

## IEEE P802.3as/D2.1 Frame Expansion Comments

CI 00 SC P L # 20191  
Walter Hurwitz Broadcom

Comment Type TR Comment Status R

P802.3as does not guarantee compatibility with existing Ethernet devices.

SuggestedRemedy

Proposed Response Response Status W

REJECT.

Though a significant effort has been made to minimize the affect on legacy systems, P802.3as did not set out to guarantee compatibility with existing Ethernet devices. No objective states this goal. Nothing in the PAR states this goal.

CI 02 SC 2.1 P 2 L 7 # 20195  
David V James JGG

Comment Type ER Comment Status R

Figure callouts should all be 8-point Arial, here and throughout. The meaning of larger fonts is unclear and too distracting.

SuggestedRemedy

8-point Arial throughout.

Proposed Response Response Status U

REJECT.

The TF does not consider these larger fonts unclear or distracting

CI 02 SC 2.1 P 5 L 1 # 20152  
Thomas Dineen Dineen Consulting

Comment Type TR Comment Status R

Market adoption of super frames has rendered this project obsolete and irrelevant. This has been the case for 20 years. So this project to me is the moral equivalent of trying to lock the barn door 20 years after the horse has escaped.

SuggestedRemedy

Turn in the PAR and stop work.

Proposed Response Response Status U

REJECT.

Currently, 802.1 (with the completion of 802.1ad and 802.1AE) and 802.3 are incompatible. This project retains compatibility between 802.1 and 802.3 as stated in the approved PAR and 5 criteria.

CI 02 SC 2.1 P 7 L 13 # 20200  
Kim, Yong Broadcom

Comment Type TR Comment Status R

I may be mistaken (but don't think so; thus this comment :-)). The page 6 diagram was added to indicate that MAC Control sublayer could source/sink MAC Control Frame (e.g. flow control). You could either: a) undo this proposed change b) add MA\_CONTROL.indication and .request between MAC Control and MAC and look carefully what other changes need to be modified (if any) in Clause 2 and 31.

SuggestedRemedy

Do either of the suggested above: a) undo this proposed change b) add MA\_CONTROL.indication and .request between MAC Control and MAC and look carefully what other changes need to be modified (if any) in Clause 2 and 31.

Proposed Response Response Status U

REJECT.

Figure 2-1 was changed, not to show the ability of the MAC Control sublayer to source MAC Control frames, but rather to harmonize the interfaces.

CI 03 SC 2.7 P 12 L 21 # 20003  
Agarwal, Puneet Broadcom

Comment Type TR Comment Status R

Why are we limiting the value of N for QTAG frames to be 1504 bytes? One should allow similar flexibility for the QTAG frames as allowed for non-QTAG frames (1500 or 1982).

SuggestedRemedy

Specify that "N" for QTAG frames can be 1504 or 1982.

Proposed Response Response Status W

REJECT.

The specification of Q-tagged frames is in IEEE 802.1Q, not in 802.3.

Retaining 1504 is a means of grandfathering Q-tagged frames so that equipment complying with IEEE 802.3ac (now included in IEEE 802.3-2005) will have a compliant codepoint.

A data frame that includes additional 'tags' beyond a single 802.1Q tag is an 'envelope frame'.

## IEEE P802.3as/D2.1 Frame Expansion Comments

CI 03 SC 3.1 P9 L 36 # 20229  
Thaler, Pat Agilent Technologies

Comment Type TR Comment Status A

"application" doesnt seem like an accurate word. Usually application refers to something at higher layers in the stack then the encapsulation protocols. Also, it says "the applications below" but what is below are frame types. Also, the subject was changed to singular so the verb needs to change to match

*SuggestedRemedy*

"The MAC frame format is specified in this clause including the following three variants:"  
In 3.2.7 replace "application modes" with "data field sizes"  
Also change in 4.2.4.2.1 and 4A.2.4.2 search for other incorrect instances of "application" and replace.

Proposed Response Response Status U

ACCEPT IN PRINCIPLE.

Modify 2nd paragraph of 3.1:  
The frame format specified in this clause includes the following three types of data frames:

In 3.2.7 replace "application modes" with "data frames"

Also change in 4.2.4.2.1 and 4A.2.4.2 search for other incorrect instances of "application" and replace "data frames".

CI 03 SC 3.1.1 P9 L 48 # 20078  
Booth, Brad Intel

Comment Type ER Comment Status R

Editing instruction for 3.1 shouldn't be used so broadly. Insert a new editing instructions for 3.1.1.

*SuggestedRemedy*

Add new editing instruction after 3.1.1 to read: Change 1st sentence of the 1st paragraph to read as follows. Remove the remaining unchanged sentences from that paragraph.  
Add another editing instruction before the figures to read: Change Figure 3-1 to read as follows. Remove the other unchanged paragraphs from 3.1.1.

Proposed Response Response Status U

REJECT.

The current text gives a clearer view of the change and its context.

Also see response to comment 206.

CI 03 SC 3.1.2 P11 L 1 # 20079  
Booth, Brad Intel

Comment Type ER Comment Status R style

Editing instruction for 3.1 shouldn't be used so broadly. Insert a new editing instructions for 3.1.2.

*SuggestedRemedy*

Insert an editing instruction before 3.1.2 to read: Insert subclause 3.1.2 and Figure 3-2; renumber remaining figures in the clause. Remove underlines from 3.1.2.

Proposed Response Response Status U

REJECT.

The current text gives a clearer view of the change and its context.

Also see response to comment 206.

CI 03 SC 3.1.2 P11 L 22 # 20196  
Kim, Yong Broadcom

Comment Type TR Comment Status R

What is the function of the "EXTENSION" after FCS?

*SuggestedRemedy*

Delete or provide description and rationale.

Proposed Response Response Status U

REJECT.

The opening paragraph of 3.3.1 (which immediately precedes Figure 3-1) explains that the optional extension field is used for half-duplex 1000 Mb/s operation.

CI 03 SC 3.1.2 P11 L 7 # 20194  
David V James JGG

Comment Type TR Comment Status A Pub Editor

Figures should not have ALL CAPS, since the names of critical fields are not in ALL CAPS when referenced in the text. Also, IEEE does not allow mixed ALL CAPS and normal text.

*SuggestedRemedy*

Eliminate all ALL CAPS from figures, here and throughout. Of course, formal acronyms are an exception.

Proposed Response Response Status U

ACCEPT IN PRINCIPLE.

Editor will verify publication editor's resolution on CAPS in figures, and we will not change from the format of published 802.3-2005 in this amendment.

# IEEE P802.3as/D2.1 Frame Expansion Comments

CI 03 SC 3.2.7 P 12 L 15 # 20002  
Agarwal, Puneet Broadcom

Comment Type TR Comment Status A

For a frame with "type" interpretation, how would the MAC implementation decide whether to treat the frame as a "basic frame" or an "envelope frame" to determine the maxFrameSize value?

SuggestedRemedy

Proposed Response Response Status W

ACCEPT IN PRINCIPLE.

The implementation decides what maximum supported data frame size it will accept.

Change in 4.2.9:

exceedsMaxLength := ...;  
{Check to determine if receive frame size exceeds the maximum permitted frame size.  
MAC implementations may use either  
maxBasicFrameSize  
or (maxBasicFrameSize + qTagPrefixSize) or maxEnvelopeFrameSize for the maximum  
permitted frame size. It is recommended to use a larger value, the use of a smaller value  
may result in valid tagged or envelope frames exceeding the maximum permitted frame  
size.}

CI 03 SC 3.2.7 P 12 L 22 # 20201  
Kim, Yong Broadcom

Comment Type TR Comment Status R

I know N=1982 was controversial , and a contender for this value was the repeater max, the worst one being the 10 Mb/s system that allows for +/- 3 bit FIFO (since old max required +/- 2.4 bits) or 30,000/2/8 = 1875 bytes minus 18 byte HDR + FCS of 1857. I gave it a careful consideration and could not come up with any justification to go beyond 1875, based on any presentation I've seen (802.1 MAC SEC requirements, 802.1 Provider bridging, MPLS, PPPoE, Ethernet over IP, and some absurd combination of the them). Based on this, I do not see the justification to obsolete the use of repeaters in an Ethernet network path.

SuggestedRemedy

Change the N to 1857 or N to 1808 (reasonable longword boundary and allow for the same 48 octet private and/or internal header).

Proposed Response Response Status U

REJECT.

1982 is not controversial. 802.3 voted in March 2005 33-0 (motion #16) to adopt 2000 octets as the new maximum envelope frame size.

A value of 1857 does not guarantee that all repeater implementations will work.

CI 03 SC 3.2.7 P 12 L 25 # 20231  
Thaler, Pat Agilent Technologies

Comment Type TR Comment Status R

"encapsulation protocol" is used but not defined except by example.

SuggestedRemedy

A protocol taht adds a prefix or suffix or both to a frame that is transparent to the MAC Client sending the original client data.

Proposed Response Response Status U

REJECT.

The term is used to reference encapsulation protocols done elsewhere. It is not our goal to define them -- only to give examples of such protocols that may be carried by our envelope frame.

Per response to comment 4, the examples are no longer referenced by project.

# IEEE P802.3as/D2.1 Frame Expansion Comments

CI 03 SC 3.2.7 P 12 L 25 # 20004  
Agarwal, Puneet Broadcom

Comment Type TR Comment Status A

MPLS is not a protocol controlled by IEEE (and is essentially a Layer 3 protocol) - hence the document should not mention MPLS as it is outside the scope of IEEE 802.

## SuggestedRemedy

Take out reference to MPLS from this line.

Proposed Response Response Status W

ACCEPT IN PRINCIPLE.

ITU-T SG15 is mentioned in the PAR. The purpose of including a reference to MPLS was to show support for the needs of MPLS encapsulation in addition to 802.1ad, 802.1ah and 802.1AE support.

Change first sentence of note to read:

The envelope frame is intended to allow inclusion of additional prefixes and suffixes required by higher layer encapsulation protocols such as those defined by IEEE 802.1 (such as Provider Bridging and MAC Security) or ITU-T/IETF (such as MPLS).

CI 03 SC 3.2.7 P 12 L 25 # 20006  
Agarwal, Puneet Broadcom

Comment Type TR Comment Status A

Term "original client data" is not defined. For example, if I am performing 802.1ad encap followed by the 802.1AE encap on a frame, then what would the "original client data" in the context of 802.1AE mean the 802.1ad encapsulated frame or the pre-802.1ad encapsulated frame?

## SuggestedRemedy

Please define the term "original client data".

Proposed Response Response Status W

ACCEPT IN PRINCIPLE.

Remove the term "original client data"

Replace:

The original client data is not intended to exceed 1500 bytes, which is its size in the basic frame.

With:

The encapsulation protocols may use up to 482 octets.

CI 03 SC 3.2.7 P 12 L 26 # 20005  
Agarwal, Puneet Broadcom

Comment Type TR Comment Status A

Since it seems that for "envelope" frames, 802.3 has no mechanism to ensure that the "original" client data adheres to the 1500 byte value of N, it may be worth mentioning that the encapsulating protocols (like P802.1ad etc) should enforce the original Client MTU of 1500 octets on their interface to the "original client".

## SuggestedRemedy

Change line 26, 27, 28 to read as follows after the full stop on line 26:

"Use of these extra octets for other purposes by non IEEE 802 encapsulating protocols is not recommended and strongly discouraged. It is expected that the various 802 encapsulating protocols will specify their own value for the "original client" data size - preferably limited to 1500 octets".

Proposed Response Response Status W

ACCEPT IN PRINCIPLE.

See response to comment 6

CI 03 SC 3.2.8 P 12 L 18 # 20150  
Dawe, Piers Agilent

Comment Type ER Comment Status R

The quantity N, as used just twice in 3.2.8 and once in lower case in 3.2.7, has another name (the lower case n in 3.2.9 is different). If it hadn't, you would have needed to make them consistent and put them in italics.

## SuggestedRemedy

Change these N N and n to clientDataSize.

Proposed Response Response Status U

REJECT.

This use of N is as used in the original clause 3.

Other comment responses (189, 144) have deleted the new uses of N.

## IEEE P802.3as/D2.1 Frame Expansion Comments

CI 04 SC 4.2.11 P 23 L 5 # 20232  
Thaler, Pat Agilent Technologies

Comment Type TR Comment Status A

The figures look okay but the title and text needs some work - These aren't state diagrams for the MAC Client so MAC Client state diagrams is an inaccurate title. Similarly the text is incorrect (and state diagrams don't "introduce" something, they describe function).

*SuggestedRemedy*

These appear to be state diagrams for the MAC interface to the MAC client. Please describe them that way.

Also applies to 4A.2.11

Proposed Response Response Status W

ACCEPT IN PRINCIPLE.

See comment 178

CI 04 SC 4.2.7.1 P 18 L 22 # 20095  
Brown, Benjamin Motorola

Comment Type TR Comment Status R

There is a maxBasicFrameSize and a maxEnvelopeFrameSize but to determine the maxTaggedFrameSize an equation is needed: maxBasicFrameSize + qTagPrefixSize

*SuggestedRemedy*

Replace the concept of determining maxTaggedFrameSize with an equation by the use of a new constant "maxTaggedFrameSize = ...;" to be consistent

This comment also applies to 4A.2.7.1, page 30, line 16

Proposed Response Response Status W

REJECT.

Previous TF debate (January 2005) has determined that this approach was desirable due to its affect on current implementations.

CI 04 SC 4.2.7.1 P 18 L 28 # 20094  
Brown, Benjamin Motorola

Comment Type TR Comment Status A

New symbol? I think this is the first time I've seen a "I" symbol in this document. I wonder if it should be defined somewhere first?

*SuggestedRemedy*

Either replace "I" with the word "or" or define it somewhere

This comment also applies to 4A.2.7.1, page 30, line 18

Proposed Response Response Status W

ACCEPT IN PRINCIPLE.

See response to comment 96

CI 04 SC 4.3.2 P 25 L 27 # 20096  
Brown, Benjamin Motorola

Comment Type TR Comment Status A

maxValidFrame has gained a definition. It has always been used as a constant value of 1500, it "is a constant, regardless of whether the frame is a basic, tagged or envelope frame" (see page 25, line 28). There are numerous places where it still is used this way: page 20, line 58; page 21, line 8; page 25, line 21; page 25, line 27; However, now it is also used to determine whether a packet is too long and should be truncated: page 17, line 38; page 18, line 28; It may be worthwhile to use another variable for this new determination.

*SuggestedRemedy*

on page 17, line 38 and page 18, line 28, replace "maxValidFrame" with "maxFrameLength" or some other suitable variable name

This comment also applies to 4A.3.2, page 36, line 11

Proposed Response Response Status W

ACCEPT IN PRINCIPLE.

See response to comment 189

In clauses 1-4 & 4A, rename maxValidFrame -> maxBasicDataSize

Define as:

maxBasicDataSize = 1500;

{In octets, the maximum length of the MAC client data field of the basic frame. }

Also change in Annex 4A

## IEEE P802.3as/D2.1 Frame Expansion Comments

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CI **04A** SC **4A.2.9** P **32** L **39** # **20193**  
David V James JGG

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

This code seems either to be Pascal-like, which no formal definition, or something else that is undocumented. Neither is OK.

*SuggestedRemedy*

Use a defined language that has compilers, preferably C.

Fix here and throughout.

Proposed Response Response Status **U**

REJECT.

The Pascal in these sections is a small portion of the entire 802.3 standard.  
Changing from Pascal to C in all 802.3 is out of scope for this project.

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CI **04A** SC **4A.4.2** P **36** L **18** # **20067**  
Booth, Brad Intel

Comment Type **ER** Comment Status **R**

Keep editing instruction closer to affect text and remove unchanged text.

*SuggestedRemedy*

Move editing instruction to before the table and change instruction to read: Change Table 4A-1 to read as follows. Remove all other unchanged text in the subannex.

Proposed Response Response Status **U**

REJECT.

The current text gives a clearer view of the change and its context.

Also see response to comment 206.

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CI **30** SC **30.3.1.1.25** P **41** L **27** # **20068**  
Booth, Brad Intel

Comment Type **ER** Comment Status **R**

Keep editing instruction closer to affect text and remove unchanged text.

*SuggestedRemedy*

Move editing instruction to before the note and change instruction to read: Change the NOTE to read as follows. Remove unchanged text from the subclause.

Proposed Response Response Status **U**

REJECT.

The current text gives a clearer view of the change and its context.

Also see response to comment 206.

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CI **31B** SC **31B** P **46** L **18** # **20192**  
David V James JGG

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

State machine names should have an underscore, not spaces. The other ones were OK, but this one is not.

*SuggestedRemedy*

Fix it, here and check throughout.

Proposed Response Response Status **U**

REJECT.

State machines in this clause do not have underscores in the names.

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CI **43B** SC **43B.2** P **47** L **32** # **20071**  
Booth, Brad Intel

Comment Type **ER** Comment Status **R**

Keep editing instruction closer to affect text and remove unchanged text.

*SuggestedRemedy*

Move editing instruction to before bullet d) and change instruction to read: Change bullet d) to read as follows. Remove the remaining unchanged text from this subannex.

Proposed Response Response Status **U**

REJECT.

The current text gives a clearer view of the change and its context.

Also see response to comment 206.

# IEEE P802.3as/D2.1 Frame Expansion Comments

<i>Cl</i> <b>64</b>	<i>SC</i>	<i>P</i> <b>46</b>	<i>L</i> <b>15</b>	<i>#</i> <span style="border: 1px solid black; padding: 0 5px;">20098</span>
Brown, Benjamin		Motorola		
<i>Comment Type</i>	<b>TR</b>	<i>Comment Status</i>	<b>A</b>	
You forget multi point mac control				
<i>SuggestedRemedy</i>				
Modify clause 64				
<i>Proposed Response</i>	<i>Response Status</i>		<b>W</b>	
ACCEPT IN PRINCIPLE.				
Modifications to include MA_DATA.request & MA_DATA.indication service primitives as in Fig 31B-1 required for Fig 64-10, 11, 12, 13				
See responses to comments 53 & 54				