

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

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

Cl 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.

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Cl 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.

Cl 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.

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Cl 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.

Cl 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

Cl 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.

Cl 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.

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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.'

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 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