

IEEE P802.3as D2.2 Frame format extensions Comments

Cl 01 SC 1.4.343 P 10 L 31 # 8
Dawe, Piers Avago Technologies

Comment Type T Comment Status A

This definition is not consistent with the way 802.3as is describing things. The draft has removed the details of the Q tag frame format of 802.1Q, so the only length/type field in 802.3 is (now) ALWAYS immediately following the source address - there's no possibility of inserting anything else there. Also, the 802.3 MAC can (no longer) tell if the client data following the Q tag contains a further tag.

SuggestedRemedy

Change to: 'Q-tagged frame: A frame that contains an IEEE 802.1Q tag starting in the Length/Type field, and that has a maximum length of 1522 octets.'

Response Response Status C

ACCEPT IN PRINCIPLE.

Change to: 'Q-tagged frame: A MAC frame with a single 4 octet tag (see IEEE 802.1Q-2003, IEEE 802.3-2005) inserted between the source address and the Length/Type fields and that has a maximum length of 1522 octets.

Cl 01 SC 1.4.xxx P 10 L 37 # 9
Dawe, Piers Avago Technologies

Comment Type TR Comment Status A

This definition of 'basic frame' does not exclude a short-enough Q-tagged frame, for example, because 802.3 doesn't discriminate between types. Therefore we can't use it to enforce a not-tagged, not-encapsulated frame for MAC Control, OAMPDUs and so on.

SuggestedRemedy

Unless we change basic frame to be one with a Length/Type field with the Length interpretation, I think we have to go back and fix 43.4.2.2, 43.5.3.2, 43B, 57.4.2, 64.3.6 and their PICS another way.

Response Response Status W

ACCEPT IN PRINCIPLE.

In all cases where .3 clauses generate frames, the frames are defined explicitly. As a result, there is no benefit to refer to basic, Q-tagged or envelope frames.

Fix these clauses as follows:

delete first sentence of 43.4.2.2

delete first sentence of 43.5.3.2

delete PICS LPS1, FP4 & FP5 in 43.7

delete item d) in 43B.2

delete PICS SP3 in 43B.6.2.3

delete first sentence of 57.4.2

delete PICS PDU1 in 57.7.3.3

delete first sentence of 64.3.6

modify second sentence of 64.3.6

The MPCPDU structure shall be as shown in Figure 64-30...

rename PICS MP1 in 64.4.4.4

MPCPDU structure - 64.3.6 - As shown in Fig 64-30 - M

IEEE P802.3as D2.2 Frame format extensions Comments

CI 02 SC 2.1 P 11 L 32 # 10
Dawe, Piers Avago Technologies

Comment Type E Comment Status R

It would help the reader to have a complete list of possible intermediate layers (it's not very long). Sentence would read better if the example(s) were nearer the mention of other clauses rather than at the other end. A specific clause gets a capital C.

SuggestedRemedy

Change to 'Other clauses in this standard, e.g. Clause 31, Clause 43, Clause 57, Clause 64, may add optional protocol sublayers above the MAC.'

Response Response Status C

REJECT.

This was removed to simplify things so that the paragraph needs to be edited for the addition of an intermediate sublayer.

CI 02 SC 2.1 P 12 L 48 # 11
Dawe, Piers Avago Technologies

Comment Type E Comment Status A

Figure title needs revision in step with figure.

SuggestedRemedy

Delete '(optional MAC Control sublayer implemented)'

Response Response Status C

ACCEPT.

CI 03 SC 3.1 P 15 L 37 # 12
Dawe, Piers Avago Technologies

Comment Type ER Comment Status A

There isn't enough information for the reader to know what, if anything, he is meant to do about this normative sentence: 'During Ethernet's history, capabilities have been added to allow Layer 2 protocol encapsulations within the MAC client data field.'. There's no definition of layer 2 in 802.3, and nothing to indicate what the sentence is talking about or why the reader needs to be concerned.

SuggestedRemedy

Options:

1. Turn it into a NOTE.
2. Turn it into a NOTE and add more information.
3. Delete the sentence.

Response Response Status W

ACCEPT IN PRINCIPLE.

Leave as normative but revise as follows:

During Ethernet's history, capabilities have been added to allow data link layer (layer 2) protocol encapsulations within the MAC client data field.
As a result, there is now more than one type of MAC frame.

CI 03 SC 3.1.1 P 15 L 51 # 13
Dawe, Piers Avago Technologies

Comment Type E Comment Status A

You should re-insert an 'and' into the truncated list.

SuggestedRemedy

... padding if required, and the frame check ...

Response Response Status C

ACCEPT.

CI 03 SC 3.1.2 P 17 L 4 # 14
Dawe, Piers Avago Technologies

Comment Type E Comment Status A

Two dashed lines looks like two mappings

SuggestedRemedy

... mappings for pad and FCS are shown with dashed lines.

Response Response Status C

ACCEPT.

IEEE P802.3as D2.2 Frame format extensions Comments

Cl 03 SC 3.2.7 P 20 L 7 # 19
Dawe, Piers Avago Technologies

Comment Type T Comment Status A

WRT 'basic frames that carry a Length/Type field with either the Length or Type interpretation with no additional tags (i.e., untagged) or encapsulations': I don't think the MAC can tell whether there are additional tags or encapsulations. As far as I understand it, any frame that's short enough might, or probably will, be treated as a basic frame by the MAC.

SuggestedRemedy

Strictly, I don't think this is a problem in 3.2.7 but it's confusing.

Response Response Status C

ACCEPT IN PRINCIPLE.

The MAC cannot tell what is in the MAC client data field, but the basic frame is still defined as not having any 'tags' in the MAC client data field.

Add a new NOTE at the end of 3.2.7:

All 802.3 MAC frames share a common format. The processing of the three types of MAC frames is not differentiated within the 802.3 MAC, except for management. However, they are mutually exclusive within the MAC client.

Cl 03 SC 3.2.7 P 20 L 9 # 17
Dawe, Piers Avago Technologies

Comment Type T Comment Status A

I assume that we do not intend to allow MACs that can handle Q-tagged frames but not basic frames, nor ones that can handle some envelope frames but not Q-tagged frames. The current text does not make this clear.

SuggestedRemedy

Either: change bullets b and c, and add a NOTE 2:

b) 1504 decimal - basic frames, and Q-tagged frames that contain an IEEE 802.1Q tag

c) 1982 decimal - basic frames, and envelope frames that contain encapsulation(s) and carry a Length/Type field with the Type interpretation

NOTE 2 (or include in existing NOTE) - All Q-tagged frames are envelope frames, but not all envelope frames are Q-tagged frames.

Or, if this proposed NOTE is not the case, change bullets b and c to:

b) 1504 decimal - basic frames, and Q-tagged frames that contain an IEEE 802.1Q tag

c) 1982 decimal - basic and Q-tagged frames, and envelope frames, which contain encapsulation(s) and carry a Length/Type field with the Type interpretation

Response Response Status C

ACCEPT IN PRINCIPLE.

Change to:

a) 1500 decimal - basic frames (see 1.4.xxx)

b) 1504 decimal - Q-tagged frames (see 1.4.327), in addition to basic frames.

c) 1982 decimal - envelope frames (see 1.4.xxx), in addition to basic frames.

Add the following:

NOTE 2 - All Q-tagged frames are envelope frames, but not all envelope frames are Q-tagged frames.

Modify 1.4.xxx

1.4.xxx basic frame: A MAC frame that carries a Length/Type field with the Length or Type interpretation and has a maximum length of 1518 octets. The basic frame is not intended to allow inclusion of additional tags (i.e., untagged) or encapsulations required by higher layer protocols.

IEEE P802.3as D2.2 Frame format extensions Comments

CI 03 SC 3.2.7 P 20 L 9 # 20
Dawe, Piers Avago Technologies

Comment Type T Comment Status A

WRT 'Q-tagged frames that contain an IEEE 802.1Q tag': this implies that there are other kinds of Q-tagged frames - ones that don't contain an IEEE 802.1Q tag.

SuggestedRemedy

Options:

1. Change 'frames that contain' to 'frames, which contain'.
2. Change 'frames that contain' to 'frames, which contain', add 'See 1.4.343.'
3. Delete 'that contain an IEEE 802.1Q tag', add 'See 1.4.343.'

Response Response Status C

ACCEPT IN PRINCIPLE.

See comment 17

CI 03 SC 3.2.7 P 20 L 10 # 18
Dawe, Piers Avago Technologies

Comment Type T Comment Status A

WRT 'envelope frames that contain encapsulation(s) and carry a Length/Type field with the Type interpretation': this implies that there are other kinds of envelope frames - ones that don't contain encapsulation(s) and/or don't carry a Length/Type field with the Type interpretation. But per 1.4.xxx, all envelope frames carry a Length/Type field with the Type interpretation, and may contain encapsulation. And the MAC is not supposed to need to know if a frame contains encapsulation(s).

SuggestedRemedy

Options:

1. Change 'frames that contain' to 'frames, which contain'.
2. Change 'frames that contain encapsulation(s) and carry' to 'frames, which carry'
3. Delete 'that contain encapsulation(s) and carry a Length/Type field with the Type interpretation', change NOTE to 'The envelope frame is defined in 1.4.xxx. It is intended...'

Response Response Status C

ACCEPT IN PRINCIPLE.

See comment 17

CI 03 SC 3.2.7 P 20 L 22 # 15
Dawe, Piers Avago Technologies

Comment Type E Comment Status A

minFrameSize hasn't been introduced yet (it was mentioned above in the base document but that sentence now follows).

SuggestedRemedy

Change to '... discussion of the minimum frame size, minFrameSize.'

Response Response Status C

ACCEPT.

CI 03 SC 3.2.8 P 20 L 37 # 16
Dawe, Piers Avago Technologies

Comment Type E Comment Status A

Please stop the word processor putting hyphens in variable names.

SuggestedRemedy

Suggest using tabs or new-line before 'max' to get the whole expression on one line anyway.

Response Response Status C

ACCEPT IN PRINCIPLE.

Will use a new line here.

The editor will try to force no hyphens for variables.

CI 03 SC 3.2.8 P 20 L 37 # 53
George Cravens Reti Corp

Comment Type E Comment Status A

Equation for pad field length was split across two lines, and the hyphen could be mistaken for a minus sign.

SuggestedRemedy

Prevent the equation from being split across two lines.

Response Response Status C

ACCEPT.

See comment 16

IEEE P802.3as D2.2 Frame format extensions Comments

CI 04 SC 4.2.3.3 P 24 L 1 # 57
Glenn Parsons Nortel

Comment Type E Comment Status R

To be consistent in the 'MAC frame' terminology we should modify 4.2.3.3 to reinforce that this is the case.

The confusion arises since in 802.3ac-1998 Q tags were allowed in minimum size frames. In 802.3as anything is allowed in minimum size frames. So if a bridge strips a tag on a 64 octet frame, it must pad it back to 64 before resending.

Per 4.3.3.3 of 802.3-2005 - minFrameSize = 64 octets
Per 3.2.6 this is irrespective of Type or Length value
If it is less. The MAC _must_ pad to 64.

Not sure if we can/should say this, but we should at least change terms.

SuggestedRemedy

Old:

4.2.3.3
The CSMA/CD Media Access mechanism requires that a minimum frame length of minFrameSize bits be transmitted.

New:
4.2.3.3
The CSMA/CD Media Access mechanism requires that a minimum MAC frame length of minFrameSize bits be transmitted.

Response Response Status C

REJECT.

The text is sufficiently clear as-is and does not need to be further clarified.

Further all instances of 'frame' in clause 4 means 'MAC frame'

CI 04 SC 4.2.7.1 P 25 L 14 # 22
Dawe, Piers Avago Technologies

Comment Type TR Comment Status A

The sentence at 4.2.9 p29 line 21:
'MAC implementations use maxPermittedFrameSize for the maximum permitted MAC frame size.'
contradicts 4.2.4.2.1:
'The receiving CSMA/CD sublayer is not required to enforce the MAC frame size limit, but it is allowed to truncate MAC frames longer than maxPermittedFrameSize octets (see 4.4.2).'

and
3.2.7 '... up to a maximum number specified by the implementation of the standard that is used. ... The maximum size of the MAC client data field is determined by the particular implementation.'
These changes could cause problems for well-behaved existing MACs, and this is why I was not satisfied with the response to my TR, no. 81 against D2.1.

SuggestedRemedy

One could keep maxPermittedFrameSize as defining a MAC's membership in one of three frame-size classes, but then we would need another Pascal variable for the actual frame size limit the MAC uses. Or, let maxPermittedFrameSize be that actual frame size limit.

Change:

'maxPermittedFrameSize = maxBasicFrameSize or (maxBasicFrameSize + qTagPrefixSize) or maxEnvelopeFrameSize ; {in octets}' to:
'maxBasicFrameSize = ..; {in octets: at least maxBasicFrameSize and no more than maxEnvelopeFrameSize}'

and change the sentence in 4.2.4.2.1 to:

'The receiving CSMA/CD sublayer is not required to enforce the MAC frame size limit, but it is allowed to truncate over-long MAC frames (see 3.2.7 and 4.4.2).'

Response Response Status W

ACCEPT IN PRINCIPLE.

It is the intent of the project to encourage new implementations to support envelope frames, and to grandfather previous maximum frame sizes. The suggested remedy of a variable for maximum frame size allows implementations to support a maximum frame size smaller than envelope and not one of the grandfathered sizes. As a result, maxPermittedFrameSize is left unchanged.

However, the text can be improved in 4.2.9 to clarify this as follows:

exceedsMaxLength:

Check to determine if the received MAC frame size exceeds maxPermittedFrameSize. MAC implementations use maxPermittedFrameSize to determine if management counts the frame as too long. It is recommended that new implementations support maxPermittedFrameSize = maxEnvelopeFrameSize.

IEEE P802.3as D2.2 Frame format extensions Comments

CI **04** SC **4.2.7.5** P **28** L **3** # **21**
Dawe, Piers Avago Technologies

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

You have removed the Initialize procedure, yet it is still referred to in the Pascal on pages 26, 27. More generally, I would like to be reassured that deleting all of 4.2.7.4, 4.2.7.5 and 4.3.2 is OK.

SuggestedRemedy

Reconcile. A few sentences in an editor's box, saying where the function of the deleted subclauses has gone, would help get through sponsor ballot.

Response Response Status **W**

ACCEPT IN PRINCIPLE.

Add an editor's note indicating:

Portions of 4.3.2 have been moved to 4.2.7.1, 4.2.8 and 4.2.9. 4.2.7.4 is a summary of 4.2.8 and 4.2.9.

Undelete 4.2.7.5.

Insert:

TransmitStatus & ReceiveStatus into type section in 4.2.7.1

Move paragraphs before and after TransmitStatus in 4.3.2 into 4.2.8 before the TransmitFrame function.

Move paragraphs before and after ReceiveStatus in 4.3.2 into 4.2.9 before the ReceiveFrame function.

CI **04** SC **4.2.9** P **29** L **17** # **23**
Dawe, Piers Avago Technologies

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

Deleting the over-size frame checking option 'either as a constant or as a function of whether the frame being received is a basic or tagged frame (see 3.2.3.5)' on line 17 seems unnecessary. If some implementations actually do this, it seems fine. And if I wanted to police a network very strictly, I would want to reject anything I hadn't contracted to transport, as early as I could detect it. (If you disagree and think this way of checking is not desirable, deprecate it for a while.)

SuggestedRemedy

Reinstate, but modified to fit the draft: 'either as a constant or as a function of the received length/type field (see 3.2.6).'

Response Response Status **W**

REJECT.

The problem is there is no way to identify a frame as basic, Q-tagged or envelope without parsing the entire MAC client data. For example, an initial Q-tag type no longer uniquely identifies just a 'Q-tagged' frame with a maximum size of 1522. That is why this was removed.

If an implementor chose to do complex parsing to police a network, that implementation is not prohibited.

CI **04** SC **4.3.2.1** P **32** L **20** # **24**
Dawe, Piers Avago Technologies

Comment Type **T** Comment Status **A**

What happened to TransmitStatus (was in 4.3.2)?

SuggestedRemedy

?

Response Response Status **C**

ACCEPT IN PRINCIPLE.

It is in Fig 4-1, and see comment 21

It should be added to 4.3.2.2.1 as well:

TransmitStatus

Indicates the status of the transmitted MAC frame. See 4.2.8

IEEE P802.3as D2.2 Frame format extensions Comments

CI **04** SC **4.3.2.1.2** P **32** L **25** # **26**
 Dawe, Piers Avago Technologies

Comment Type **E** Comment Status **A**

Wrong references. There is no 4.3.2.3.

SuggestedRemedy

Change 4.2.9 to 4.2.8, here. Change 4.3.2.3 to ? (4 times)

Response Response Status **C**

ACCEPT IN PRINCIPLE.

Change 4.2.9 to 4.2.8, here.

Delete 4.3.2.3 (4 times)

In RecieveStatus add 'see 4.2.9'

CI **04** SC **4.3.2.1.3** P **32** L **28** # **25**
 Dawe, Piers Avago Technologies

Comment Type **E** Comment Status **A**

Wrong primitive

SuggestedRemedy

MA_DATA.request

Response Response Status **C**

ACCEPT.

CI **04A** SC **4A** P **37** L **1** # **28**
 Dawe, Piers Avago Technologies

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

Note comments against Clause 4.

SuggestedRemedy

See comments against Clause 4.

Response Response Status **W**

ACCEPT IN PRINCIPLE.

Apply accepted comments against clause 4 to Annex 4A

CI **04A** SC **4A.2.9** P **40** L **37** # **54**
 George Cravens Reti Corp

Comment Type **T** Comment Status **A**

The definition of exceedsMaxLength in Clause 4 (pg.29 L12) says "MAC implementations use maxPermittedFrameSize" while this one says "... MAY use EITHER ...". Meanwhile, the NOTE on pg. 52 (30.3.1.1.25, line 50) says "Implementations shall use maxPermittedFrameSize". Seems like a conflict. There is another comment for this NOTE.

SuggestedRemedy

Delete the words "may" and "either". Should "Shall" be included?

Response Response Status **C**

ACCEPT IN PRINCIPLE.

Delete the words "may" and "either" in 4A.2.9.

Also see comment 31

CI **04A** SC **4A.3.2.1.4** P **44** L **1** # **27**
 Dawe, Piers Avago Technologies

Comment Type **ER** Comment Status **A**

Figure 4A-1 is still in 7 point. Note D2.1 comment 77. I know this feels like clerical work, and not always relevant to this project, but maintaining such a huge document as 802.3 needs multiple participants, and anything to do with state diagrams needs expert handling. Thank you!

SuggestedRemedy

Please change any 7 point in Figures 4A-1 and 4A-2 to 8 point (I have no objection to anything in 9 or 10 point: we use that for tables and text so it can't be bad...). Also the 3-line key 'Instances of MAC data service interface' in figures 64-3, 64-6, 64-7, 64-8, 64-10, 64-11.

And if you can, figures 64-10, 64-11, 64-15, 64-17, figures 64-20, 21 & 22, 64-25, 64-27, two things in 64-12 ('UCT', 'J'). Maybe insert an editorial box asking the staff editor to do these last 10 figures?

Response Response Status **W**

ACCEPT.

IEEE P802.3as D2.2 Frame format extensions Comments

CI **04A** SC **4A.4.2** P **45** L **36** # **29**
Dawe, Piers Avago Technologies

Comment Type **E** Comment Status **A**

Font size

SuggestedRemedy

All rows should be in 9 point

Response Response Status **C**

ACCEPT.

CI **05** SC **5.2.4.3** P **48** L **46** # **1**
Dawe, Piers Avago Technologies

Comment Type **E** Comment Status **A**

Getting rid of unwanted mention of LLC. Even if the MAC knew or cared what its client was, it cannot make assumptions about a bad incoming packet. And even a legitimate packet might not have been destined for the MAC client (might be for e.g. MAC Control).

SuggestedRemedy

Delete 'LLC', do not replace with 'MAC client'. In 30.3.1.1.23, change 'number of MAC client data octets received' to 'number of data octets received' (twice).

Response Response Status **C**

ACCEPT IN PRINCIPLE.

Delete 'LLC', do not replace with 'MAC client' in 5.2.4.3
In 30.3.1.1.23 page 52, line 14, change 'number of MAC client data octets received' to 'number of data octets received' (twice).

CI **30** SC **30.3.1.1.23** P **52** L **12** # **30**
Dawe, Piers Avago Technologies

Comment Type **E** Comment Status **A**

While 30.3.1.1.25 says 'A count of MAC frames received that...' this and 30.3.1.1.24 just say 'A count of MAC frames with...'. It's not clear whether this is to count length errors from the line, from the MAC client, or both.

SuggestedRemedy

Assuming the former, insert 'received' into 30.3.1.1.23 and 30.3.1.1.24.

Response Response Status **C**

ACCEPT.

CI **30** SC **30.3.1.1.25** P **52** L **50** # **31**
Dawe, Piers Avago Technologies

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

Similarly to my comment against 4.2.9, removing the option of strict error counting seems outside of the project. Assuming we want MACs to count exactly the same frames as they reject: if this note is consistent with clauses 4 and 5 it's not necessary, and if it isn't, it's wrong.

SuggestedRemedy

Delete the note altogether.

Response Response Status **W**

ACCEPT IN PRINCIPLE.

Delete note.

Modify BEHAVIOR sentence:
A count of MAC frames received that exceed maxPermittedFrameSize.

CI **30** SC **30.3.1.1.25** P **52** L **50** # **55**
George Cravens Reti Corp

Comment Type **T** Comment Status **A**

Is the NOTE normative? It uses the word "Shall", and conflicts with Clause 4 (exceedsMaxFrameSize, pg. 29, Line 12), and Annex 4a (exceedsMaxFrameSize, pg. 40, line 37) which both say "Implementations use maxPermittedFrameSize".

SuggestedRemedy

Delete the "Shall" from this note, and insert it into the exceedsMaxFrameSize definitions in Clause 4 and annex4a if it is appropriate.

Response Response Status **C**

ACCEPT IN PRINCIPLE.

Note deleted per comment 31

Also 'shall' is implicit in Pascal syntax.

IEEE P802.3as D2.2 Frame format extensions Comments

Cl 30 **SC 30.3.1.1.37** **P 53** **L 12** # **33**
Dawe, Piers Avago Technologies

Comment Type E **Comment Status A**

Names in list aren't the same as the equivalent in 30B.2.

SuggestedRemedy
Find out if they should be! If so, change one list or the other.

Response **Response Status C**
ACCEPT IN PRINCIPLE.

Change the GDMO names to be:
unknown
basicFrame
qTaggedFrame
envelopeFrame

Also modify 30.3.1.1.37 BEHAVIOR:
This indicates the MAC frame length at which the aFramesTooLong counter is incremented.

Cl 30 **SC 30.4.3.1.8** **P 53** **L 35** # **32**
Dawe, Piers Avago Technologies

Comment Type E **Comment Status A**

Obsolete sentence 'A repeater may use either value in a constant manner, in which case the largest value is recommended.'

SuggestedRemedy
Delete it

Response **Response Status C**
ACCEPT.

Cl 30 **SC 30.4.3.1.8** **P 53** **L 35** # **56**
George Cravens Reti Corp

Comment Type E **Comment Status A**

While multiple values are allowed for maxPermittedFrameSize, the sentence could be confusing as written since there is only one parameter listed (A repeater may use either value in a consistent manner...).

SuggestedRemedy
modify the line to read" "A repeater may use either of the values for maxPermittedFrameSize in a consistent manner, with the largest value recommended."

Response **Response Status C**
ACCEPT IN PRINCIPLE.

See comment 32

Cl 31 **SC 31.3** **P 58** **L 21** # **34**
Dawe, Piers Avago Technologies

Comment Type T **Comment Status A**

This sentence mentions three entities connected to the MAC Control sublayer: the MAC client, the MAC Control client and the MAC. Figure 31-2 shows no 'MAC client' while mostly the text in 802.3 mentions the MAC client and no MAC Control client.

SuggestedRemedy
If there can be three entities, split the upper interface in figure 31-2 into left and right, label left client 'MAC client'. If the two clients can (or usually are) the same thing, add a sentence saying so. If there are never three entities, can we change all 'MAC Control client's into 'MAC client's'?

Response **Response Status C**
ACCEPT IN PRINCIPLE.

Change sentence of 31.3 to:
The MAC Control sublayer uses the MAC service interface to interface to the MAC client and to the MAC.

In Figure 31-2 change 'MAC Control client' to 'MAC client' (2 instances) and throughout clause 31.

IEEE P802.3as D2.2 Frame format extensions Comments

Cl 31 SC 31.3 P 58 L 33 # 35
Dawe, Piers Avago Technologies

Comment Type T Comment Status A

With the move of the MAC control primitives to Clause 31, this sentence has become a nonsense: 'Devices that implement the MAC Control sublayer shall support the optional MAC service primitives...'. They aren't optional if they shall be supported! (But it could be that the original sentence was wrong, and there are legitimate uses of MAC control that don't need to interface to a 'higher' layer entity, but just 'sideways' to management.)

SuggestedRemedy

Delete 'that implement the MAC Control sublayer' here, delete 'if the optional MAC Control sublayer is implemented in a device' in 31.3.1 and 31.3.2.
Either: Delete 'optional', here and in PICS 31.8.3.1. Or, change 'shall' to 'may', change the PICS to from 'M' to 'O', change 'mandatory' to 'optional' in 31.3.1 and 31.3.2.31.

Response Response Status C

ACCEPT IN PRINCIPLE.

Delete 'optional', here and in PICS SI1 31.8.3.1.

Cl 31 SC 31.3.1 P 60 L 22 # 37
Dawe, Piers Avago Technologies

Comment Type E Comment Status A

Very similar sentences in 31.3.1 'This primitive defines the transfer of control requests from the MAC client to the MAC Control sublayer.' and 31.3.1.1 'This primitive defines the transfer of control commands from a MAC client entity to the local MAC Control sublayer entity.': duplication? A request is not a command. Receive side 31.3.2, 31.3.2.1 does not match.

SuggestedRemedy

Tidy up

Response Response Status C

ACCEPT IN PRINCIPLE.

Delete first sentence of 31.3.1

Align 31.3.2 & 31.3.2.1 to this style.

Cl 31 SC 31.3.1 P 60 L 23 # 36
Dawe, Piers Avago Technologies

Comment Type E Comment Status R

Do we usually say that a primitive is mandatory within its description? The sentence at the end of page 58 seems enough. If you keep it, more PICS items may be needed.

SuggestedRemedy

Delete the sentence, and similarly 31.3.2.1 p61 line 11 (or if kept, move the latter to 31.3.2).

Response Response Status C

REJECT.

Leave as is, with changes per comment 37

Cl 31 SC 31.3.1.2 P 60 L 45 # 38
Dawe, Piers Avago Technologies

Comment Type E Comment Status A

'The valid opcodes and their respective meanings are defined in Clause 31.' - not. And we are in Clause 31 now, anyway.

SuggestedRemedy

Change to 'The valid opcodes and their respective meanings are defined in Annex 31A, Annex 31B and Clause 64.' In 31.3.1.4, change to '(See Annex 31A.) In 31.3.2.2 and 31.5.3.4, change 'the annexes to Clause 31' to 'Annex 31A, Annex 31B and Clause 64'.

Response Response Status C

ACCEPT.

Cl 31 SC 31.3.2.4 P 61 L 31 # 39
Dawe, Piers Avago Technologies

Comment Type ER Comment Status A

This is one of my pet hates: 'The effect of receipt of this primitive by the MAC client is unspecified.' If the primitive is in use, anywhere in the world, then the sentence is a lie.

SuggestedRemedy

Change to 'The effect of receipt of this primitive by the MAC client is not specified in this standard. See IEEE Std 802.1?, IETF ??' (or whatever) If we can't provide any references, delete the primitive.

Response Response Status W

ACCEPT IN PRINCIPLE.

Change to 'The effect of receipt of this primitive by the MAC client is not specified in this clause. See list of MAC control functions in Annex 31A.'

IEEE P802.3as D2.2 Frame format extensions Comments

Cl 31 SC 31.5.1 P 61 L 50 # 40
Dawe, Piers Avago Technologies

Comment Type E Comment Status A

Do not know what 'MAC Data' means. Unnecessary capitals ('Data frame' appears just 3 times in 31, and 'data frame' once).

SuggestedRemedy

Move the 'MAC' to go with the first 'frame' in the sentence: 'Upon receipt, the MAC Control sublayer parses the incoming MAC frame to determine whether it is destined for the MAC client (data frame)...' On next page, change 'Data frame' to 'data frame' twice

Response Response Status C

ACCEPT.

Cl 31 SC 31.5.3.4 P 64 L 11 # 41
Dawe, Piers Avago Technologies

Comment Type E Comment Status A

Do not know what 'MAC control MAC client data field' means. This thing has another name already.

SuggestedRemedy

Change to 'An alias for mac_service_data_unit, the concatenation of lengthOrType, data.'?
Or better, replace and eliminate 'MADI_MCD' in figure 31-4.

Response Response Status C

ACCEPT IN PRINCIPLE.

Replace MADI_MCD with mac_service_data_unit in Figure and Variable list (delete from text)

Variables:

mac_service_data_unit

The concatenation of lengthOrType, data.

Cl 31B SC 31B.3.1 P 66 L 36 # 42
Dawe, Piers Avago Technologies

Comment Type T Comment Status A

If 'The length/type field ... is set to the reserved IEEE 802.3 MAC Control type' then it isn't reserved, it's in use. As well as the suggested remedy below, it would be nice to change 'reserved_multicast_address' in 31B to something like 'pause_address' - but it's not essential for this project.

SuggestedRemedy

Change to 'is set to the IEEE 802.3 MAC Control type value assigned in 31.4.1.3.'

Response Response Status C

ACCEPT.

Cl 31B SC 31B.3.2.4 P 68 L 3 # 43
Dawe, Piers Avago Technologies

Comment Type TR Comment Status A

Here we have 'The timer governing the inhibition of transmission of MAC frames from a MAC Client by the PAUSE function.', whereas 31B.1 says 'The PAUSE operation cannot be used to inhibit transmission of MAC Control frames.' A MAC frame might be a MAC Control frame, so we have a contradiction: are MAC Control frames paused or not?

SuggestedRemedy

Reconcile.

Response Response Status W

ACCEPT IN PRINCIPLE.

Change

MAC frames to
data frames (see 31.5.1)

Cl 31B SC 31B.3.2.5 P 68 L 12 # 45
Dawe, Piers Avago Technologies

Comment Type E Comment Status A

Stray words not in original

SuggestedRemedy

Delete 'Transmit state diagram for PAUSE operation' here.

Response Response Status C

ACCEPT.

IEEE P802.3as D2.2 Frame format extensions Comments

Cl 31B **SC 31B.3.2.5** **P 68** **L 14** # **44**
Dawe, Piers Avago Technologies

Comment Type **E** *Comment Status* **A**
case

SuggestedRemedy
sublayer

Response *Response Status* **C**
ACCEPT IN PRINCIPLE.

Modify:

MAC:MA_DATA.request
The service primitive issued by the MAC Control sublayer to transmit a MAC frame with the specified parameters.

Cl 31B **SC 31B.3.2.6** **P 69** **L 3** # **46**
Dawe, Piers Avago Technologies

Comment Type **E** *Comment Status* **A**
Stray capitals, reference gone wrong

SuggestedRemedy
'Figure 31B-1 depicts the Transmit state diagram...'

Response *Response Status* **C**
ACCEPT.

Cl 31B **SC 31B.3.2.6** **P 69** **L 6** # **47**
Dawe, Piers Avago Technologies

Comment Type **E** *Comment Status* **A**
Noticing that per 31B.3.1 Transmit operation, MADR_MCD seems to be just the same as mac_service_data_unit:

SuggestedRemedy
Can we use this in place of MADR_MCD in figure 31B-1? May have to add to 31B.3.2.2 Variables:
mac_service_data_unit
The concatenation of 802.3_MAC_Control, pause_command, n_quanta_tx, zeros.

Response *Response Status* **C**
ACCEPT IN PRINCIPLE.

Change in Figure 31B-1 and Variables (delete from text):

pause_mac_service_data_unit
The concatenation of 802.3_MAC_Control, pause_command, n_quanta_tx, zeros.

Cl 31B **SC 31B.3.2.6** **P 70** **L 9** # **48**
Dawe, Piers Avago Technologies

Comment Type **E** *Comment Status* **A**
Arrow from PAUSED to SEND CONTROL FRAME goes very close to pause_timerDone = true * MA_CONTROL.request... - misleading. Arrow from HALT TX to PAUSED goes further up the page than needed. Arrow from TRANSMIT READY to PAUSED not horizontal.

SuggestedRemedy
Move first line to left, second down, use snap grid and tweak third.

Response *Response Status* **C**
ACCEPT.

IEEE P802.3as D2.2 Frame format extensions Comments

Cl 43 SC 43.7.15 P 71 L 20 # 2
Dawe, Piers Avago Technologies

Comment Type TR Comment Status R

Stray capital, font size

SuggestedRemedy

'LACPDU frame format'. 'Shall be basic frame' in 9 point. Similarly in 43.7.23 (twice).

Response Response Status W

REJECT.

PICS deleted. See comment 9

Cl 43B SC 43B.2 P 73 L 40 # 49
Dawe, Piers Avago Technologies

Comment Type E Comment Status R

Consistency with 43 and 43B.6.2.3

SuggestedRemedy

PDUs generated by these protocols shall *be* basic frames* (see Clause 3).

Response Response Status C

REJECT.

Bullet deleted. See comment 9

Cl 43B SC 43B.6.2.3 P 74 L 14 # 50
Dawe, Piers Avago Technologies

Comment Type E Comment Status R

Obsolete capital

SuggestedRemedy

basic

Response Response Status C

REJECT.

Deleted PICS. See comment 9.

Cl 57 SC 57.5.2.1 P 75 L 37 # 51
Dawe, Piers Avago Technologies

Comment Type E Comment Status A

Editorials: at line 37, 'PDU', at lines 37, 44-45, 47-48, stray capitals.

SuggestedRemedy

Change all four occurrences to 'maximum OAMPDU size'.

Response Response Status C

ACCEPT IN PRINCIPLE.

Change:

Maximum PDU Size -> Maximum OAMPDU Size

Prior to exchanging and agreeing upon a Maximum OAMPDU Size,

->

Prior to exchanging Maximum OAMPDU Size and agreeing upon a maximum OAMPDU size,

In last paragraph change first two 'size' -> 'Size'. 3rd instance is OK.

Cl 64 SC 64.1.3 P 80 L 4 # 5
Dawe, Piers Avago Technologies

Comment Type E Comment Status A

Stray capitals

SuggestedRemedy

MAC Control service interface, and at bottom of figure, MAC service interface. Also titles of figs 64-6, 7, 8, 15, 16 17, 23, 26, and 'state diagram' in figs 64-18, 25, 27.

Response Response Status C

ACCEPT.

IEEE P802.3as D2.2 Frame format extensions Comments

Cl 64 SC 64.1.3 P 80 L 40 # 3
Dawe, Piers Avago Technologies

Comment Type E Comment Status A

In figure 64-3, arrow for MAC:MA_DATA.indication() points the wrong way.

SuggestedRemedy

Reverse it, to point upwards

Response Response Status C

ACCEPT.

Cl 64 SC 64.1.3 P 80 L 46 # 4
Dawe, Piers Avago Technologies

Comment Type E Comment Status R

Putting the same key about MAC and MCF interface instances in multiple diagrams is not very satisfactory (and the font is too small).

SuggestedRemedy

Move 64.1.4 Service interfaces to precede the current 64.1.3 Functional block diagram.
Insert two new sentences into what was 64.1.4:
The MAC Client communicates with the Control Multiplexer (see Figure 64-3) using the standard service interface specified in 2.3. Data primitives at this interface are prefixed with MCF:. Multipoint MAC Control communicates with the underlying MAC sublayer using the standard service interface specified in 4A.3.2. Primitives at this interface are prefixed with MAC:. Similarly, Multipoint MAC Control communicates internally using primitives and interfaces consistent with definitions in Clause 31.
Then you might do without the following in the figures you have added it to:
Instances of MAC data service interface:
MCF=interface to MAC Control client
MAC=interface to subordinate sublayer

Response Response Status C

REJECT.

It is the consensus of the Task Force, that it is much better to have the legend co-located with the figure.

Cl 64 SC 64.2.1 P 81 L 53 # 6
Dawe, Piers Avago Technologies

Comment Type E Comment Status A

Bullet d: it really is data frames, not all MAC frames

SuggestedRemedy

Change 'MAC' back to 'Data' (or 'Other' if you prefer).

Response Response Status C

ACCEPT IN PRINCIPLE.

Change

MAC frames to
Data frames (see 31.5.1)

Cl 64 SC 64.2.2.7 P 92 L 9 # 7
Dawe, Piers Avago Technologies

Comment Type E Comment Status A

Should MAC:MA_DATA.request(DA, SA, data_tx) be MCF:MA_DATA.request(DA, SA, data_tx)? If it's 'data_tx' on line 9, wouldn't it be the same payload at line 36 (but it's 'data' there)?

SuggestedRemedy

Correct if appropriate.

Response Response Status C

ACCEPT IN PRINCIPLE.

Changes to Fig 64-12:

MAC:MA_DATA.request(DA, SA, data_tx) ->
MCF:MA_DATA.request(DA, SA, data_tx)

MAC:MA_DATA.request(DA, SA, data) -> MAC:MA_DATA.request(DA, SA, data_tx)

Add legend.

IEEE P802.3as D2.2 Frame format extensions Comments

<i>Cl</i> 99	<i>SC</i> 99	<i>P</i> 8	<i>L</i> 28	# 52
Dawe, Piers				
Avago Technologies				
<i>Comment Type</i>	E	<i>Comment Status</i>	A	
Beginning and end of this paragraph is in 9 point				
<i>SuggestedRemedy</i>				
Reset all to default (10 point)				
<i>Response</i>	<i>Response Status</i>		C	
ACCEPT.				