Cl **45** *SC* **45.2.1.23a.2** *P* **35** *L* **40** # 609

Kramer, Glen   Broadcom

Comment Type **T** *Comment Status* **X**   *post-deadline*

In January 2019 meeting, we discussed the issue of MDIO addresing for separate instances of PCS and PMA (see hajduczenia_3ca_2_0119.pdf and remein_3ca_3_0119.pdf). We seemed to agree to use DEVAD (MMD) to address individual instances, but that agreement was never reflected in the draft. The existing Table 45-1 does provide a way to address up to 4 instances for the PMA, but there is only a single address for PCS.

It is also not clear whether the "PMA/PMD" grouping makes sense for .3ca. Our model assumes N identical instances of PMA, but only a single instance of multi-wavelength PMD.

SuggestedRemedy

Either change the existing addresses 8 through 11 to read "Separated PCS/PMA (n)" or add a separate set of addresses for PCS instances in the reserved space.

Proposed Response *Response Status* **O**

Cl **142** *SC* **142.1.3** *P* **116** *L* **5** # 611

Kramer, Glen   Broadcom

Comment Type **T** *Comment Status* **X**   *post-deadline*

The option of allowing 2 vs 3 sync patterns was only added so that in case when SP1 and SP2 are the same, the OLT may send one less SYNC_PATTERN MPCPDU per discovery attempt. This saving of downstream bandwidth is negligible, but its adds complexity to ONU parsing and processing. Also it creates ambiguity wrt the SPLength fields. If OLT sent SP Count to 2, but in DISCOVERY it had 3 non zero lengths, what should ONU trust?

SuggestedRemedy

Simplyfy the protocol by always requiring 3 SYNC_PATTERN messages, even if SP1 and SP2 patterns are the same.

The specific changes are shown in kramer_3ca_10_0919.pdf

Proposed Response *Response Status* **O**

Cl **143** *SC* **143.4.1.2** *P* **185** *L* **8** # 608

Kramer, Glen   Broadcom

Comment Type **TR** *Comment Status* **X**   *post-deadline*

Editor's note requires a new sub-clause 143.4.4 on Asymmetric rate operation to be provided.

SuggestedRemedy

1) Add sub-clause 143.4.4 as shown in kramer_3ca_8_0919.pdf.
2) Make cross-reference link live
3) Remove editor's note

Proposed Response *Response Status* **O**

Cl **144** *SC* **144.3.1.2** *P* **204** *L* **3** # 610

Kramer, Glen   Broadcom

Comment Type **TR** *Comment Status* **X**   *post-deadline*

Since the reference for MPCPDU timestamp is the ESH time, an MPCPDU cannot be split over multiple envelopes, either separated in time or overlapping in time on multiple channels. Doing so will cause the Timestamp to reference the first ESH at the Tx side, but to be compared to the second ESH at the receiving side (since by the time the frame is completely received and parsed and timestamp is checked, the second ESH time will be latched and it will overwrite the first ESH time)

SuggestedRemedy

Add clarifications and specific requirements to avoid spltting MPCPDUs over multiple envelopes. Specific changes are shown in kramer_3ca_9_0919.pdf.

This comment is intended to supersede comment #573 and it provides a more complete solution.

Proposed Response *Response Status* **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general
COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn
SORT ORDER: Clause, Subclause, page, line   *Cl* **144** *SC* **144.3.1.2** Page 1 of 2
8/29/2019 7:21:56 PM

Cl **144**   *SC* **144.3.6.1**   *P* **208**   *L* **44**   # 612

Kramer, Glen   Broadcom

Comment Type **T**   *Comment Status* **X**   *post-deadline*

The response tp comment #213 against D2.0 stated:
"- Definitions of timestamp should be corrected and will therefore be different."
and
"Timestamps in GATEs are not the same as the content of MPCP Local time counter.
Each timestamp is pre-compensated by the RTT value of the destination ONU."

This comment addresses the above issues.

SuggestedRemedy

Change the definitions of Timestamp fields in GATE and REGISTER_ACK as shown in
kramer_3ca_12_0919.pdf.

The definitions for rest of the fields appears correct.

Proposed Response   *Response Status* **O**

Cl **144**   *SC* **144.3.6.7**   *P* **219**   *L* **46**   # 606

Kramer, Glen   Broadcom

Comment Type **T**   *Comment Status* **X**   *post-deadline*

Allowing the SYNC_PATTERN MPCPDUs to be sent to registered ONUs creates a lot of
ambiguity wrt the time of switching and handling of lost messages. It also may require dual
comparators in the OLT PCS to simultaneously hunt for the old and new patterns. If we
keep this capability, we need to add a significant amount of details on how the ONU and
OLT should process the switch (wait for all SPs and swich once? Switch on each
SYNC_PATTERN one SPn at a time?) To clarify this we probably will need 2 new state
diagrams.

SuggestedRemedy

Disallow pattern change after Discovery. To do that, delete the text "(unless changed by
the OLT)" on line 46 and delete the paragraph on lines 48-50.

Proposed Response   *Response Status* **O**

Cl **144**   *SC* **144.3.6.7**   *P* **221**   *L* **14**   # 613

Kramer, Glen   Broadcom

Comment Type **TR**   *Comment Status* **X**   *post-deadline*

Figure 144-18 SYNC_PATTERN MPCPDU shows field sizes that do not match the
description. We should decide whether we want to show the second octet of PatternInfo to
be in PatternInfo or to be the first octet in the filed Pattern (this is what the figure
assumed). Moving it to the Pattern field may make it more aligned with the state diagrams
144-20 and 144-22, where we have these statements
'MsgSyncPattern.Value <== MsgBurstSync.Value[SpSeq]'

'MsgBurstSync.Value[SpSeq]   MsgSyncPattern.Value'

(both 'Value' fields are 257-bit patterns.)

SuggestedRemedy

Two options are suggested:

The first option is shown in kramer_3ca_11_0919.pdf. It moves the last octet of PatternInfo
to be part of Pattern field.

The second option is shown in kramer_3ca_13_0919.pdf. This solution keeps PatternInfo
as is. It adds extra text to tie last bit of PatternInfo and 32 bytes of Pattern into a single 257-
bit field called Value, which is used in state diagrams 144-20 and 144-22.

The author prefers the first solution.

Proposed Response   *Response Status* **O**

Cl **144**   *SC* **144.3.7**   *P* **221**   *L* **32**   # 607

Kramer, Glen   Broadcom

Comment Type **TR**   *Comment Status* **X**   *post-deadline*

Field (structure) SpValue is not used anywhere in the draft. The correct name is
MsgSyncPattern structure.

SuggestedRemedy

Replace <i>SpValue</i> with <i>MsgSyncPattern</i> (3 instances)

Proposed Response   *Response Status* **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn
SORT ORDER: Clause, Subclause, page, line

Cl **144**
SC **144.3.7**

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