Cl **E** *SC* **E.6** *P* **265** *L* **11** # 1

Philippe Klein Broadcom

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

NOTE - The Channel-Time Clock (CTC) is specified in the MoCA MAC/PHY SPECIFICATION v2.0 only

SuggestedRemedy

Remove "the MoCA MAC/PHY SPECIFICATION v1.0 and" from the note

Response *Response Status* **C**

ACCEPT. Group comments 1 and 64. The text will be removed.

Cl **E** *SC* **E.6** *P* **264** *L* **43** # 2

Philippe Klein Broadcom

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

Table - E2 - gPTP event message encapsulation for MoCA is missing

SuggestedRemedy

Add "encapsulated in control frames as described in the MoCA MAC/PHY SPECIFICATION v2.0"

Response *Response Status* **C**

ACCEPT. The text will be added to Table E-2 to the blank cell.

Cl **13** *SC* **13.4** *P* **179** *L* **4** # 3

Yuehua Wei ZTE

Comment Type **T** *Comment Status* **D**

for communicating time over - probably should read "for communicating time-of-day over", since this is what the described communication protocol is about.

SuggestedRemedy

Per comment

Proposed Response *Response Status* **W**

WITHDRAWN.

Cl **13** *SC* **13.4** *P* **179** *L* **5** # 4

Yuehua Wei ZTE

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

This implies that if one physical OLT associates with multiple ONUs,
(1) what is a "physical OLT" ? Do you mean an OLT port, OLT card, OLT chassis? What is this?
(2) since it is a physical OLT, does it communicate with physical ONUs or not?
This statement is at least strange in the context of the standard, since it enters into implementation details, which are irrelevant in the scope of the standard. For any standard, it is always OLT and associated / connected ONUs. It is irrelevant whether an OLT card contains multiple OLTs or not.

SuggestedRemedy

Per comment, either remove this statement altogether or change it to avoid any references to implementation.

Response *Response Status* **C**

ACCEPT. The text "…one physical OLT…" will be changed to "… one OLT port …..".

Cl **13** *SC* **13.4** *P* **179** *L* **40** # 5

Yuehua Wei ZTE

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

This comment is about Figure 13-2
(1) What is "802.3ah/av MAC" and how is it different from 802.3 MAC?
(2) Where are definitions of the "802.3ah/av master state machine" and "802.3ah/av slave state machine" defined? A reference would be most welcome in this place.
(3) "802.3ah" does not exist any more, since it was incorporated into base 802.3-2008 text.
(4) Which of the 802.3 PHYs can operate with some mysterious "802.3ah/av MAC"? Can I operate it over say 10Base-T PHY ?

SuggestedRemedy

Per comment.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE. "802.3ah/av" will be replaced with EPON, to match the name of the clause. A cross reference will not be added; after discussion, it was felt that having cross-references in figures can be dangerous because they are not automatically updated when the document changes (at least, not with the tools currently used here).

"802.3ah/av MAC" will be changed to "MAC".
"802.3 PHY" will be changed to "PHY"

Cl **13** *SC* **13.5.1.1** *P* **179** *L* **48** # 6

Yuehua Wei ZTE

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

What is this "sync interval" ? Is this defined anywhere?

SuggestedRemedy

Per comment.

Response *Response Status* **C**

ACCEPT. The term "sync interval" will be defined in 10.6.2.1 (where the concept is defined). For the instance that this comment refers to, a cross-reference to 10.6.2.1 will be added.

In addition, the term "announce interval" also needs to be defined; this will be added to 10.6.2.1. Some of the detailed material currently in 10.6.2.1 would more appropriately go in 10.6.2.2 (related to announce interval) or 10.6.2.3 (related to sync interval); the material will be moved.
The terms "announce interval" and "sync interval" will be written with the "a" of announce and "s" of sync lower case, consistently through the document.

Cl **13** *SC* **13.5.1.1** *P* **179** *L* **48** # 7

Yuehua Wei ZTE

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

Change " clock master requester " to " clock master "
Change " clock slave responder " to " clock slave "
It was defined at the start of Clause 13, that clock master = requester and clock slave = responder. No need to duplicate.

SuggestedRemedy

Per comment

Response *Response Status* **C**

ACCEPT. The suggested changes will be made.

Cl **13** *SC* **13.5.1.2.2** *P* **180** *L* **23** # 8

Yuehua Wei ZTE

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

a downstream MPCP message that would carry - IMHO you use OSSP message (OSSPDU) to carry that timestamp ...

SuggestedRemedy

Per comment

Response *Response Status* **C**

ACCEPT IN PRINCIPLE. Group comments 8, 13, 14, 15, 16. The text of 13.5.1.2.2 will be re-worded as:

"This parameter identifies the time-of-day value at the clock slave that corresponds to X, i.e., the parameter value is the time-of-day when a downstream MPCP message whose timestamp would be X would have arrived at the the clock slave."

Cl **13** *SC* **13.5.1.3** *P* **180** *L* **53** # 9

Yuehua Wei ZTE

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

This primitive is generated every - generated by what or at which side of the link?

SuggestedRemedy

Per comment

Response *Response Status* **C**

ACCEPT. The text will be reworded as:

"This primitive is generated by the clock master every …."

Cl **13** *SC* **13.5.1.4** *P* **181** *L* **3** # 10

Yuehua Wei ZTE

Comment Type **TR** *Comment Status* **D**

Upon receipt, a TIMESYNC message is enqueued for transmission. - how do you deal with the transmission delay which a frame can suffer when reaching the MAC layer? MAC layer is not immediately available for transmission. Imagine that the OSSPDU is queued behind a 2k frame, which will introduce additional delay, which is not accounted in the calculations. How is this compensated?

SuggestedRemedy

Per comment

Proposed Response *Response Status* **W**

WITHDRAWN. The comment was withdrawn. In the course of the discussion that led to the withdrawal, it was decided that a note would be useful that indicates that the proper operation of the protocol is not impeded if the TIMESYNC message arrives at the ONU after the time X. The following note will be added:

NOTE - Arrival of the TIMESYNC OSSP message at the ONU after the selected time X does not impede proper operation of the synchronization mechanism defined in this clause.

Cl **13** *SC* **13.5.2.4** *P* **181** *L* **43** # 11

Yuehua Wei ZTE

Comment Type **T** *Comment Status* **R**

are captured from the respective TIMESYNC message fields - why do we need to mention any implementation details at all? Isn't this obvious that a message would be parsed on reception and individual fields would be processed and sent to respective receiving process?

SuggestedRemedy

Strike this text or rewrite to avoid discussion of the obvious.

Response *Response Status* **C**

REJECT. This comment is out of scope, as the current ballot is a recirculation ballot, the text the comment is referring to did not change relative to the previous ballot, and the text is not new text.

However, the text is correct; this is what happens. It also is not confusing. Finally, this section is present because an analagous section is present in 13.5.1.

Cl **13** *SC* **13.6.1** *P* **181** *L* **49** # 12

Yuehua Wei ZTE

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

Is this RTTi updated when the RTT measured for the given ONU changes over time? It is not mentioned anywhere.

SuggestedRemedy

Per comment.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE. The note will be reworded:

NOTE - RTT is measured and updated by the MPCP using the mechanism specified in IEEE Std 802.3TM-2008 and IEEE Std 802.3avTM-2009, and stored in RTTi when measured and updated. RTTi is not used by the ONU, and is set to zero in an ONU MD entity."

Cl **13** *SC* **13.7.1.2.5** *P* **182** *L* **25** # 13

Yuehua Wei ZTE

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

Change to read "13.7.1.2.5 ToDX,i: the time-of-day (i.e., grandmaster time) when a downstream MPCP message carrying a timestamp X (see 13.7.1.2.7) arrives at the clock slave. The data type for ToDX,i is Timestamp."

SuggestedRemedy

Per comment

Response *Response Status* **C**

ACCEPT IN PRINCIPLE. Group comments 8, 13, 14, 15, 16. The text of 13.7.1.2.5 will be reworded as:

"ToD X,i: the time of day (i.e., grandmaster time) at the clock slave that corresponds to X, i.e., the time of day when a downstream MPCP message whose timestamp would be X would have arrived at the clock slave."

Cl **13** *SC* **13.7.1.2.5** *P* **182** *L* **25** # 14

Yuehua Wei ZTE

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

a downstream MPCP message that would carry - IMHO you use OSSP message (OSSPDU) to carry that timestamp ...

SuggestedRemedy

Per comment

Response *Response Status* **C**

ACCEPT IN PRINCIPLE. Group comments 8, 13, 14, 15, 16. The text of 13.7.1.2.5 will be reworded as indicated in comment 13.

Cl **13** *SC* **13.7.1.2.6** *P* **182** *L* **29** # 15

Yuehua Wei ZTE

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

a downstream MPCP message that would carry - IMHO you use OSSP message (OSSPDU) to carry that timestamp ...

SuggestedRemedy

Per comment

Response *Response Status* **C**

ACCEPT IN PRINCIPLE. Group comments 8, 13, 14, 15, 16. The text of 13.7.1.2.6 will be reworded as:

"ToD X,o: the time of day (i.e., grandmaster time) at the clock master that corresponds to X, i.e., the time of day when a downstream MPCP message whose timestamp would be X would have departed the clock master."

Cl **13** *SC* **13.7.1.2.6** *P* **182** *L* **29** # 16

Yuehua Wei ZTE

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

Change to read "13.7.1.2.6 ToDX,o: the time-of-day (i.e., grandmaster time) when a downstream MPCP message carrying a timestamp X (see 13.7.1.2.7) departs from the clock master. The data type for ToDX,o is Timestamp."

SuggestedRemedy

Per comment

Response *Response Status* **C**

ACCEPT IN PRINCIPLE. Group comments 8, 13, 14, 15, 16. The text of 13.7.1.2.6 will be reworded as indicated in comment 15.

Cl **13** *SC* **13.7.2.3.1** *P* **184** *L* **13** # 17

Yuehua Wei ZTE

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

In bullet c): "received TIMESYNC message (see rateRatio)" - this is not a correct reference - provide a numeric reference to that rateRatio and where it is defined using a correct format. Otherwise, the reference seems to be circular.

SuggestedRemedy

Per comment

Response *Response Status* **C**

ACCEPT. Actually, it is item c). In any case, "see rateRatio" will be changed to "see 13.3.1.2.11".

Cl **13** *SC* **13.7.2.4** *P* **185** *L* **1** # 18

Yuehua Wei ZTE

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

Change the setting for orphan lines in Frame. It seems to force 2 lines to be left on the following page, which produces such straneg results as seen on page 184 and 185.

SuggestedRemedy

Per comment

Response *Response Status* **C**

REJECT. This will be fixed by the IEEE staff editors during final editing.

Cl **13** *SC* **13.8.1** *P* **185** *L* **36** # 19

Yuehua Wei ZTE

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

Title of subclause 13.8.1 is not in format compliant with the IEEE style guide. Please correct accordingly.

SuggestedRemedy

Per comment

Response *Response Status* **C**

REJECT. Any discrepancies with the IEEE style guide will be fixed by the IEEE staff editors during final editing.

Cl **13** *SC* **13.8.2** *P* **185** *L* **43** # 20

Yuehua Wei ZTE

Comment Type **T** *Comment Status* **R**

send TIMESYNC messages when logSyncInterval has this value. - which value? 127? it is not immediately clear what value is referenced.

SuggestedRemedy

Per comment

Response *Response Status* **C**

REJECT. The text is not ambiguous.

Cl **13** *SC* **13.1.1** *P* **173** *L* **11** # 21

Yuehua Wei ZTE

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

The referenced standards contain so much more material than "timing process and measurements" that it makes sense to indicate specific clauses in them which describe these "timing process and measurements". Include information on specific clauses in both 802.3 and 802.3av which define these "timing process and measurements". Only then it makes sense to have such information included in the first place.

SuggestedRemedy

Per comment

Response *Response Status* **C**

ACCEPT. The text that currently reads:

"…specified in IEEE Std 802.3TM-2008 and IEEE Std 802.3avTM-2009." (note that TM is at superscript level)

will be changed to:

"…specified in 64.2.1.1 (Ranging and Timing Processes) and 64.3.2.4 (Delay Requirements) of IEEE Std 802.3TM-2008, and 77.2.1 (Ranging and Timing Processes) and 76.1.2 (Delay Requirements) of IEEE Std 802.3avTM-2009." (note that TM is at superscript level)

Cl **13** *SC* **13.1.1** *P* **173** *L* **15** # 22

Yuehua Wei ZTE

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

Also against line 16.
What is an "EPON link"? There is no such definition in 802.1, 802.3 or 802.3av for that matter. Provide a formal definition. What does it contain? How many EPON links an ONU has? What about ONUs which have more than one customer (MDU)? Do they have one EPON link as well?

SuggestedRemedy

Per comment

Response *Response Status* **C**

ACCEPT. The following sentence will be added to the end of the 1st paragraph of 13.1.1, i.e. the paragraph that currently extends from line 9 to line 12):

For purposes of this clause, an EPON link is an EPON, which contains one OLT and associated ONUs.

Cl **13** *SC* **13.1.2** *P* **173** *L* **20** # 23

Yuehua Wei ZTE

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

The timing process in EPON relies on the 32-bit counters (see 64.2.2.2 of IEEE Std 802.3TM-2008) - such counters are also defined in 802.3av, yet they are not referenced in here. Does this mean that the description applies only to 1G-EPON and not 10G-EPON ? Please clarify, insert proper reference to 802.3av if the said description is applicable to 10G-EPON as well.

SuggestedRemedy

Per comment

Response *Response Status* **C**

ACCEPT. Group 23, 24 and 26. The reference in parentheses will be changed to (with TM at superscript level):

(see 64.2.2.2 of IEEE Std 802.3TM-2008 and 77.2.2.2 of IEEE Std 802.3avTM-2009)

Cl **13** *SC* **13.1.2** *P* **173** *L* **22** # 24

Yuehua Wei ZTE

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

is equal to 16 ns (see 64.2.2.1 of IEEE Std 802.3TM-2008). - time_quantum is also defined in 802.3av - that needs to be referenced as well. Note that in 802.3av, the definition of time_quantum was generalized and included in clause 1.

SuggestedRemedy

Per comment

Response *Response Status* **C**

ACCEPT. Group 23, 24 and 26. The reference in parentheses will be changed to (with TM at superscript level):

(see 64.2.2.1 of IEEE Std 802.3TM-2008 and 77.2.2.1 of IEEE Std 802.3avTM-2009)

Cl **13** *SC* **13.1.2** *P* **173** *L* **23** # 25
Yuehua Wei ZTE

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

which enables a MAC client to participate in a point-to-multipoint optical network. How does a MAC client "participate in a point-to-multipoint optical network" ? What does this mean? Does it mean it is allowed to transmit over P2MP architecutre? If so, that needs to be clarified beyond any doubt.

SuggestedRemedy

Per comment. Provide clarification of what it means for a MAC client to "participate in a point-to-multipoint optical network" or change the wording altogether.

Response *Response Status* **C**

ACCEPT. The text will be revised to read:

"…(MPCP), which is one of the protocols that enables MAC clients to communicate over a point-to-multipoint optical network."

Cl **13** *SC* **13.1.2** *P* **173** *L* **25** # 26
Yuehua Wei ZTE

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

Clause 64 of IEEE Std 802.3TM-2008 specifies the EPON timing mechanism. - it is my belief that so does clause 77 of 802.3av-2009, yet it is not mentioned in here. Again, does this mean that this description applies to 1G-EPON only? Clarify and add proper reference to Clause 77 as well.

SuggestedRemedy

Per comment

Response *Response Status* **C**

ACCEPT. Group 23, 24 and 26. The text will be changed to (with TM at superscript level):

Clause 64 of IEEE Std 802.3TM-2008 and clause 77 of IEEE Std 802.3avTM-2009 specify the EPON timing mechanism.

Cl **13** *SC* **13** *P* **173** *L* **1** # 27
Yuehua Wei ZTE

Comment Type **ER** *Comment Status* **X**

Clause 13 does not meet the 2009 IEEE Standards Style Manual, section 11 and as such should not be progressed any further until the stlye problems are resolved.

SuggestedRemedy

Per comment

Proposed Response *Response Status* **W**

WITHDRAWN.

Cl **13** *SC* **13.1.3.1** *P* **173** *L* **37** # 28
Yuehua Wei ZTE

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

using the acceptable master table feature of IEEE Std 1588TM - 2008 (see 17.6 of IEEE Std 1588TM - 2008).♂change to ♂"using the acceptable master table feature (see 17.6 of IEEE Std 1588TM - 2008)."

SuggestedRemedy

Per comment. Repetition of reference to IEEE 1588 is not needed.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE. The text will be changed to

"..using the acceptable master table feature defined in 17.6 of IEEE Std 1588TM - 2008."

Cl **13** *SC* **13.1.3.3** *P* **174** *L* **9** # 29
Yuehua Wei ZTE

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

The AcceptableMaster type represents an acceptable master port. - which specific property of the "acceptable master port" does it represent? The text is not precise enough and can be confusing.

SuggestedRemedy

Per comment - provide clarificationi / extend the text.

Response *Response Status* **C**

ACCEPT. The text will be changed to:

"The AcceptableMaster type represents a port that can be considered, in the execution of the BMCA, as a candidate for master."

Cl **13** *SC* **13.1.3.4** *P* **174** *L* **27** # 30
Yuehua Wei ZTE

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

Bullet b.1 is most unclear - suggest to create a specific version of 10.3.10.2.1 applicable to EPON only and then reference it from here, rather than forcing a reader / implementer to guess what conditions becoem invalid and which still hold.

SuggestedRemedy

Per comment.

Response *Response Status* **C**

REJECT. This comment is out of scope of the recirculation because the text did not change. In addition, the text is clear.

Cl **13** *SC* **13.1.3.5** *P* **174** *L* **43** # 31

Yuehua Wei ZTE

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

Does it mean that there is a link entry in the table per ONU? What about ONUs with port protection feature? Do they count as two? How is this related to EPON link which was used in 13.1.2?

SuggestedRemedy

Per comment.

Response *Response Status* **C**

REJECT. On the first item, it is stated in 13.1.1 (p. 173, line 14) that a time-aware system contains at most one ONU (though it may contain more than one OLT). With this statement, 802.1AS is limited to time-aware bridges that have at most one ONU. Therefore, a situation where more than one entry in the AcceptableMasterTable does not arise. On the second item, EPON does not have a protection feature.

Cl **13** *SC* **13.1.3.5** *P* **175** *L* **4** # 32

Yuehua Wei ZTE

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

OLT will be considered better than the ONU - better in what terms? Please clarify what you mean in here and do not use ambigiuous language, even though this is just a note.
Suggest to move this text to an informative annex to Clause 13, including more material on this particular topic, since it is not entirely clear to me how corner cases are resolved. Such material should be always included in informative annexes and not half a page long notes.

SuggestedRemedy

Per comment

Response *Response Status* **C**

ACCEPT IN PRINCIPLE. The text on p.175 line 4 that currently reads:

"…ensures that the OLT will be considered better than the ONU in the BMCA, which will…"

will be change to:

"…ensures that the OLT will be considered better than the ONU in the sense of the BMCA, which will…"

Cl **13** *SC* **13.1.4** *P* **175** *L* **20** # 33

Yuehua Wei ZTE

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

In line 20 and 21, remove "the" standing before "ONUs" - 2 instances

SuggestedRemedy

Per comment

Response *Response Status* **C**

ACCEPT. The two instances of "the" will be removed.

Cl **13** *SC* **13.1.4** *P* **175** *L* **24** # 34

Yuehua Wei ZTE

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

Each wavelength has a different index of refraction - incorrect, wavelengths do not have refractive index. It is the fibre material in which effective refractive index is frequency dependent i.e. refractive index of fibre glass depends on wavelength of the transmitted optical signal.

SuggestedRemedy

Per comment

Response *Response Status* **C**

ACCEPT. Group comments 34 and 35. The sentence "Each wavelength has a different…" will be changed to:

"The index of refraction is frequency dependent, which results in the upstream and downstream delays being asymmetric."

Cl **13** *SC* **13.1.4** *P* **175** *L* **25** # 35

Yuehua Wei ZTE

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

result in transmission time difference across an EPON link.
(1) EPON link is again used without definition of what this is ...
(2) statement is imprecise. What results from difference in refractive index in SMF for upstream and downstream wavelengths is the fact that downstream and upstream delay is asymmetric and not that there is some "transmission time difference across" some unspecified EPON link. Clarify the language and make sure that the language reflects the target statement.

SuggestedRemedy

Per comment

Response *Response Status* **C**

ACCEPT. Group comments 34 and 35. See response to 34.

Cl **13** *SC* **13.1.4** *P* **175** *L* **31** # 36

Yuehua Wei ZTE

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

How high is "high accuracy" ? Is it higher than 1 time_quantum in which your counters measure? How can you even achieve such level of precision given the unpredistable queuing delays between MPCP and MAC layers ?
Suggest to remove "with high accuracy" and dewcribe what level of accuracy is achievable in EPON.

SuggestedRemedy

Per comment

Response *Response Status* **C**

ACCEPT IN PRINCIPLE. The words "with high accuracy" will be removed. This statement is not needed here; performance-related information is contained in Annex B.

Cl **13** *SC* **13.1.4** *P* **175** *L* **54** # 37

Yuehua Wei ZTE

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

selects a timestamp = what timestamp? At what layer? Be specific

SuggestedRemedy

Per comment - text is ambigiuous and confusing.

Response *Response Status* **C**

ACCEPT. The following will be added to 13.1.4 (a) (i.e., to follow the sentence that is currently there):

Any timestamp value may be chosen, provided it is relative to the current epoch of the MPCP counter.

Cl **13** *SC* **13.1.4** *P* **176** *L* **1** # 38

Yuehua Wei ZTE

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

Bullet b) is one of the more confusing texts I have seen so far. The relationship between both ToD values is so obfuscated that reading the text and formula, it is hard to figure out how the author produces such a confusing descripotion♂

SuggestedRemedy

Change b) to read "The clock master calculates the ToDX,i based on ToDX,o, following formula (13-1). ToDX,o is the exact time-of-day at which a downstream MPCPDU carring the timestamp X departs from the clock master. ToDX,i is the exact time-of-day at which a downstream MPCPDU carring the timestamp X arrives at the clock slave."
Define MPCPDU in your list of acronyms.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE. The text will be changed to:

"The clock master calculates ToDX,i based on ToDX,o, using

<<Eq. 13-1 will go here, as written in the document>>, (13-1)

where ToDX,i is the time of day at which a downstream MPCP message that would carry the timestamp X would have arrived at the clock slave, ToDX,o is the time of day at which a downstream MPCP message that would carry the timestamp X would have departed the clock master, RTTi is the round-trip time measured by the clock master for clock slave i, i.e., ONU i, nup is the effective index of refraction for EPON upstream wavelength light of the optical path, and ndown is the effective index of refraction for EPON downstream wavelength light of the optical path.

Cl **13** *SC* **13.1.4** *P* **176** *L* **1** # 39

Yuehua Wei ZTE

Comment Type **TR** *Comment Status* **D**

in bullet b) you still refer to MPCP message while section 13.2 clearly specifies an OSSP protocol use as well as OSSPDU in use. Which is it then?

SuggestedRemedy

Per comment

Proposed Response *Response Status* **W**

PROPOSED REJECT. It is the MPCP message that is the event message. The TIMESYNC message carries the time of day that corresponds to X; it is a general message, analogous to Follow_Up. However, to clarify this the following sentence will be added as the first sentence of the paragraph immediately following bullet item (d):

The OSSP message is a general message, analogous to Follow_Up.

Cl **13** *SC* **13.1.4** *P* **176** *L* **11** # 40

Yuehua Wei ZTE

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

Due to variations in transmission wavelength in both upstream and downstream channels, the used values of refractive indices need to be corrected accordingly. Either include correction factors or state clearly to what extent the outcome of formula (13-1) is affected by changes in the refractive index for SMF.

SuggestedRemedy

Per comment.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE. The following sentence will be added to the end of bullet item (b) of 13.1.4:

"The impact of the worst-case variation in the transmission wavelength for the clock master and clock slave transmitters is examined in Annex VII of ITU-T G.984.3, Amendment 2 (11/2009)."

The following reference will be added to clause 2 (all the references in clause 2 are normative):

ITU-T Recommendation G.984.3, Amendment 2, 2009, Gigabit-capable Passive Optical Networks (G-PON): Transmission convergence layer specification, ITU-T, Geneva, November, 2009.
(note that the title "Gigabit-capable…" will be italicized when the reference is added to clause 2).

Cl **13** *SC* **13.1.4** *P* **176** *L* **16** # 41

Yuehua Wei ZTE

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

plus any processing delays - such delays are not measurable at the ONU level. How do you expect for the ONU to know precisely its own processing delays? State clearly how such delay can be measured (if there is a mechanism for that) or indicate that it is implementation dependent.

SuggestedRemedy

Either way, clarification is needed on this point.

Response *Response Status* **C**

REJECT. This comment was made by this voter before, in comment #12 and #13 of the D6.1 ballot; a similar comment was made by this voter as comment #162 of the D6.2 ballot. In D6.1, the term "internal delay" was used; this term was changed to "processing delay" as a result of the resolution of comments 12 and 13 of D6.1. However, this was only a change in nomenclature, the term "processing delay" still refers to the delay between the processing of the timestamp and the setting of the internal clock. It was agreed by the AVB TG that the determination of this delay is an implementation issue.

Cl **13** *SC* **13.2.1** *P* **176** *L* **32** # 42

Yuehua Wei ZTE

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

What is a "general message"? are there any messages which are not "general" ?

SuggestedRemedy

Per comment.

Response *Response Status* **C**

ACCEPT. After "….general message", a cross reference to 8.4.2.2:

(see 8.4.2.2)

will be added.

Cl **13** *SC* **13.2.1** *P* **176** *L* **33** # 43

Yuehua Wei ZTE

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

It is transmitted by the OLT and received by the ONU
change to
"It is transmitted in the downstream direction"

SuggestedRemedy

Per comment

Response *Response Status* **C**

ACCEPT IN PRINCIPLE. The text will be changed to:

"It is transmitted in the downstream direction, from OLT to ONU."

Cl **13** *SC* **13** *P* **174** *L* **1** # 44

Yuehua Wei ZTE

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

Clause 13 has all of its cross references dead i.e. it is not possible to jump to the given indicated reference. Please add that capability, which greately facilitates reading and analysis

SuggestedRemedy

Per comment

Response *Response Status* **C**

ACCEPT. Note that not all cross-references in clause 13 are dead; however, those that are dead will be fixed.

Cl **13** *SC* **13.3.1.2.1** *P* **176** *L* **49** # 45

Yuehua Wei ZTE

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

The destination address field is is equal
change to
"The destination address field is equal"

SuggestedRemedy

Response *Response Status* **C**

ACCEPT. The extra instance of the word "is" will be removed.

Cl **13** *SC* **13.3.1.2.8** *P* **178** *L* **6** # 46

Yuehua Wei ZTE

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

Per 6.3.3.4 Timestamp, this variable type is defined as composed of UInteger48 seconds; UInteger32 nanoseconds; if such a definition holds, then what "subnanosecond portion of synchronized time" is refereed to in line 11? That defies the definition of the Timestamp variable type IMHO.

SuggestedRemedy

Clarify what you mean in note in line 11 and whether that is consistent in any way with the definition included in 6.3.3.4 Timestamp.

Response *Response Status* **C**

ACCEPT. In 802.1AS (and in IEEE 1588), the subnanosecond portion of synchronized time is carried in the correction field, i.e., not in the timestamp field. The NOTE will be modified to read:

"Any subnanosecond portion of synchronized time, normally transported in a correction field (see 10.2.2.1.2, 10.2.2.2.2, and 10.2.2.3.4), is not transported over EPON.

Cl **10** *SC* **10.2.3.2** *P* **78** *L* **32** # 47

Kevin Stanton Intel

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

The first sentence is either missing a word or is awkwardly phrased.

SuggestedRemedy

Insert "messages" and strike "of", causing the sentence to read: "a variable containing the mean time interval between successive messages providing time-synchronization information by…", or perhaps "…time interval between successive instants when time-synchronization information is provided by the..."

Response *Response Status* **C**

ACCEPT. "messages" will be inserted and "of" will be stricken.

Cl **15** *SC* **15.3** *P* **205** *L* **1** # 48

Norm Finn Cisco

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

I have found the MIB lint tool at http://www.ibr.cs.tu-bs.de/projects/libsmi/tools/ to be very useful in cleaning up MIBs. Other tools may also be used. That is why this is not a Required comment. The tool reported the following errors: mibs/802.1as-D6.6.mib:41: [3] {revision-after-update} revision date after last update
mibs/802.1as-D6.6.mib:47: [3] {revision-missing} revision for last update is missing
mibs/802.1as-D6.6.mib:54: [1] {out-of-range-unsigned64} number `792281625142643375935439503335' is out of range for SPPI 64bit unsigned numbers
mibs/802.1as-D6.6.mib:54: [5] {integer-misuse} warning: use Integer32 instead of INTEGER in SMIv2
mibs/802.1as-D6.6.mib:54: [2] {range-exchanged} range limits must be `lower-bound .. upper-bound'
mibs/802.1as-D6.6.mib:56: [1] {out-of-range-signed} number `-396140812571321687967719751 68' is out of SMIv1/SMIv2 signed number range
mibs/802.1as-D6.6.mib:56: [1] {out-of-range-unsigned64} number `396140812571321687967719751 67' is out of range for SPPI 64bit unsigned numbers
mibs/802.1as-D6.6.mib:56: [5] {integer-misuse} warning: use Integer32 instead of INTEGER in SMIv2
mibs/802.1as-D6.6.mib:61: [5] {integer-misuse} warning: use Integer32 instead of INTEGER in SMIv2
mibs/802.1as-D6.6.mib:61: [2] {range-exchanged} range limits must be `lower-bound .. upper-bound'
mibs/802.1as-D6.6.mib:61: [5] {identifier-basetype-redefined} warning: definition of identifier `Unsigned64' which is already a SMI or SPPI basetype
mibs/802.1as-D6.6.mib:62: [5] {integer-misuse} warning: use Integer32 instead of INTEGER in SMIv2
mibs/802.1as-D6.6.mib:63: [5] {integer-misuse} warning: use Integer32 instead of INTEGER in SMIv2
mibs/802.1as-D6.6.mib:64: [5] {integer-misuse} warning: use Integer32 instead of INTEGER in SMIv2
mibs/802.1as-D6.6.mib:65: [5] {integer-misuse} warning: use Integer32 instead of INTEGER in SMIv2
mibs/802.1as-D6.6.mib:66: [5] {integer-misuse} warning: use Integer32 instead of INTEGER in SMIv2
mibs/802.1as-D6.6.mib:164: [4] {hyphen-in-label} warning: named number `timeAccurateTo2-5us' must not include a hyphen in SMIv2
mibs/802.1as-D6.6.mib:170: [4] {hyphen-in-label} warning: named number `timeAccurateTo2-5ms' must not include a hyphen in SMIv2
mibs/802.1as-D6.6.mib:179: [1] {internal-other} syntax error, unexpected '}', expecting LOWERCASE_IDENTIFIER
mibs/802.1as-D6.6.mib:179: [5] {internal-flushing} warning: flushing recent incorrect declaration, see previous error(s)
mibs/802.1as-D6.6.mib:375: [2] {underscore-in-identifier} identifier `atomic_Clock' must not contain an underscore
mibs/802.1as-D6.6.mib:377: [2] {underscore-in-identifier} identifier `terrestrial_Radio' must not contain an underscore
mibs/802.1as-D6.6.mib:380: [2] {underscore-in-identifier} identifier `hand_Set' must not contain an underscore