IEEE P802.3av D2.2 10Gb/s Ethernet Passive Optical Network (EPON)
Procedure for Conditional Approval to Forward a Draft Standard report

The following is the Clause 19 'Procedure for Conditional Approval to Forward a Draft Standard' report for IEEE P802.3av 10Gb/s EPON which received conditional approval to proceed to sponsor ballot at the November 2008 IEEE 802 Plenary meeting.

a) Recirculation ballot is completed. Generally, the recirculation ballot and resolution should occur in accordance with the schedule presented at the time of conditional approval.

The schedule presented to November 2008 closing IEEE 802 EC meeting when requesting conditional approval was:

3rd December 2008	2nd Recirculation Ballot Opens
18th December 2008	2nd Recirculation Ballot Closes
12th January 2009	BRC meeting in New Orleans

BALLOT OPEN: Thursday, 4th December 2008
BALLOT CLOSE: Friday, 19th December 2008, 11:59 p.m. AOE

A complete set of comment resolution responses were generated and accepted at the IEEE P802.3av January interim as planned. All comments received during the recirculation of draft D2.2, that closed 19th December 2008, were considered.

The recirculation and resolution occurred essentially in accordance of the plan presented.

b) After resolution of the recirculation ballot is completed, the approval percentage is at least 75% and there are no new DISAPPROVE votes.

The ballot results after resolution are:

Voters	221
Approve	135
Disapprove	2
Abstain	22
Returns	159
Response Rate	71.95%
Approval Rate	98.54%

The approval rate after resolution of the ballot is greater than 75% and there were no new negative DISAPPROVES votes.

c) No technical changes, as determined by the WG Chair, were made as a result of the recirculation ballot.

Changes have been made to the draft. The draft number has been updated to D3.0, the draft date to January 16th 2009, and the copyright year to 2009. In addition the following editorial changes were made based on comments received:

Page 2:

3) Provide physical layer specifications:
- PHY for PON, 10 Gb/s downstream/1 Gb/s upstream, single ~~SM fiber~~SME
- PHY for PON, 10 Gb/s downstream/10 Gb/s upstream, single ~~SM fiber~~SME

Page 14:

1.4.40 10GBASE-PR: IEEE 802.3 Physical Layer specification for a 10 Gb/s (10/10G-EPON) point-to-multipoint link over one single-mode optical fiber (See IEEE 802.3 Clause 75, Clause ~~76~~76, and Clause 77).

1.4.41 10/1GBASE-PRX: IEEE 802.3 Physical Layer specification for a 10 Gb/s downstream, 1 Gb/s upstream (10/1G-EPON) point-to-multipoint link over one single-mode optical fiber (see IEEE 802.3 Clause 75, Clause 76, and Clause 77).

1.4.48 10G-EPON: An EPON architecture operating at 10 Gb/s data rate in either one or both directions. This term collectively refers to 10/10G-EPON and 10/1G-EPON architectures (see definitions ~~above~~below).

Page 15:

SLD	Start of LLID Delimiter
TDMA	~~Time Division Multiple Access~~time division multiple access
TQ	time_quantum
WDM	~~Wavelength Division Multiplexing~~wavelength division multiplexing

Page 20:

A read–only value that identifies the Logical Link identity (LLID) associated with the MAC port as specified in ~~65.1.2.3.2~~65.1.3.2.2 or 76.2.6.1.3.2~~.~~, as approproate.;

Page 21:

A count of frames received that contain a valid SLD field in an ONU, as defined in 65.1.3.3.1 or 76.2.6.1.3.1, as appropriate, ~~passes~~ and pass the CRC–8 check, as defined in 65.1.3.3.3 or 76.2.6.1.3.3, as appropriate, and ~~the frame meets~~ meet the rule for acceptance defined in 65.1.3.3.2 pr 76.2.6.1.3.2, as appropriate.;

Page 31:

Opcode (~~Hexadecimal~~hexadecimal)	MAC Control function	Specified in	Value/Comment	Timestamp[a]
00-00	Reserved			
00-01	PAUSE	Annex 31B	Requests that the recipient stop trans-	No

Page 32:

Opcode (~~Hexadecimal~~hexadecimal)	MAC Control function	Specified in	Value/Comment	Timestamp[a]
00-06	REGISTER_ACK	Clause 64	Notify the recipient that the station	Yes

Page 50:

a) PON with a nominal bit rate of 1000 Mb/s in both downstream and upstream directions (1G-EPON), shared amongst the population of Optical Network Units (ONUs) attached to the P2MP topology. The P2MP PHYs use the 1000BASE-PX Physical Coding Sublayer (PCS), the Physical Medium Attachment (PMA) sublayer defined in Clause 65 and an optional ~~Forward Error Correction~~ forward error correction (FEC) function defined in Clause 65;

Page 72:

Table 75–2 illustrates recommended ~~parings~~ pairings of asymmetric–rate ONU PMDs with asymmetric–rate OLT PMDs to achieve the power budgets shown in Table 75–1.

Table 75–3 illustrates recommended ~~parings~~ pairings of symmetric–rate ONU PMDs with symmetric–rate OLT PMDs to achieve the power budgets as shown in Table 75–1

Page 90:

b) $T_{receiver\_settling}$ is defined in 60.7.13.2.~~1~~ 1, and its value is defined in Table 75–6 and Table 75–7.
c) T_{CDR} is defined in 76.4.2.1, and its value is less than 400 ns.

Page 125 (changes only to formating of subscripts and superscripts):

The code is based on the generating polynomial

~~$$G(Z) = \prod_{i=0}^{31}(Z-\alpha^i) = A_{32}Z^{32} + A_{31}Z^{31} + \ldots + A_0Z^0$$~~

$$G(Z) = \prod_{i=0}^{31}(Z-\alpha^i) = A_{32}Z^{32} + A_{31}Z^{31} + \ldots + A_0Z^0 \quad (76\text{-}1)$$

where:

α is a root of the binary primitive polynomial $x^8 + x^4 + x^3 + x^2 + 1$
A is a series representing the resulting polynomial coefficients of $G(Z)$, ~~(A_{32}~~ (A_{32} is equal to 0x01)
Z corresponds to an 8-bit GF(2^8) symbol,
x corresponds to a bit position in a GF(2^8) symbol .

A FEC parity vector is ~~presented~~ represented by

$$P(Z) = D(Z) \bmod G(Z) \quad (76\text{-}2)$$

Page 126 (changes only to formating of subscripts and superscripts):

$D(Z)$ is the data vector ~~$D(Z) = D_{222}Z^{254} + D_{221}Z^{253} + \ldots + D_0Z^{32}$~~ $D(Z) = D_{222}Z^{254} + D_{221}Z^{253} + \ldots + D_0Z^{32}$.
~~D_{222}~~ D_{222} is the first data octet and ~~D_0~~ D_0 is the last.

$P(Z)$ is the parity vector $P(Z) = P_{31}Z^{31} + P_{30}Z^{30} \ldots + P_0Z^0$. ~~$P_{31}$~~ P_{31} is the first parity octet and ~~P_0~~ P_0 is the last.

A data octet (~~$d_8, d_8, \ldots, d_8, d_8$~~ $d_7, d_6, \ldots, d_1, d_0$) is identified with the element: $d_7\alpha^7 + d_6\alpha^6 + \ldots + d_1\alpha^1 + d_0$ in GF(2^8), the finite field with 2^8 elements. The code has a correction capability of up to sixteen symbols.

NOTE—~~Note~~ for the (255,223) Reed-Solomon code, the symbol size equals one octet. The ~~d_0~~ d_0 is identified as the LSB and ~~d_7~~ d_7 is identified as the MSB for all octets in accordance with the conventions of 3.1.1. Bit ordering shall be as illustrated in Figure 76–12.

Page 129:

To avoid spontaneous emission noise from near ONUs obscuring the signal from a distant ONU, the lasers in ONUs are ~~be~~ turned off between transmissions. To control the laser, the ONU PCS is extended to detect the presence of transmitted data and generate the PMA_SIGNAL.request(tx_enable) primitive to turn the laser on and off at the correct times. This function is performed by the Data Detector shown in the functional block diagram in Figure 76–8.

No technical changes have been made.

d) No new valid DISAPPROVE comments on new issues that are not resolved to the satisfaction of the submitter from existing DISAPPROVE voters.

There were no new valid DISAPPROVE comments.

e) If the WG Chair determines that there is a new invalid DISAPPROVE comment or vote, the WG Chair shall promptly provide details to the EC.

Five Technical Required comments were received from one existing DISAPPROVE voter. These comments are draft D2.2 comment #2850, #2851, #2852, #2865 and #2866. Verbatim copies of these comments and the detail rulings of the chair are provided below. In the case where a comment is a restatement of a previously rejected, and recirculated, comment, that comment is provided as well.

Draft D2.2 comment #2850:

Cl 31C *SC* 31C.3.1 *P* 33 *L* 6 # 2850

Dawe, Piers Avago Technologies

Comment Type TR *Comment Status* R *Control Client UnCngTxt-OOS*

Draft says 'Upon reception of EXTENSION frames, the frame is sent to the MAC CONTROL client.' So there is only one MAC CONTROL client. I doubt that you want the EXTENSION frames to go to the same client as the ordinary Ethernet frames. Note unsatisfied TRs in this area.

SuggestedRemedy

Change 'the MAC CONTROL client' to wherever you want these frames to go. One could call it 'the MAC Control organization specific extension client'.

Response *Response Status* W

REJECT.

The WG chair rules that this comment is out of scope not requiring recirculation.

The MAC Control Client is outside of the scope of 802.3 standard; the standard does not restrict MAC Control Client from including multiple functions. In fact currently MAC Control Clients already include multiple functions, such as flow control, MPCP discovery client, etc. A new MAC Control Client can also include functionality necessary to handle EXTENSION messages. No changes to the draft are needed.

The comment does not require recirculation for the following reasons:
1) It was submitted by a balloter who voted "Disapprove" on the previous ballot, thus the balloter's vote does not change.
2) The comment restates comments #2709 & #2710 from draft D2.1 ballot, which was submitted by the same balloter, and rejected. It can therefore be considered a "pile on" to the balloter's own comment.
3) The comment is made against text which did not change between D2.1 and D2.2 (i.e. did not change in the recirculated draft).

(Continued below)

Draft D2.1 comment #2709 referred to in response:

Cl **00** *SC* **31.2** *P* **417** *L* **25** # 212709

Dawe, Piers — Avago Technologies

Comment Type **TR** *Comment Status* **R** *SED] - delayed until Annex31*

31.2 says 'MAC Control clients may include the Bridge Relay Entity, LLC, or other applications.' If there is a purpose to the proposed Annex 31 'organization specific' transmission channel, someone must have another client in mind. Refer to unsatisfied TRs.

SuggestedRemedy

State what the new MAC Control client is. Is it an OMCI? Give a reference to the appropriate ITU-T document(s).

Response *Response Status* **U**

REJECT.
OMCI fits perfectly into the category of "other applications". No changes to the draft are believed to be needed.
[was c31, move to c00 as c31 is not in the draft]
[page number is against 802.3ay D2.3]

Draft D2.1 comment #2710 referred to in response:

Cl **31C** *SC* **31C.3.1** *P* **33** *L* **6** # 212710

Dawe, Piers — Avago Technologies

Comment Type **TR** *Comment Status* **R** *TENSION MAC Control Client*

Draft says 'Upon reception of EXTENSION frames, the frame is sent to the MAC CONTROL client.' 31.2 says 'MAC Control clients may include the Bridge Relay Entity, LLC, or other applications.' I don't believe the intended recipient is Bridge Relay Entity, LLC, or the other applications imagined in the base standard. Note unsatisfied TRs in this area.

SuggestedRemedy

Change 'the MAC CONTROL client' to wherever you want these frames to go. One could call it 'the MAC Control organization specific extension client' and add another sentence to 31C.1 'The intended client for the MAC Control organization specific extension is an OMCI? remote management subsystem (see ITU-T G.984 and G.983?).'

Response *Response Status* **U**

REJECT.
OMCI fits perfectly into the category of "other applications". No changes to the draft are believed to be needed.

The WG chair rules that D2.2 comment #2850 is a new invalid DISAPPROVE comment.

Draft D2.2 comment #2851:

Cl 76 SC 76.3.2.5.3 P 139 L 1 # 2851

Dawe, Piers — Avago Technologies

Comment Type TR *Comment Status* R *C Code*

The committee replied to D2.1 comment 2712 with some criticism of Pascal and a claim that C is a popular programming language but does not justify the use a programming language rather than English words (or state machine notation). It points to an example in 61A.3. That example is, I believe, a proper program that could run, which makes it unambiguous even if the reader is not fully expert in C, and it's informative, so one does not have to understand it to use the standard. In contrast, the fragments in this clause are incomplete and won't run (hence ambiguous), don't seem to serve any useful purpose, put an unnecessary burden on the standard's users, and raise ambiguity because they attempt to redefine material stated in English words. State diagrams with embedded bits of C is particularly horrible.

SuggestedRemedy

If you must decorate the draft with C, put the pieces together into one or a few executable programs in an informative appendix. Write the normative standard with the methods that the other 70+ clauses have found adequate; principally English words, failing that in state diagrams, Pascal or Matlab. Avoid short fragments. And, avoid pseudo-code.

Response *Response Status* W

REJECT.

The WG chair rules that this comment is out of scope not requiring recirculation.

The Task Force believes that pseudo-code provides a more concise and unambiguous notation than could be achieved with textual description. For example, see response to comment #2852. No changes to the draft are needed.

The comment does not require recirculation for the following reasons:
1) It was submitted by a balloter who voted "Disapprove" on the previous ballot, thus the balloter's vote does not change.
2) The comment restates comments #2712, #2713 & #2714 from draft D2.1 ballot, which was submitted by the same balloter, and rejected. It can therefore be considered a "pile on" to the balloter's own comment.
3) The comment is made against text which did not change between D2.1 and D2.2 (i.e. did not change in the recirculated draft).

Draft D2.1 comment #2713 referred to in response:

Cl 76 SC 76.2.2.5.3 P 181 L 5 # 212713

Dawe, Piers — Avago Technologies

Comment Type TR *Comment Status* R *C Code*

"Does this pseudo-C fragment say anything that the sentence above doesn't? It uses three sorts of brackets; what does this signify?"

SuggestedRemedy

Delete this fragment

Response *Response Status* U

REJECT.
See response to comment #2712

(Continued below)

Draft D2.1 comment #2714 referred to in response:

Cl 76 *SC* 76.2.3.1.3 *P* 187 *L* 40 # 212714
Dawe, Piers Avago Technologies

Comment Type TR *Comment Status* R *C Code*

As far as I can see, all this pseudo-C fragment says that the sentence above doesn't, is that only the first 27 blocks are appended into the input buffer.

SuggestedRemedy

Say that in words and delete this fragment. Similarly with the next three fragments.

Response *Response Status* U

REJECT.
See response to comment #2712

Draft D2.1 comment #2712 referred to in response:

Cl 76 *SC* 76.2.1.3 *P* 162 *L* 37 # 212712
Dawe, Piers Avago Technologies

Comment Type TR *Comment Status* R *C Code*

"Draft says 'Code examples given in this clause adhere to the style of the ""C"" programming language.' This is a particularly bad choice, because C is notorious for being too cryptic and compact. D2.0 comment 1962 pointed out that the standard is supposed to be written in English, or state machine notation, or, only when desperate, specified programming languages with references so that the reader can find what the syntax actually means (Pascal and Matlab have been used and are MUCH more readable), and that code should if possible be executable by a machine."

SuggestedRemedy

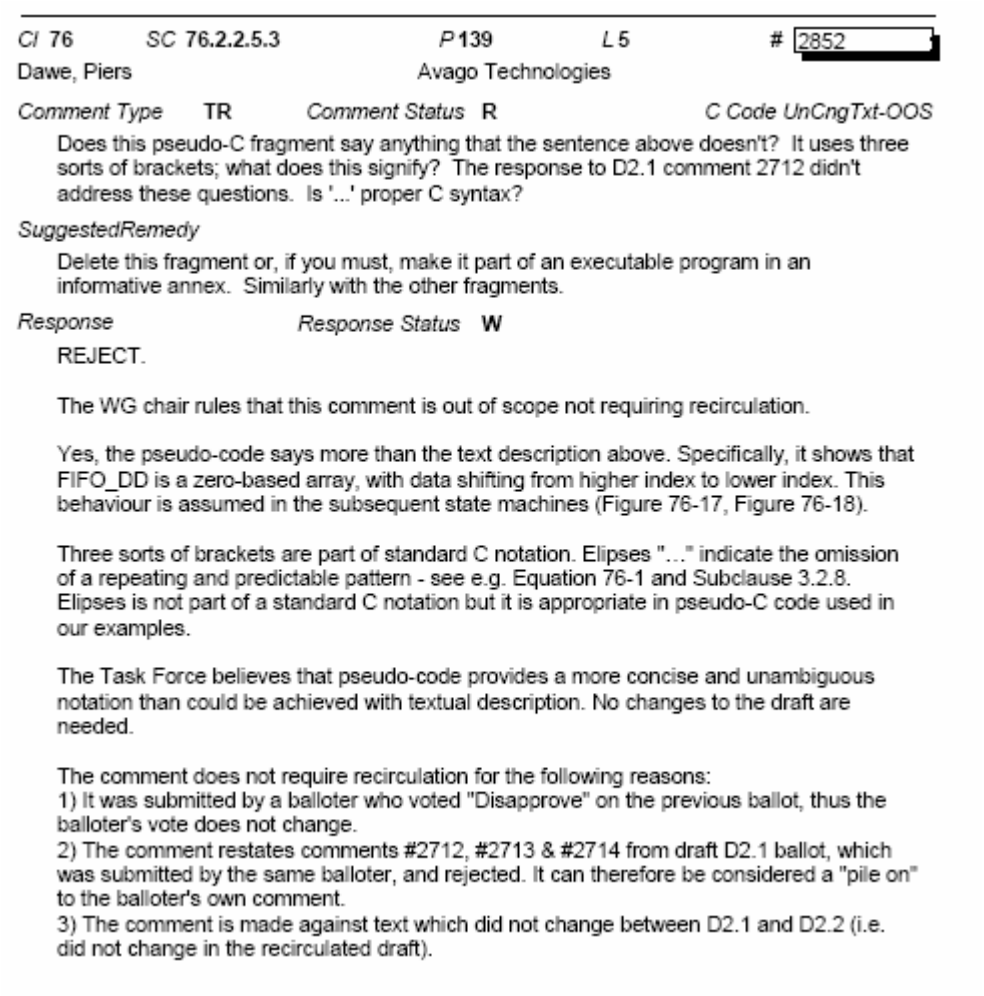
Be sure that you state anything the reader needs to know, preferably in words, failing that in state diagrams, Pascal or Matlab. Avoid short fragments. Say which takes precedence if English and pseudo-code disagree.

Response *Response Status* U

REJECT.
1) The task force pays strong attention to clarity and readability of the produced draft.
2) Many studies show that today, programming language "C" is the most popular language. For example, see http://www.langpop.com/
3) C-style notation was adopted by many other programming environments, for example, Verilog. The TF believes that the C-style notation would be easiest to understand to a largest fraction of potential standard users.
4) Pascal was developed in 1968 and its popularity peaked around 1980. Since then, both popularity and user base of Pascal has been continuously shrinking. Today, Pascal's popularity is far behind C. In fact, studies show it to be in the same category with languages like Delphi, Ada, Scheme. Again, please, refer to http://www.langpop.com/.
5) Pascal programming language is no longer a mandatory course in computer science curriculum (for about 10-15 years now) while C programming language is widely studied. Pascal constructs today may appear unclear and confusing to many engineers who graduated in the past decade.
6) The IEEE Style Manual places no requirements of which programming language to use.
7) The task force believes that the draft development should reflect objective realities of technology development and evolution. Continued use of Pascal language in the draft will make a negative impression on potential users of the standard. The standard may unnecessarily be perceived as obsolete, not being in sync with modern technologies, and may turn potential users to use alternative
standards developed by other SDOs.
8) Use of "C" language is consistent with code examples given in other projects for example see clause 61A.3.

The WG chair rules that D2.2 comment #2851 is a new invalid DISAPPROVE comment.

Draft D2.2 comment #2852:



Cl 76 *SC* 76.2.2.5.3 *P* 139 *L* 5 # 2852

Dawe, Piers — Avago Technologies

Comment Type TR *Comment Status* R *C Code UnCngTxt-OOS*

Does this pseudo-C fragment say anything that the sentence above doesn't? It uses three sorts of brackets; what does this signify? The response to D2.1 comment 2712 didn't address these questions. Is '...' proper C syntax?

SuggestedRemedy

Delete this fragment or, if you must, make it part of an executable program in an informative annex. Similarly with the other fragments.

Response *Response Status* W

REJECT.

The WG chair rules that this comment is out of scope not requiring recirculation.

Yes, the pseudo-code says more than the text description above. Specifically, it shows that FIFO_DD is a zero-based array, with data shifting from higher index to lower index. This behaviour is assumed in the subsequent state machines (Figure 76-17, Figure 76-18).

Three sorts of brackets are part of standard C notation. Elipses "…" indicate the omission of a repeating and predictable pattern - see e.g. Equation 76-1 and Subclause 3.2.8. Elipses is not part of a standard C notation but it is appropriate in pseudo-C code used in our examples.

The Task Force believes that pseudo-code provides a more concise and unambiguous notation than could be achieved with textual description. No changes to the draft are needed.

The comment does not require recirculation for the following reasons:
1) It was submitted by a balloter who voted "Disapprove" on the previous ballot, thus the balloter's vote does not change.
2) The comment restates comments #2712, #2713 & #2714 from draft D2.1 ballot, which was submitted by the same balloter, and rejected. It can therefore be considered a "pile on" to the balloter's own comment.
3) The comment is made against text which did not change between D2.1 and D2.2 (i.e. did not change in the recirculated draft).

For draft D2.1 comment #2712, #2713 and #2714 referred to in response, see above.

The WG chair rules that D2.2 comment #2852 is a new invalid DISAPPROVE comment.

Draft D2.2 comment #2865:

Cl **99** *SC* **99** *P* **2** *L* **12** # 2865

Dawe, Piers — Avago Technologies

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

This abstract avoids telling the reader that there is a draft new transmission scheme in Annex 31C, unrelated to anything described here.

SuggestedRemedy

Add a sentence: 'A MAC Control organization specific extension enables Physical Layer Operations, Administration, and Management (PLOAM) messages.'

Response *Response Status* **W**

REJECT.

The WG chair rules that this comment is a restatement of a previous comment not requiring recirculation.

The EXTENSION MAC Control message was added by directive of the 802.3 WG at the July 2008 plenary meeting - please see motion number #3 in minutes_0708.pdf.

Please note that EXTENSION MAC Control message does not define any new transmission schemes as implied in the comment. It only defines a format and processing of an EXTENSION MAC Control frame.

EXTENSION mechanism is a very small part of the overall draft and does not need to be mentioned in the abstract any more than for example 10Gb/s FEC or dual-rate operation mode. The abstract should describe the overall goal of the standard and not specific details. Moreover, abstract and frontmatter is not part of the standard and will be removed by Staff Editors prior to publication of 802.3 standard. No changes to the draft are needed.

The comment does not require recirculation for the following reasons:
1) It was submitted by a balloter who voted "Disapprove" on the previous ballot, thus the balloter's vote does not change.
2) The comment restates comments #2707 from draft D2.1 ballot, which was submitted by the same balloter, and rejected. It can therefore be considered a "pile on" to the balloter's own comment.

Draft D2.1 comment #2707 referred to in response:

Cl **99** *SC* **99** *P* **2** *L* **12** # 212707

Dawe, Piers — Avago Technologies

Comment Type **TR** *Comment Status* **R** *[TO BE PROCESSED]*

This abstract avoids telling the reader that there is a draft new transmission scheme in Annex 31C, unrelated to anything described here.

SuggestedRemedy

Either remove the draft new transmission scheme in Annex 31C or add text here to mention it. This could be done by an additional objective.

Response *Response Status* **U**

REJECT.
Front matter is not part of the published standard.
Independently of that, the abstract does not need to list every minor mechanism added to the draft. The EXTENSION MAC Control message was added at the directive of 802.3 Working Group at the July 2008 plenary meeting. Please review meeting minutes.

Response accepted by voice vote without opposition.

The WG chair rules that D2.2 comment #2865 is a new invalid DISAPPROVE comment.

Draft D2.2 comment #2866:

Cl **00**	*SC* **31.2**	*P* **417**	*L* **25**	# 2866

Dawe, Piers — Avago Technologies

Comment Type **TR** *Comment Status* **R** *UnCngTxt-OOS*

31.2 says 'MAC Control clients may include the Bridge Relay Entity, LLC, or other applications.' With the proposed Annex 31 'organization specific' transmission channel, there would be another client. But is it possible to have multiple MAC Control clients of the same MAC Control sublayer instance? Refer to unsatisfied TRs.

SuggestedRemedy

Either: State what the new MAC Control client is. Is it an OMCI? Give a reference to the appropriate ITU-T document(s). Explain about multiple MAC Control clients. Or,
State what the new MAC Control EXTENSION client is. Is it an OMCI? Give a reference to the appropriate ITU-T document(s).
Either way, modify the diagram to show the two parallel sublayers above MAC Control.

Response *Response Status* **W**

REJECT.

The WG chair rules that this comment is out of scope not requiring recirculation.

OMCI fits perfectly into the category of "other applications". The MAC Control Client is outside of the scope of 802.3 standard; the standard does not restrict MAC Control Client from including multiple functions, OMCI being one of them. No changes to the draft are needed.

The comment does not require recirculation for the following reasons:
1) It was submitted by a balloter who voted "Disapprove" on the previous ballot, thus the balloter's vote does not change.
2) The comment restates comments #2709 & #2710 from draft D2.1 ballot, which was submitted by the same balloter, and rejected. It can therefore be considered a "pile on" to the balloter's own comment.
3) The comment is made against text which did not change between D2.1 and D2.2 (i.e. did not change in the recirculated draft).

Draft D2.1 comment #2709 referred to in response:

Cl **00**	*SC* **31.2**	*P* **417**	*L* **25**	# 212709

Dawe, Piers — Avago Technologies

Comment Type **TR** *Comment Status* **R** *SED] - delayed until Annex31*

31.2 says 'MAC Control clients may include the Bridge Relay Entity, LLC, or other applications.' If there is a purpose to the proposed Annex 31 'organization specific' transmission channel, someone must have another client in mind. Refer to unsatisfied TRs.

SuggestedRemedy

State what the new MAC Control client is. Is it an OMCI? Give a reference to the appropriate ITU-T document(s).

Response *Response Status* **U**

REJECT.
OMCI fits perfectly into the category of "other applications". No changes to the draft are believed to be needed.
[was c31, move to c00 as c31 is not in the draft]
[page number is against 802.3ay D2.3]

(Continued below)

Draft D2.1 comment #2710 referred to in response:

Cl 31C *SC* 31C.3.1 *P* 33 *L* 6 # 212710

Dawe, Piers Avago Technologies

Comment Type TR *Comment Status* R *TENSION MAC Control Client*

Draft says 'Upon reception of EXTENSION frames, the frame is sent to the MAC CONTROL client.' 31.2 says 'MAC Control clients may include the Bridge Relay Entity, LLC, or other applications.' I don't believe the intended recipient is Bridge Relay Entity, LLC, or the other applications imagined in the base standard. Note unsatisfied TRs in this area.

SuggestedRemedy

Change 'the MAC CONTROL client' to wherever you want these frames to go. One could call it 'the MAC Control organization specific extension client' and add another sentence to 31C.1 'The intended client for the MAC Control organization specific extension is an OMCI? remote management subsystem (see ITU-T G.984 and G.983?).'

Response *Response Status* U

REJECT.
OMCI fits perfectly into the category of "other applications". No changes to the draft are believed to be needed.

The WG chair rules that D2.2 comment #2866 is a new invalid DISAPPROVE comment.

There were five new DISAPPROVE comments ruled invalid by the WG chair.

f) The WG Chair shall immediately report the results of the ballot to the EC including: the date the ballot closed, vote tally and comments associated with any remaining disapproves (valid and invalid), the WG responses and the rationale for ruling any vote invalid.

Please see above.