

P802.3ah Draft 3.1 Comments

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

SuggestedRemedy

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

Pursue further steps to approval, both editorially and 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.

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 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 01 SC 1.4 P 16 L 8 # 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.

P802.3ah Draft 3.1 Comments

Cl 58 SC 58.1 P252 L 8 # 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 61 SC 61.1.4.1.2 P357 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.

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 caluse describes OLT may support multicast by using additional multicast MACs. Additional multicast MACs require additional LLIDs and filtering rules. However, multicast channel configuration as well as filtering and marking of frames for multicast isn't defined in Clause 65.1.3.3.2

SuggestedRemedy

Suggest a solution for multicast channel configuration as well as filtering and marking of frames for multicast. Attached file "choi_p2mp_1_0304.pdf" suggests a new variable "LGID(logical group identifier)" for grouping of some logical ports (LLIDs). Attached file "choi_p2mp_2_0304.pdf" shows the changes of the draft based on the suggested multicast solution.

Proposed Response Response Status **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

P802.3ah Draft 3.1 Comments

Cl 65 SC 65.1.3.3.2 P514 L11 # 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).

SuggestedRemedy

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.

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_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 L1 # 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.

Suggested Remedy

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[]