intel

Comment Type TR Comment Status A Three clauses

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 U

ACCEPT IN PRINCIPLE.

Each one of the clauses 58, 59, and 60, defines only the PMD not a complete port and cannot make requirements outside the PMD.

Will refer to PMA in 66, where option to be identical to clause 24, and connection to PCS, will be found.

Clauses 56 and 66 make it very clear what is needed to build a port.

Change "A PMD is connected to the 100BASE-X PMA of Clause 24 or the 100BASE-X PMA of 66.1," to "A PMD is connected to the 100BASE-X PMA of 66.1,".

Similarly in 59 and 60. Remove 59.10.3 and 60.10.3 PICS "PCS". In 60.1, change "appropriate 1000BASE-X PMA of Clause 66" to "appropriate 1000BASE-X PMA of Clause 65".

Cl 58 SC 58.2.1.1 P229 L18 # 99332

Paul Fitzgerald Circadian 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

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Cl 58 **SC Table 58-11** **P 229** **L 12** # **99333**
 Paul Fitzgerald Circadian 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 58-5** **P 224** **L 16** # **99334**
 Paul Fitzgerald Circadian 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 Table 59-13** **P 269** **L 12** # **99336**
 Paul Fitzgerald Circadian 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 Circadian 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 Circadian 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

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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 60.8.11 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 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 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 # 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 61.1.4.1.2 P 357 L 20 # 556
Grow, Robert Intel

Comment Type TR Comment Status A
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 U

ACCEPT.

P802.3ah Draft 3.0 and 3.1 Comments

Cl 64 SC 64.3.2.3 P469 L 15 # 125
 Choi, Su-il ETRI

Comment Type **TR** Comment Status **R** Not Member Of Ballot Group

This clause 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

Suggested Remedy

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 **U**

REJECT.

Editor suggests this comment to be rejected as it constitutes a new feature.

Y: 5
 N: 1
 A: 2

Remove words "(multicast MACs)".
 Remove the words "Multicast and" from the section header

Y:1
 N:1
 A:5

=====

Accept solution proposed in the comment

Y:1
 N:2
 A:5

Motion to accept STF resolution (reject the comment)
 IEEE 802.3ah:

Y:17
 N:1
 A:4

Cl 65 SC 65.1 P506 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.

Suggested Remedy

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.

Cl 65 SC 65.1.3.3.2 P514 L 11 # 124
 Choi, Su-il ETRI

Comment Type **TR** Comment Status **R** Not Member Of Ballot Group

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).

Suggested Remedy

Add additional comparison as "..., or the received logical_link_id matches 0x7FFF or one of the multicast_llids, then ..."

Proposed Response Response Status **U**

REJECT.

Proposed new feature is past deadline for new feature addition.

See comment #125 for clause 64.

P802.3ah Draft 3.0 and 3.1 Comments

Cl 66 SC P L # 375
 Thompson, Geoffrey Nortel

Comment Type TR Comment Status A

Changes have been made for 100 Mb/s that violate the compatibility promises committed 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 100BASE-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 U

ACCEPT IN PRINCIPLE.

See the presentation daw_2_0304 that serves to make unidirectional operation dependent upon the ability of the PHY and the existence of the OAM Remote Fault option.

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/smf_x_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 P540 L 1 # 557
 Booth, Brad Intel

Comment Type TR Comment Status A

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 U

ACCEPT IN PRINCIPLE.

In addition - need to drop "on both ends of the link" from the part where OAM is enabled.

I'm okay with accepting these changes but these 5 new shall statements require a new PICS entry.

Replace the existing text with the following:

"This clause describes additions and modifications to the 100BASE-X, 1000BASE-X and 10GBASE physical layers, making them capable of unidirectional operation, which is required to initialize a 1000BASE-PX network, and allows the transmission of Operations, Administration and Management (OAM) frames regardless of whether the PHY has determined that a valid link has been established.

However, unidirectional operation may only be enabled under very limited circumstances. Before enabling this mode, the MAC shall be operating in full duplex mode and Auto-Negotiation, if applicable, shall be disabled. In addition, the OAM sublayer above the MAC (see Clause 57) shall be enabled or (for 1000BASE-X), the PCS shall be part of a 1000BASE-PX-D PHY (see Clause 60 and Clause 64). Unidirectional operation shall not be invoked for a PCS that is part of a 1000BASE-PX-U PHY (except for out-of-service test purposes or where the PON contains just one ONU). Failure to follow these restrictions results in an incompatibility with the assumptions of 802.1 protocols, a PON that cannot initialize, or collisions, which are unacceptable in the P2MP protocol."

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 66.3.2.2 P540 L41 # 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.