

Proposed Responses

IEEE P802.3ca D2.0 25/50G-EPON Task Force Initial Working Group ballot comments

Cl 144 SC 144 P180 L1 # 464

Thompson, Geoff GraCaSI S.A./Independent

Comment Type TR Comment Status D

This clause is out of scope. It is shown in Fig. 144-2 as residing in the MAC sub-layer. This is a Physical Layer project which said it would "extend the operation of EPON protocols". That means to me the augmentation of what is specified in clause 64, not the creation of an entire new specification misplaced in the Physical Layer.

SuggestedRemedy

Rewrite the draft to fit what was promised in the PAR. Presumably that will include deleting lause 144.

Proposed Response Response Status W

PROPOSED REJECT.

The PAR scope states that this project "... also extends the operation of Ethernet Passive Optical Networks (EPON) protocols, such as MultiPoint Control Protocol (MPCP) and Operation Administration and Management (OAM)." Just like previous generations of Multi-Point Control Protocol (MPCP), the new generation uses GATE and REPORT MPCPDUs to provide time-based transmission arbitration for multiple connected ONUs. However, the new MPCP extends the existing MPCP specification by supporting multiple channels, and specifying finer granularity for transition units (2.56 ns EQs instead of 16 ns TQs). There are numerous other enhancements.

The TF strongly disagrees that the statement "extends the operation of Ethernet Passive Optical Networks (EPON) protocols, such as MultiPoint Control Protocol (MPCP)" implies that all the changes need to be confined to one of the existing MPCP clauses (see Clause 64 or Clause 77), and not be defined as a new clause. The TF made a decision to create a new clause instead of modifying an existing clause for clarity of presentation and for the convenience of users of the standard. This is not unlike an earlier WG decision to specify the simplified full-duplex MAC as a separate Annex 4A instead of modifying the operation of the existing CSMA/CD MAC in Clause 4.

Cl 144 SC 144 P244 L6 # 254

Remein, Duane Futurewei Technologies, Inc.

Comment Type TR Comment Status D

MP9b should ref 144.3.7.7 not 144.3.8.7.

SuggestedRemedy

per comment

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 144 SC 144.1 P180 L12 # 189

Remein, Duane Futurewei Technologies, Inc.

Comment Type TR Comment Status D

We report queue occupancy levels not congestion.

SuggestedRemedy

Change:  
"reporting of congestion" to:  
"reporting queue occupancy"

Proposed Response Response Status W

PROPOSED ACCEPT.

Comment type changed to "T"

Cl 144 SC 144.1.1.1 P180 L45 # 191

Remein, Duane Futurewei Technologies, Inc.

Comment Type T Comment Status D

Hopefully we allocate more than one grant to each ONU

SuggestedRemedy

Change  
"allocating a transmission window (grant)" to  
"allocating transmission windows (grants)"

Proposed Response Response Status W

PROPOSED REJECT.

OLT allocates one grant to ONU at a time. Using plural here is more confusing and it can be interpreted that one grant is some kind of a fixed unit, and OLT allocates multiple such grants for a single ONU transmission.

Cl 144 SC 144.1.1.2 P181 L24 # 192

Remein, Duane Futurewei Technologies, Inc.

Comment Type ER Comment Status D

This is the only instance of "MAC element"

SuggestedRemedy

Change to "MAC instances"

Proposed Response Response Status W

PROPOSED ACCEPT.

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Cl 144 SC 144.1.1.2 P181 L40 # 193

Remein, Duane Futurewei Technologies, Inc.

Comment Type TR Comment Status D

This para implies free use of pre-defined single-copy broadcast for a number of purposes which is incorrect.

## SuggestedRemedy

Change:

"Several single-copy broadcast logical links are pre-set. Such links may be used to broadcast MPCPDUs, CCPDUs, or OAMPDUs." to:

"Several single-copy broadcast logical links are pre-defined for specific purposes (see Table 144-1)."

Proposed Response Response Status W

PROPOSED REJECT.

Not clear what the problem is. The current text seems precise and correct.

Cl 144 SC 144.1.1.2 P181 L49 # 194

Remein, Duane Futurewei Technologies, Inc.

Comment Type TR Comment Status D

This statement is extraneous and misleading imho. Most LLID values are not setup by the Discovery Process and those that are not very "dynamic" but rather static.

## SuggestedRemedy

Strike "Some LLID values are pre-set, while other values are dynamically assigned by the Discovery Process (144.3.5)."

If the TF believe it is necessary to mention the Discovery Process in this section then change "By default, the OLT is connected" to "By default during the Discovery Process (144.3.5), the OLT is connected"

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Ok to strike the sentence, as this is already explained in preceeding paragraphs.

Don't modify the sentence starting with "By default...". Instead, add a new sentence, following it:

"These two connections per each ONU are established by the Discovery Process (144.3.5).

Cl 144 SC 144.1.1.3 P183 L4 # 38

Hajduczenia, Marek Charter Communications

Comment Type ER Comment Status D can-vs-may

"can" used and not intended per Style Guide

## SuggestedRemedy

Change "newly connected ONU can be scheduled for the upstream transmission" to "newly connected ONU may be scheduled for the upstream transmission"

Proposed Response Response Status W

PROPOSED REJECT.

"Can" (i.e., "is able" or "is capable") is correct and is intended. "May" (i.e., "is allowed" or "is permitted") is semantically wrong here

Cl 144 SC 144.1.4.2 P184 L45 # 196

Remein, Duane Futurewei Technologies, Inc.

Comment Type ER Comment Status D

"MCI:MA\_- CONTROL.indication" crosses the line

## SuggestedRemedy

make non-breaking

Proposed Response Response Status W

PROPOSED ACCEPT.

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Cl 144 SC 144.2.1 P186 L27 # 198

Remein, Duane Futurewei Technologies, Inc.

Comment Type TR Comment Status D

Use of the term timestamp is ambiguous:  
 187/28 - defined as a variable  
 187/30 - something other than (LocalTime?) the variable that is being defined  
 187/33 - the variable that is being defined  
 187/52 - a non italicized variable  
 187/53 - "timestamp value" (which apparently is not the same as the variable)  
 188/2 - a field name "Timestamp field"  
 191/40 - the value of the variable (or maybe field?) "the Timestamp value pre-compensated"  
 192/24 - a field value "the Timestamp field value"  
 I could go on;  
 there are 29 instances of "Timestamp" most of which (but not all) are in italics (including a lone instance of "Timestamp drift" in DeregistrationTrigger definition),  
 there are 29 instances of "timestamp" none of which are in italics (including 11 instance of "timestamp value" and 11 instances of "timestamp drift")

We can be nicer to the first time reader.

SuggestedRemedy

See remain\_3ca\_2\_0719.pdf which shows all changes in marked text (remain\_3ca\_3\_0719 omits change markings).

Proposed Response Response Status W

PROPOSED REJECT.

Yes, as the commenter noticed, these are different things. Capitalization is important. Italics are important. It is ok to use the word "timestamp" in its direct meaning (it is not reserved or prohibited in any way). The proposed changes make the text so much harder to process.

Cl 144 SC 144.2.1.2 P186 L53 # 199

Remein, Duane Futurewei Technologies, Inc.

Comment Type TR Comment Status D

We should be more specific about which TX & Rx clocks are being referred to here.

SuggestedRemedy

Change  
 "At the OLT the counter shall track the transmit clock, while at the ONU the counter shall track the receive clock." to  
 "At the OLT the counter shall track the xMII transmit clock, while at the ONU the counter shall track the xMII receive clock."

Proposed Response Response Status W

PROPOSED REJECT.

There is never 10G transmission by the OLT or 10G reception by the ONU. Why should we say xMII and not 25GMII?

Cl 144 SC 144.2.1.2 P187 L1 # 107

Anslow, Pete Ciena

Comment Type TR Comment Status D TBD

"{TBD reference to Clause 142 needed}" is not acceptable content for a draft that is suitable to move to Standards Association ballot.

SuggestedRemedy

replace "{TBD reference to Clause 142 needed}" with a suitable reference.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

See comment #269

Cl 144 SC 144.2.1.2 P187 L1 # 342

Laubach, Mark Broadcom

Comment Type E Comment Status D TBD

Resolve the red TBD text to cross reference to the appropriate Clause 142 subclause.

SuggestedRemedy

Make it so.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

See comment #269

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Cl 144 SC 144.2.1.2 P187 L1 # 390  
 Dawe, Piers Mellanox  
 Comment Type E Comment Status D TBD  
 Missing cross-reference  
 SuggestedRemedy  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 See comment #269

Cl 144 SC 144.2.1.2 P187 L1 # 278  
 Marris, Arthur Cadence Design Systems  
 Comment Type TR Comment Status D TBD  
 {TBD reference to Clause 142 needed}  
 SuggestedRemedy  
 Add appropriate reference  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 See comment #269

Cl 144 SC 144.2.1.2 P187 L1 # 6  
 Hajduczenia, Marek Charter Communications  
 Comment Type TR Comment Status D TBD  
 Missing reference to Clause 142  
 SuggestedRemedy  
 I do not see any statement which could be referenced to. Strike the whole sentence?  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 See comment #269

Cl 144 SC 144.2.1.2 P187 L1 # 200  
 Remein, Duane Futurewei Technologies, Inc.  
 Comment Type TR Comment Status D  
 Either this statement is incorrect or the Control Parser Process is incorrect. "In the ONU, this variable is updated with the received timestamp value by the Control Parser Process (see 144.2.1.5)". Note that the ProcessTimestamp only sets the ONUs LocalTime once.  
 SuggestedRemedy  
 Copy the "// The following line is executed only in the ONU LocalTime = Timestamp;" lines to the end of the else statement in ProcessTimestamp definition (pg 188 line 17).  
 Proposed Response Response Status W  
 PROPOSED REJECT.

Cl 144 SC 144.2.1.2 P187 L1 # 269  
 Kramer, Glen Broadcom  
 Comment Type T Comment Status D TBD  
 TBD and missing reference  
 SuggestedRemedy  
 replace with a cross-reference to 142.4.3.1  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

... that would break the MPCP operation and is in conflict with the detailed explanation given in 144.3.1.1. No changes needed

Cl 144 SC 144.2.1.2 P187 L1 # 480  
 Slavick, Jeff Broadcom  
 Comment Type TR Comment Status D TBD  
 TBD present for LocalTime reference.  
 SuggestedRemedy  
 Replace TBD with pointer to appropriate refernce clause  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 See comment #269

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Cl 144 SC 144.2.1.2 P189 L1 # 298  
 Wienckowski, Natalie General Motors  
 Comment Type TR Comment Status D TBD  
 There is a red highlighted TBD in the document.  
 SuggestedRemedy  
 Change: {TBD reference to Clause 142 needed}  
 To: Appropriate subclause in Clause 142.  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 See comment #269

Cl 144 SC 144.2.1.3 P187 L1 # 444  
 Powell, William Nokia  
 Comment Type TR Comment Status D TBD  
 Current text:  
 "For accuracy of receive clock, see {TBD reference to Clause 142 needed}."  
 SuggestedRemedy  
 Change to read:  
 For accuracy of receive clock, see 142.4.3.1.  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 See comment #269

Cl 144 SC 144.2.1.3 P187 L35 # 202  
 Remein, Duane Futurewei Technologies, Inc.  
 Comment Type ER Comment Status D  
 The reference to T able 31A-1 should not be forest green but rather a live link here and at line 40.  
 SuggestedRemedy  
 per comment  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

Cl 144 SC 144.2.1.5 P188 L48 # 315  
 Lynskey, Eric Broadcom  
 Comment Type T Comment Status D  
 In Figure 144-5, it shows that the first argument passed to MCII is the DA. In 144.1.4.2, it shows the first parameter as being the opcode.  
 SuggestedRemedy  
 Remove DA from the argument list.  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

Cl 144 SC 144.3.1.1 P192 L29 # 39  
 Hajduczenia, Marek Charter Communications  
 Comment Type ER Comment Status D can-vs-may  
 "can" used and not intended per Style Guide  
 SuggestedRemedy  
 Change "This condition can be independently detected" to "This condition may be independently detected"  
 Proposed Response Response Status W  
 PROPOSED REJECT.  
 "Can" (i.e., "is able" or "is capable") is correct and is intended. "May" (i.e., "is allowed" or "is permitted") is semantically wrong here

Cl 144 SC 144.3.1.1 P192 L37 # 205  
 Remein, Duane Futurewei Technologies, Inc.  
 Comment Type T Comment Status D  
 This requirement is redundant as a properly implemented ProcessTimestamp function ensures that this first large timestamp difference is accommodated.  
 SuggestedRemedy  
 Change:  
 "This large difference is detected immediately after the registration is expected and the ONU shall not recognize it as a timestamp drift error."  
 "This large difference that is detected immediately after registration is expected and the ONU does not recognize it as a timestamp drift error (see ProcessTimestamp 144.2.1.4)."  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 Per comment + strike MP8b PICs + change MP8a to MP8

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Cl 144 SC 144.3.4.1 P194 L46 # 208

Remein, Duane Futurewei Technologies, Inc.

Comment Type T Comment Status D

Are these "TDM-based medium access by the ONUs" something other than GATES? There is no need to introduce new terms here.

SuggestedRemedy

Change: "such as TDM-based medium access by the ONUs" to "such as GATE messages"

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Comment type changed to "T"

"TDM-based medium access" is an explanation of "Nx25G-EPON operation", not an example, of flows. PLID carries all MPCPDUs, not only GATES.

Rephrase the sentence as follows: "The Physical Layer ID (PLID) carries messages used to control critical Nx25G-EPON operations, such as ONU registrations and arbitration of ONU's access to PON medium."

Cl 144 SC 144.3.5 P195 L44 # 209

Remein, Duane Futurewei Technologies, Inc.

Comment Type TR Comment Status D

There are duplicate requirements between Table 144-1 and the text of Section 144.3.5. For example registered ONUs accepting BCAST\_PLID is specified in Table 144-1 3rd row and on pg 196 line 17.

SuggestedRemedy

on pg 196 line 12 change: "a registered ONU shall accept all envelopes" to "a registered ONU accepts all envelopes"

Change Table 144-1 as shown in remain\_3ca\_1\_0719.pdf

Update PICS accordingly.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Implement changes per http://www.ieee802.org/3/ca/public/meeting\_archive/2019/07/kramer\_3ca\_8\_0719.pdf and http://www.ieee802.org/3/ca/public/meeting\_archive/2019/07/kramer\_3ca\_9\_0719.pdf.

Once changes to text are made, update PICS, removing items LL1a, LL1b, and LL2. Insert new PICS 144.5.4.2 per http://www.ieee802.org/3/ca/public/meeting\_archive/2019/07/hajduczenia\_3ca\_2\_0719.pdf

Cl 144 SC 144.3.6 P196 L27 # 210

Remein, Duane Futurewei Technologies, Inc.

Comment Type T Comment Status D

There are several disagreements between the text and Figure 144-11.

The same issues exists on pg 232 / Fig 144-30. and in Cl 144.4.3 pg 232 / Fig 144-30

SuggestedRemedy

In text In Figure DestinationAddress Destination Address SourceAddress Source Address OperandList Operand List

Change Figures to agree with the text (assuming these are considered variables, otherwise it might be easier to change the text)

Proposed Response Response Status W

PROPOSED ACCEPT.

Proposed Responses

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Cl 144 SC 144.3.6 P196 L35 # 40  
 Hajduczenia, Marek Charter Communications  
 Comment Type ER Comment Status D can-vs-may  
 "can" used and not intended per Style Guide  
 SuggestedRemedy  
 Change "For MPCPDUs originating at the OLT, this can be the address of" to "For MPCPDUs originating at the OLT, this may be the address of"  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

Cl 144 SC 144.3.6.1 P197 L28 # 41  
 Hajduczenia, Marek Charter Communications  
 Comment Type ER Comment Status D can-vs-may  
 "can" used and not intended per Style Guide  
 SuggestedRemedy  
 Change "Up to seven envelope allocations can be carried" to "Up to seven envelope allocations may be carried"  
 Proposed Response Response Status W  
 PROPOSED REJECT.

"Can" (i.e., "is able" or "is capable") is correct and is intended. "May" (i.e., "is allowed" or "is permitted") is semantically wrong here

Cl 144 SC 144.3.6.1 P197 L48 # 211  
 Remein, Duane Futurewei Technologies, Inc.  
 Comment Type TR Comment Status D  
 We seem to have lost the definition of StartTime.  
 SuggestedRemedy  
 Add after ChannelMap description  
 "— StartTime:  
 This 32-bit unsigned integer value represents the start time of the transmission window (burst), expressed in the units of EQT. The start time is compared to the <I>LocalTime</I>, to correlate the start of the grant."  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.

Per comment, but StartTime should be in italics. No comma after LocalTime.

Cl 144 SC 144.3.6.1 P198 L20 # 212  
 Remein, Duane Futurewei Technologies, Inc.  
 Comment Type T Comment Status D  
 Here we use the phrase "The value of 0 in this field signifies an empty ..." on pg 200 line 10 we use "The value of zero in this field signifies an empty ..." meanwhile we have a good constant defined for this - ESC\_PLID.

SuggestedRemedy  
 Change both locations to "When this field is set to the value of ESC\_PLID then it signifies an empty ..."  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.

Good catch, and implement per coment but need to add "(see Table 144-1)" after "ESC\_PLID"

Question to discuss - why the ESC\_PLID is PLID? Should it just be ESC\_LLID?

Cl 144 SC 144.3.6.2 P199 L40 # 42  
 Hajduczenia, Marek Charter Communications  
 Comment Type ER Comment Status D can-vs-may  
 "can" used and not intended per Style Guide

SuggestedRemedy  
 Change "Up to seven LLIDs can be reported by a single" to "Up to seven LLIDs may be reported by a single"

Proposed Response Response Status W  
 PROPOSED REJECT.

"Can" (i.e., "is able" or "is capable") is correct and is intended. "May" (i.e., "is allowed" or "is permitted") is semantically wrong here

Proposed Responses

IEEE P802.3ca D2.0 25/50G-EPON Task Force Initial Working Group ballot comments

Cl 144 SC 144.3.6.2 P199 L47 # 213

Remein, Duane Futurewei Technologies, Inc.

Comment Type TR Comment Status D

The description for the timestamp field is repeated 7x. We don't do this for other variable definitions

- 197/36
- 199/47
- 201/13
- 203/4
- 204/41
- 206/4
- 209/1

Similar situation exist for other fields.

SuggestedRemedy

Remove the description for all but the first instance of this field (pg 197 line 36). Note that the first instance of this is generic and does not mention OLT or ONU (which is good). Add a cross reference to the first definition instance "See 144.3.6.1" (with a live link of course).

Do the same for the following field def's (pg/line fieldname xRef):

- 200/9 LLID "See 144.3.6.1"
- 206/9 ChannelMap "See 144.3.6.1"
- 207/38 SP1Length "See 144.3.6.4"
- 207/42 SP2Length "See 144.3.6.4"
- 207/46 SP3Length "See 144.3.6.4"

Proposed Response Response Status W

PROPOSED REJECT.

Comment type changed to "T"

- Definitions of ChannelMap are different for GATE and DISCOVERY MPCPDUs
- Definitions of timestamp should be corrected and will therefore be different.
- Definitions of LLID are different for GATE and REPORT MPCPDUs
- Definitions of SPnLength are different in DISCOVERY and REGISTER MPCPDUs

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.

Cl 144 SC 144.3.6.2 P200 L2 # 214

Remein, Duane Futurewei Technologies, Inc.

Comment Type T Comment Status D

We should make it clear that GLIDs are not included in the NonEmptyQueues count.

SuggestedRemedy

After "The number of LLIDs" add " (PLID, MLID, and ULIDs)"

Proposed Response Response Status W

PROPOSED REJECT.

Comment type changed to "T"

Discussion needed at the meeting.

Cl 144 SC 144.3.6.3 P201 L31 # 216

Remein, Duane Futurewei Technologies, Inc.

Comment Type TR Comment Status D

PendingEnvelopes is an 8-bit value in the text but a 16 bit field in Fig 144-14 whereas EchoPendingEnvelopes is only 8-bits in both text and fig 144-15 (pg 203/204),

At the very lease these should agree.

Should we consider increasing the maximum size of PendingEnvelopes? This seemed like a reasonable size 10 years ago for pending grants but maybe not now.

SuggestedRemedy

Increase the size of these to a 10 bits. (4 x larger)

Likewise increase size of EchoPendingEnvelopes on pg 203 line 33 and in Figure 144-15 (adjust Pad to 27 also).

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Some time ago, we made a decision to increase this field to 16 bits. Previously, we were showing PendingGrants, but now we show PendingEnvelopes and there can be hundreds of envelopes per each grant. The change to 16 bits needs to be propagated to all places (to be discussed at the meeting).



## Proposed Responses

## IEEE P802.3ca D2.0 25/50G-EPON Task Force Initial Working Group ballot comments

Cl 144 SC 144.3.6.3 P202 L22 # 458

Nicholl, Shawn

Xilinx

Comment Type E Comment Status D

In "Figure 144-14 - REGISTER\_REQ MPCPDU" unexpected use of hyphen. Contrast with "Figure 103-26 - REGISTER\_REQ MPCPDU" in existing 802.3-2018 which shows "Length/Type = 0x8808" and "Opcode = 0x0004". There are other figures in the document with unexpected hyphen (eg. Figure 144-30, 144-31, 144-32).

*SuggestedRemedy*

Remove the hyphen from the figures.

Proposed Response Response Status W

PROPOSED REJECT.

Consistent with previous EPON clause definitions, see Clause 64, 77

Cl 144 SC 144.3.6.6 P206 L17 # 220

Remein, Duane

Futurewei Technologies, Inc.

Comment Type T Comment Status D

Elsewhere (ex. when assigning timestamp) we use LocalTime not local clock. It would be better if we were consistent.

*SuggestedRemedy*

Change "the local clock" to "LocalTime" (in italics)

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 144 SC 144.3.6.6 P206 L40 # 43

Hajduczenia, Marek

Charter Communications

Comment Type ER Comment Status D can-vs-may

"can" used and not intended per Style Guide

*SuggestedRemedy*

In table 144-7, change all instance of "OLT cannot receive" to "OLT is not capable of receiving" and "OLT can receive" to "OLT is capable of receiving"

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 144 SC 144.3.6.6 P207 L20 # 325

Lynskey, Eric

Broadcom

Comment Type T Comment Status D

The draft makes it very clear how the ONU should react when an OLT advertises multiple speeds during a discovery attempt. There is no description of how the ONU should handle a case when multiple coexistence types are advertised. It can be left to the ONU to decide.

*SuggestedRemedy*

Remove the second two sentences of the paragraph and replace with: The OLT MPMC client may allow a concurrent registration of ONUs with different rates by setting both bits 5 and 6 to 1. The processing of DiscoveryInfo flags by the ONU and the ONU behavior in dual-rate systems is further specified in 144.3.9. The OLT MPMC client may also allow a concurrent registration of ONUs with different coexistence options by setting both bits 14 and 15 to 1. For ONUs that support both coexistence types, the choice of which type to attempt to register is implementation dependent.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Minor editorial tweaks

Remove the second two sentences of the paragraph and replace with: The OLT MPMC client may allow a concurrent registration of ONUs with different rates by setting both bits 5 and 6 to 1. The processing of DiscoveryInfo flags by the ONU and the ONU behavior in dual-rate systems is further specified in 144.3.9. The OLT MPMC client may also allow a concurrent registration of ONUs with different coexistence options by setting both bits 14 and 15 to 1. For ONUs that support both coexistence types, the choice of which type to attempt to register is implementation-dependent.

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Cl 144 SC 144.3.6.7 P208 L42 # 222

Remein, Duane Futurewei Technologies, Inc.

Comment Type TR Comment Status D

This statement is misleading "Generally, the SYNC\_PATTERN MPCPDUs are transmitted in envelopes with the LLID equal to DISC\_PLID (see 144.3.5)." as it may not be the general case but does describe a required case for unregistered ONUs. Subsequent statement in this section contradicts the "Generally" phrasing.

## SuggestedRemedy

Change the statement as follows:  
"The SYNC\_PATTERN MPCPDUs are transmitted in envelopes with the LLID equal to DISC\_PLID (see 144.3.5) to allow unregistered ONUs to obtain the synchronization pattern."

Proposed Response Response Status W

PROPOSED ACCEPT.

The intention was to say that, in most common scenarios, the SYNC\_PATTERN MPCPDUs are transmitted on DISC\_PLID. There may be situation where they also (i.e., additionally) are transmitted on unicast PLIDs. Need to discuss the text with proposed updates and make sure it is correctly reflecting that intent.

Cl 144 SC 144.3.7 P210 L38 # 224

Remein, Duane Futurewei Technologies, Inc.

Comment Type T Comment Status D

We should be clear that the Discovery process is aborted only if a SYNC\_PATTERN is received for the DISC\_PLID.

## SuggestedRemedy

Change:  
"If a SYNC\_PATTERN MPCPDU is received ..." to  
"If a SYNC\_PATTERN MPCPDU directed to the DISC\_PLID is received ..."

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Changes per comment. Also implement changes per  
[http://www.ieee802.org/3/ca/public/meeting\\_archive/2019/07/kramer\\_3ca\\_7\\_0719.pdf](http://www.ieee802.org/3/ca/public/meeting_archive/2019/07/kramer_3ca_7_0719.pdf)

Cl 144 SC 144.3.7 P210 L50 # 225

Remein, Duane Futurewei Technologies, Inc.

Comment Type E Comment Status D

This is the only instance of the term off-line. It is easier on the reader if we are consistent in our use of terms. Unregistered is used at least 22 times, newly connected is use 3x.

## SuggestedRemedy

Replace with "Off-line" and "newly connected" with "unregistered". Note that on pg 210 line 26 just strike "newly connected or".

Proposed Response Response Status W

PROPOSED REJECT.

What is the reason to restrict our vocabulary? Not every new word needs a definition. "off-line" or "newly-connected" is self-explanatory and make this text clearer.

Cl 144 SC 144.3.7 P211 L1 # 303

Kramer, Glen Broadcom

Comment Type T Comment Status D

"Each ONU waits a random amount of time before transmitting the REGISTER\_REQ MPCPDU that is shorter than the length of the discovery window."

A very confusing sentence. What is shorter than the discovery window, the REGISTER\_REQ MPCPDU or the random amount of time?

## SuggestedRemedy

Split this into two sentences:  
"Each ONU waits a random amount of time before transmitting the REGISTER\_REQ MPCPDU. The wait time together with the REGISTER\_REQ MPCPDU transmission time (including optical overhead, burst synchronization sequence, and FEC parity data) do not exceed the length of the discovery window."

Proposed Response Response Status W

PROPOSED ACCEPT.

Proposed Responses

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Cl 144 SC 144.3.7 P211 L3 # 9 [REDACTED]  
 Hajduczenia, Marek Charter Communications  
 Comment Type E Comment Status D can-vs-may  
 Can versus may  
 SuggestedRemedy  
 Change "REGISTER\_REQ MPCPDUs can be received by the OLT" to "REGISTER\_REQ MPCPDUs may be received by the OLT"  
 Proposed Response Response Status W  
 PROPOSED REJECT.  
 "Can" (i.e., "is able" or "is capable") is correct and is intended. "May" (i.e., "is allowed" or "is permitted") is semantically wrong here.

Cl 144 SC 144.3.7 P211 L3 # 44 [REDACTED]  
 Hajduczenia, Marek Charter Communications  
 Comment Type ER Comment Status D can-vs-may  
 "can" used and not intended per Style Guide  
 SuggestedRemedy  
 Change "valid REGISTER\_REQ MPCPDUs can be received" to "valid REGISTER\_REQ MPCPDUs may be received"  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

Cl 144 SC 144.3.7 P211 L9 # 226 [REDACTED]  
 Remein, Duane Futurewei Technologies, Inc.  
 Comment Type TR Comment Status D  
 It is not clear to me why we expect the ONU to lie to the OLT as implied by this statement "Note that even though a compliant ONU is not prohibited from supporting more than one data rate in any transmission channel, it is expected that a single supported data rate for upstream and downstream channel is indicated in the RegisterRequestInfo field."  
 While I agree that an ONU should only attempt to register at a single rate it should advertise it's capabilities truthfully.  
 The description of the information in the RegisterRequestInfo seems to begin with "Included in the REGISTER\_REQ MPCPDU is the ONU's MAC address and ..." at line 3, which would make a better para break than this misguided note.

SuggestedRemedy  
 Start a new para beginning at line 3 "Included in the REGISTER\_REQ MPCPDU is the ONU's MAC address and ..." and combine with the para starting "Note even thought ..."  
 Change:  
 "Note that even though a compliant ONU is not prohibited from supporting more than one data rate in any transmission channel, it is expected that a single supported data rate for upstream and downstream channel is indicated in the RegisterRequestInfo field." to "Note that even though a compliant ONU is not prohibited from supporting more than one data rate in any transmission channel, it is expected that an ONU only attempt to register at a single rate as indicated in the RegisterRequestInfo field bits 5 and 6."

Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 Good Catch. Additionally, in the sentence "Additionally, a registering ONU notifies the OLT of its transmission capabilities in the upstream and downstream channels by setting appropriately the flags in the RegisterRequestInfo field, as specified in 144.3.6.3.", replace "in the upstream and downstream channels" with "in the current upstream channel"

The RegisterRequestInfo only reports the channel on which REGISTER\_REQ MPCPDU is transmitted.

Cl 144 SC 144.3.7 P211 L26 # 45 [REDACTED]  
 Hajduczenia, Marek Charter Communications  
 Comment Type ER Comment Status D can-vs-may  
 "can" used and not intended per Style Guide  
 SuggestedRemedy  
 Change "the ONU is registered and normal message traffic can begin" to "the ONU is registered and normal message traffic may begin"  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

Proposed Responses

IEEE P802.3ca D2.0 25/50G-EPON Task Force Initial Working Group ballot comments

Cl 144 SC 144.3.7 P211 L32 # 46  
 Hajduczenia, Marek Charter Communications  
 Comment Type ER Comment Status D can-vs-may  
 "can" used and not intended per Style Guide  
 SuggestedRemedy  
 Change "The ONU can then reregister" to "The ONU may then reregister"  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

Cl 144 SC 144.3.7 P211 L33 # 324  
 Lynskey, Eric Broadcom  
 Comment Type T Comment Status D  
 Reregister and Deregister are not valid flags.  
 SuggestedRemedy  
 Change to, "...REGISTER\_MPCPDU may indicate a value, NACK, that if specified forces the receiving ONU into reregistering." In the next sentence, change to "...REGISTER\_REQ MPCPDU contains the NACK bit..."  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

Cl 144 SC 144.3.7.3 P213 L38 # 227  
 Remein, Duane Futurewei Technologies, Inc.  
 Comment Type T Comment Status D  
 The description of ChState does not sound like an integer.  
 SuggestedRemedy  
 Change type to "8-bit Boolean array"  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 Change to "Array of eight boolean values"

Cl 144 SC 144.3.7.3 P213 L51 # 11  
 Hajduczenia, Marek Charter Communications  
 Comment Type TR Comment Status D  
 Undefined variables / constants? MissedReportCount, MISSED\_REPORT\_LIMIT  
 SuggestedRemedy  
 Need to be added and defined  
 Proposed Response Response Status W  
 PROPOSED REJECT.  
 No proposal included, discussion needed?

Cl 144 SC 144.3.7.3 P214 L4 # 317  
 Lynskey, Eric Broadcom  
 Comment Type T Comment Status D  
 There is no way for the ONU to send a register ack once it has been registered. Figure 144-22 shows that the ONU can only send a register request once it has reached the REGISTERED state. Once the REGISTERED state in Figure 144-21 has been reached, only the other conditions (1, 2, 4) are expected.  
 SuggestedRemedy  
 Replace MsgRegisterAck with MsgRegisterReq in two places. Also replace Deregister with NACK.

Proposed Response Response Status W  
 PROPOSED ACCEPT.

Cl 144 SC 144.3.7.3 P214 L7 # 323  
 Lynskey, Eric Broadcom  
 Comment Type T Comment Status D  
 Deregister is not a valid flag.  
 SuggestedRemedy  
 Change to NACK.  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

Proposed Responses

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Cl 144 SC 144.3.7.3 P214 L9 # 228  
 Remein, Duane Futurewei Technologies, Inc.  
 Comment Type T Comment Status D  
 The description of GrantEndTime does sound like an integer.  
 SuggestedRemedy  
 Change type to "32-bit unsigned integer"  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

Cl 144 SC 144.3.7.3 P214 L36 # 229  
 Remein, Duane Futurewei Technologies, Inc.  
 Comment Type T Comment Status D  
 The description of MaxDelay does sound like an integer.  
 SuggestedRemedy  
 Change type to "32-bit unsigned integer"  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

Cl 144 SC 144.3.7.3 P214 L37 # 47  
 Hajduczenia, Marek Charter Communications  
 Comment Type ER Comment Status D can-vs-may  
 "can" used and not intended per Style Guide  
 SuggestedRemedy  
 Change "the maximum delay the ONU can apply to" to "the maximum delay the ONU may apply to"  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

Cl 144 SC 144.3.7.3 P214 L44 # 391  
 Dawe, Piers Mellanox  
 Comment Type T Comment Status D  
 10.3125 Gb/s  
 SuggestedRemedy  
 10.3125 GBd. Also 25.78125 Gb/s -> GBd  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

Cl 144 SC 144.3.7.3 P214 L49 # 300  
 Wienckowski, Natalie General Motors  
 Comment Type E Comment Status D  
 Missing non-breaking spaces in number that have 4 or more digits to the right of the decimal per 13.3.2 of the 2014 IEEE-SA Style Manual.  
 SuggestedRemedy  
 Change: 25.78125  
 To: 25.781 25  
 Proposed Response Response Status Z  
 PROPOSED REJECT.  
 This comment was WITHDRAWN by the commenter.

Cl 144 SC 144.3.7.3 P215 L1 # 48  
 Hajduczenia, Marek Charter Communications  
 Comment Type ER Comment Status D can-vs-may  
 "can" used and not intended per Style Guide  
 SuggestedRemedy  
 Change "this variable can take the following values" to "this variable takes the following values"  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

Proposed Responses

IEEE P802.3ca D2.0 25/50G-EPON Task Force Initial Working Group ballot comments

Cl 144 SC 144.3.7.3 P215 L21 # 230

Remein, Duane Futurewei Technologies, Inc.

Comment Type TR Comment Status D

This definition of RegAllowed disallows an ONU capable of both 10 & 25 G rates from registering with an OLT that is also capable of both 10 & 25G rates at the 10G rate. There may be good reasons that we haven't thought of that would make such behavior beneficial. There are several solutions:  
 1) add a bit for 10G Discovery Window for single rate ONUs only.  
 2) add a note indicating that the OLT may lie to the ONU regarding capabilities to force registration at 10G rate.

SuggestedRemedy

I would prefer option 1.  
 Reflect any changes in 144.3.9 also

Proposed Response Response Status W

PROPOSED REJECT.

To allow ONU deterministic behavior, ONU is required to register at the highest rate supported by both the OLT and this ONU.

The OLT doesn't lie to the ONU. It can choose what capability to advertize (see 144.3.9)

To force 10G- and 25G-capable ONUs to register at 10G, the OLT "temporarily disables" its 25G receive capability, so option 2 is employed. This is the same method that is employed with 10G and 1G capable ONUs in 802.3av.

No changes required.

Cl 144 SC 144.3.7.3 P215 L45 # 231

Remein, Duane Futurewei Technologies, Inc.

Comment Type T Comment Status D

The description of RegStart does sound like an integer.

SuggestedRemedy

Change type to "32-bit unsigned integer"

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 144 SC 144.3.7.3 P215 L53 # 232

Remein, Duane Futurewei Technologies, Inc.

Comment Type T Comment Status D

The description of SpSeq does sound like an integer.

SuggestedRemedy

Change type to "32-bit unsigned integer"

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 144 SC 144.3.7.5 P216 L48 # 233

Remein, Duane Futurewei Technologies, Inc.

Comment Type ER Comment Status D

No variable name MsgRegsiter is used. Maybe should be MsgRegister?

SuggestedRemedy

per comment

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 144 SC 144.3.7.8 P219 L9 # 12

Hajduczenia, Marek Charter Communications

Comment Type TR Comment Status D

Wrong symbol in line: "?"

SuggestedRemedy

Likely it is supposed to be "!="

Proposed Response Response Status W

PROPOSED ACCEPT.

## Proposed Responses

## IEEE P802.3ca D2.0 25/50G-EPON Task Force Initial Working Group ballot comments

Cl 144 SC 144.3.7.8 P219 L9 # 235  
 Remein, Duane Futurewei Technologies, Inc.  
 Comment Type TR Comment Status D  
 In valid symbol in exit criteria from WAIT\_FOR\_SYNC "msgSyndPattern.Index >>?<< SpSeq  
 SuggestedRemedy  
 Replace "?" with less than or equal to symbol  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.  
 Replace "?" with b"!=" (not equal)

Cl 144 SC 144.3.7.8 P219 L36 # 353  
 Laubach, Mark Broadcom  
 Comment Type T Comment Status D  
 In Figure 144-22, is there a blank line in the middle of the steps in COMMIT\_DISC\_ENV or is something technical missing?  
 SuggestedRemedy  
 Verify if something missing, and if so fix it. If it is indeed a blank line consider removing.  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 Remove the blank line

Cl 144 SC 144.3.8 P220 L8 # 237  
 Remein, Duane Futurewei Technologies, Inc.  
 Comment Type T Comment Status D  
 It would be useful to the reader to refer back to Figure 144-3 & 144-4.  
 SuggestedRemedy  
 At the end of the first para add: "The following description of the granting process makes use of the interfaces and functional blocks found in Figure 144-3 and Figure 144-4."  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.  
 Comment type changed to "T"

Cl 144 SC 144.3.8.1 P220 L36 # 238  
 Remein, Duane Futurewei Technologies, Inc.  
 Comment Type T Comment Status D  
 The description of MPCP\_PROCESS\_DLY and GATE\_TIMEOUT does sound like an integer.  
 SuggestedRemedy  
 Change type to "32-bit unsigned integer"  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

Cl 144 SC 144.3.8.1 P220 L40 # 301  
 Wienckowski, Natalie General Motors  
 Comment Type E Comment Status D  
 Use a non-breaking space in number that have 4 or more digits to the left of the decimal per 13.3.2 of the 2014 IEEE-SA Style Manual, not a comma.  
 SuggestedRemedy  
 Change: 6,400  
 To: 6 400 or 6400 as 4 digit numbers don't have to have the space unless they are in a column with larger numbers.  
 Proposed Response Response Status Z  
 PROPOSED REJECT.  
 This comment was WITHDRAWN by the commenter.

Cl 144 SC 144.3.8.1 P220 L47 # 239  
 Remein, Duane Futurewei Technologies, Inc.  
 Comment Type TR Comment Status D  
 Assuming GATE\_TIMEOUT really is a constant as implied then 50 ms is not the default value, it is the only allowed value.  
 SuggestedRemedy  
 Strike ", default value"  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

## Proposed Responses

## IEEE P802.3ca D2.0 25/50G-EPON Task Force Initial Working Group ballot comments

Cl 144 SC 144.3.8.1 P220 L47 # 302  
 Wienckowski, Natalie General Motors  
 Comment Type E Comment Status D  
 Use a non-breaking space in number that have 4 or more digits to the left of the decimal per 13.3.2 of the 2014 IEEE-SA Style Manual, not a comma.  
 SuggestedRemedy  
 Change: 19,531,250  
 To: 19 531 250  
 Proposed Response Response Status Z  
 PROPOSED REJECT.  
 This comment was WITHDRAWN by the commenter.

Cl 144 SC 144.3.8.3 P221 L4 # 240  
 Remein, Duane Futurewei Technologies, Inc.  
 Comment Type T Comment Status D  
 This variable is stated as a Boolean array and it is confusing to refer to it as "A Boolean that represents"  
 SuggestedRemedy  
 Change:  
 "A Boolean that represents" to  
 "Each element in this Boolean array represents"  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 Use this text:  
 "Each element of this array is associated with the respective MCRCs channel and represents whether..."  
 Strike the last sentence

Cl 144 SC 144.3.8.3 P221 L22 # 241  
 Remein, Duane Futurewei Technologies, Inc.  
 Comment Type T Comment Status D  
 In all other variable definitions we give the size of the variable or field, we should here also.  
 SuggestedRemedy  
 Change as follows:  
 "LLID: LLID" -> "LLID: the 16-bit LLID"  
 StartTime: Start time" -> "StartTime: the 32-bit start time"  
 "Length: The length" -> "Length: the 22-bit length"  
 observe proper italics format.  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

Cl 144 SC 144.3.8.7 P222 L33 # 242  
 Remein, Duane Futurewei Technologies, Inc.  
 Comment Type TR Comment Status D  
 Given only one requirement maps to this clause there should ideally be only one shall statement.  
 SuggestedRemedy  
 Change:  
 "The OLT shall implement the GATE Generation state diagram as shown in Figure 144–23. A separate instance of the state diagram shall be implemented per each registered ONU (PLID)." to  
 "The OLT shall implement a separate instance for each registered ONU (PLID) of the GATE Generation state diagram as shown in Figure 144–23."  
 No change to PICS needed.  
 Proposed Response Response Status W  
 PROPOSED REJECT.  
 The existing text reads better. No changes needed.

Cl 144 SC 144.3.8.8 P223 L40 # 244  
 Remein, Duane Futurewei Technologies, Inc.  
 Comment Type TR Comment Status D  
 There does not appear to be any field defined as MsgGate.ChMap  
 SuggestedRemedy  
 Change to MsgGate.ChannelMap (2x in this SD) as used elsewhere and defined in 144.3.6.1.  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.



Proposed Responses

IEEE P802.3ca D2.0 25/50G-EPON Task Force Initial Working Group ballot comments

Cl 144 SC 144.3.8.8 P223 L40 # 243  
 Remein, Duane Futurewei Technologies, Inc.  
 Comment Type TR Comment Status D  
 Ampersand as an operator is not included in our list of conventions.  
 SuggestedRemedy  
 Use "AND"  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

Cl 144 SC 144.3.8.11 P226 L8 # 13  
 Hajduczenia, Marek Charter Communications  
 Comment Type TR Comment Status D  
 Undefined primitive: MPRS\_CTRL?  
 SuggestedRemedy  
 Is MCRS\_CTRL intended?  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

Cl 144 SC 144.4.2 P229 L28 # 246  
 Remein, Duane Futurewei Technologies, Inc.  
 Comment Type T Comment Status D  
 Shouldn't this be the "CCP Client" not the "MPMC Client" (at least per Figure 144-3, 4, 28 & 29)? This seems to be a common error throughout 144.4 however there also appear to be a few cases where MPCP Client is correct. Below is a list of suspect uses (pg/line & quote.  
 229/35 local MPMC Client,  
 229/37 OLT MPMC Client,  
 229/46 local MPMC Client,  
 230/17 MPMC Client initiates,  
 230/34 MPMC Client initiates,  
 231/3 MPMC Client initiates,  
 231/24 MPMC Client initiates,  
 231/37 MPMC Client may monitor,  
 231/39 MPMC Client may (this instance may be OK check carefully),  
 231/41 notify the MPMC Client,  
 231/44 the MPMC Client at the ONU.  
 238/25 MPMC Client and is processed

SuggestedRemedy  
 per comment  
 We could consider just changing the four figures as that would be less invasive than what is suggested in this comment. Note that CCP Client does not appear in the draft at this time (including top level layering diagrams such as 144-2).

Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.

This will require TF discussion. Generally, a client includes the name of a sublayer of which it is a client ( we also use MAC Client and PMA Client). So, "MPMC Client" is correct for a client of Multi-Point MAC Control sublayer. Everywhere in text we use "MPMC Client" and never "MPCP Client" or "CCP Client". However, a few pictures label the boxes "MPCP Client" and "CCP Client". If we decide to reconcile these differences we can do one of two things:

- 1) Replace 36 occurrences of "MPMC Client" with either "MPCP Client " or "CCP Client"
- 2) In Figures 144-3, -4, -10, -11, -28, -29, replace "MPCP Client" with "MPMC Client (MPCP)" and "CCP Client" with "MPMC Client (CCP)"

## Proposed Responses

## IEEE P802.3ca D2.0 25/50G-EPON Task Force Initial Working Group ballot comments

Cl 144 SC 144.4.2 P229 L44 # 247

Remein, Duane Futurewei Technologies, Inc.

Comment Type T Comment Status D

Add clarification to the statement "Any non-persistent changes are reverted upon ONU reset and re-registration."

## SuggestedRemedy

Add to the end of the sentence "(i.e., the channel reverts to it's default state)"

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Add to the end of the sentence "(i.e., the channel reverts to its default state)"

Change: "it's" to "its"

Cl 144 SC 144.4.2.1 P230 L4 # 249

Remein, Duane Futurewei Technologies, Inc.

Comment Type TR Comment Status D

What prevents the OLT from persistently disabling the only DS channel an ONU has available and thereby breaking the ONU?

## SuggestedRemedy

Add at the end of the para "The OLT shall not disable a downstream channel at the ONU if it is the single remaining enabled channel at that ONT"  
Update PICS.

Proposed Response Response Status W

PROPOSED REJECT.

This would be a requirement to the MPMC Client (CCP), which is outside the scope of the standard. In general, we should not limit device capabilities, because an operator may make a mistake. Sometimes it may be necessary to disable all channels and brick the ONU in order to preserve the rest of EPON. NMS user interface usually have sufficient guards in place to prevent accidental msiconfiguration.

Cl 144 SC 144.4.2.1 P230 L13 # 319

Lynskey, Eric Broadcom

Comment Type T Comment Status D

It says in 144.1.4.1 that the definition and behavior of the MPMC Client is outside the scope of this standard. There is quite a bit of text in 144.4.2.1, 144.4.2.2, 144.4.2.3, and 144.4.2.4 that seems to describe the behavior of the MPMC Client. Specifically, there is text that says when the OLT starts and stops granting the ONU. A lot of the text in these subclauses is duplicated and not necessary.

## SuggestedRemedy

Remove all text in 144.4.2.1 starting with page 230 line 13. Remove all text in 144.4.2.2 starting with page 230 line 32. Remove all text in 144.4.2.3 starting with page 231 line 1. Remove all text in 144.4.2.4 starting with page 231 line 22.

Proposed Response Response Status W

PROPOSED REJECT.

This text is intended to be informative only. There are no requirements made.

Cl 144 SC 144.4.2.1 P230 L19 # 318

Lynskey, Eric Broadcom

Comment Type T Comment Status D

ccp\_timer and CCP\_RETRY\_LIMIT not defined.

## SuggestedRemedy

Remove steps i and ii in four places: 144.4.2.1, 144.4.2.2, 144.4.2.3, and 144.4.2.4.

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 144 SC 144.4.2.5 P231 L41 # 320

Lynskey, Eric Broadcom

Comment Type T Comment Status D

Behavior of MPMC Client.

## SuggestedRemedy

Remove all text in 144.4.2.5 beginning with line 41. Replace with: To notify the MPMC Client at the OLT about a local channel state change, the MPMC Client at the ONU may send an unsolicited CC\_RESPONSE CCPDU to the OLT, indicating the new state of all of its downstream and upstream channels.

Proposed Response Response Status W

PROPOSED REJECT.

This text is intended to be informative only. There are no requirements made.

Proposed Responses

IEEE P802.3ca D2.0 25/50G-EPON Task Force Initial Working Group ballot comments

Cl 144 SC 144.4.3 P232 L7 # 49  
 Hajduczenia, Marek Charter Communications  
 Comment Type ER Comment Status D can-vs-may  
 "can" used and not intended per Style Guide  
 SuggestedRemedy  
 Change "For CCPDUs originating at the OLT, this can be the" to "For CCPDUs originating at the OLT, this may be the"  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.  
 Page was wrong (233) and fixed (232)

Cl 144 SC 144.4.3 P232 L16 # 251  
 Remein, Duane Futurewei Technologies, Inc.  
 Comment Type T Comment Status D  
 Figure 144-30 does not include an "OperandList" as indicated by this text.  
 SuggestedRemedy  
 In Figure 144-30 change "Data/Reserved" to "OperandList/Reserved"  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 Add additional field "OperandList"  
 Rename "Data/Reserved/Pad" into "Pad" (as it is done in Figure 144-11)

Cl 144 SC 144.4.3.1 P233 L9 # 252  
 Remein, Duane Futurewei Technologies, Inc.  
 Comment Type TR Comment Status D  
 Opcode in Figures 144-31 & 32 do not agree with the text.  
 SuggestedRemedy  
 Align figures and text; CC\_REQUEST should use Opcode 20 and CC\_RESPONSE Opcode 21 (text is correct).  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 Opcodes are correct. The figures are wrong. 144-31 shows CC\_RESPONSE instead of CC\_REQUEST and 144-32 shows the opposite. Use correct figures.

Cl 144 SC 144.4.3.1 P233 L21 # 321  
 Lynskey, Eric Broadcom  
 Comment Type T Comment Status D  
 If the intent is to reserve space for support of up to 16 channels in the future, the space in the frame should be reserved for both downstream and upstream status.  
 SuggestedRemedy  
 In Figure 144-31, add 14 octets of Reserved following StatusUC1. Adjust the pad.  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

Cl 144 SC 144.4.3.1 P234 L14 # 253  
 Remein, Duane Futurewei Technologies, Inc.  
 Comment Type TR Comment Status D  
 What prevents the "previous persistent state" for one channel combined with "previous persistent state" for another change from creating an ONU with all channels disabled and thereby appear to be broken?  
 SuggestedRemedy  
 Add footnote to PersistenceFlag = 1  
 1 The ONU shall refuse any instruction that would result in persistently disabling all channels in a given direction.  
 Proposed Response Response Status W  
 PROPOSED REJECT.  
 ONU shall never refuse a command from the OLT (NMS), no matter what the consequences to the ONU are. Any limitations, if needed, should be placed on the NMS, not on the ONU.

Cl 144 SC 144.4.3.2 P234 L42 # 322  
 Lynskey, Eric Broadcom  
 Comment Type T Comment Status D  
 If the intent is to reserve space for support of up to 16 channels in the future, the space in the frame should be reserved for both downstream and upstream actions.  
 SuggestedRemedy  
 In Figure 144-32, add 14 octets of Reserved following ActionUC1. Adjust the pad.  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

Proposed Responses

IEEE P802.3ca D2.0 25/50G-EPON Task Force Initial Working Group ballot comments

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Cl 144 SC 144.4.4.1 P236 L11 # 15

Hajduczenia, Marek Charter Communications

Comment Type ER Comment Status D

Wrong table reference in CH\_STATE\_ABSENT, CH\_STATE\_DISABLED\_REMOTE, CH\_STATE\_ENABLED.

*SuggestedRemedy*

Change Table 144-11. to Table 144-12.

Proposed Response Response Status W

PROPOSED ACCEPT.

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Cl 144 SC 144.4.4.4 P238 L23 # 50

Hajduczenia, Marek Charter Communications

Comment Type ER Comment Status D can-vs-may

"can" used and not intended per Style Guide

*SuggestedRemedy*

Change "(array element) can be accessed" to "(array element) is accessed"

Proposed Response Response Status W

PROPOSED ACCEPT.