

P802.3ah Draft 3.0 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!

*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 0 P1 L35 # 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 L1 # 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.

P802.3ah Draft 3.0 Comments

Cl 00 SC 0 P2 L1 # 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 01 SC 1.4 P15 L38 # 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): ...



P802.3ah Draft 3.0 Comments

==>  
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

P802.3ah Draft 3.0 Comments

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.

P802.3ah Draft 3.0 Comments

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 # 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.

P802.3ah Draft 3.0 Comments

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.

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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 # 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.

P802.3ah Draft 3.0 Comments

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.

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 58.2.1.1 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





P802.3ah Draft 3.0 Comments

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 Circadian 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 Circadian 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 Circadian 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 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 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.