

Cl 1 SC 1.4 P20 L14 # 289
 Remein, Duane Huawei

Comment Type T Comment Status D definitions

If the next revision editor is to 'Insert the following definitions in alphabetic order:' we should at least provide a good hint at what that is.

SuggestedRemedy

Reorder and renumber 1.4.314a through 1.4.327a to reflect the editing instruction

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Comment type changed from E to T to reflect technical changes

Use the following numbers for:

- MPRS channel: 1.4.333a
- Envelope Allocation: 1.4.244b
- Envelope Descriptor: 1.4.244c
- Envelope Header: 1.4.244d
- Envelope: 1.4.244a
- 25G-EPON: 1.4.90a
- 25/10G-EPON: 1.4.90b
- 25/25G-EPON: 1.4.90c
- 50G-EPON: 1.4.128a
- 50/10G-EPON: 1.4.128b
- 50/25G-EPON: 1.4.128c
- 50/50G-EPON: 1.4.128d

Also, note that we have two definitions of Envelope right now (1.4.316a and 1.4.325a).

Strike 1.4.325a and use text from 1.4.316a

AI for Glen: review definition of envelope

Cl 1 SC 1.4.278 P20 L16 # 290
 Remein, Duane Huawei

Comment Type T Comment Status D definitions

This definition is overly detailed and thus incorrect. The phrase "There is one-to-one correspondence between the grants issued to an ONU and upstream bursts transmitted by that ONU, i.e., a grant issued to an ONU results in a single upstream burst transmitted by that ONU." is incorrect. There may not be a 1-1 correspondence if different GATES have the same start time. We could just as easily say that multiple grants issued to an ONU may result in a single upstream burst transmitted by that ONU.

SuggestedRemedy

Strike "There is one-to-one correspondence between the grants issued to an ONU and upstream bursts transmitted by that ONU, i.e., a grant issued to an ONU results in a single upstream burst transmitted by that ONU."

Proposed Response Response Status Z

REJECT.

This comment was WITHDRAWN by the commenter.

Cl 1 SC 1.4.313 P20 L25 # 291
 Remein, Duane Huawei

Comment Type TR Comment Status A definitions

The addition of "function of the Reconciliation Sublayer" changes the meaning of the original sentence.

SuggestedRemedy

Strike "function of the Reconciliation Sublayer" and return to original sentence which reads "A numeric identifier assigned to a P2MP association between an OLT and ONU established through the Point-to-Point Emulation sublayer."

Response Response Status C

ACCEPT IN PRINCIPLE.

Strike "function of the Reconciliation Ssublayer" in the draft. Make "Point-to-Point Emulation" all lower case.

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Cl 1 SC 1.4.324a P21 L14 # 292
 Remein, Duane Huawei

Comment Type T Comment Status A definitions

This phrase is correct but incomplete and can be simplified "This term collectively refers to 25/10G-EPON, 25/25G-EPON, 50/10G-EPON, 50/25G-EPON, and 50/50G-EPON architectures."
 It also refers to 25G-EPON and 50G-EPON.

SuggestedRemedy
 Change to "This term collectively refers to all 25G-EPON 50G-EPON architectures."

Response Response Status C
 ACCEPT IN PRINCIPLE.

Strike "i.e., 25G/10G, 25G/25G, 50G/10G, 50G/25G, or 50G/50G" from the definition.

Cl 1 SC 1.4.325a P21 L17 # 293
 Remein, Duane Huawei

Comment Type T Comment Status D definitions

Duplicate but different definition of Envelope

SuggestedRemedy
 Strike this one and change 1.4.316a from:
 "an upstream transmission that corresponds to an envelope allocation received from the OLT. ..." to read:
 "an upstream transmission that corresponds to one or more envelope allocations received from the OLT. ..."

Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.

See comment #289

Cl 1 SC 1.4.326a P21 L21 # 294
 Remein, Duane Huawei

Comment Type E Comment Status D ChIndex

I question the need for this definition of Envelope Descriptor which is then only used one other time (pg 135 line 10) in the definition of ChIndex, which is also never used in the draft.
 Note a separate comment to remove ChIndex exists.

SuggestedRemedy
 Strike the definition.

Proposed Response Response Status Z
 REJECT.

This comment was WITHDRAWN by the commenter.

Cl 1 SC 1.5 P21 L34 # 295
 Remein, Duane Huawei

Comment Type T Comment Status D bucket

Missing abbreviations (much as I dislike abbreviations we should at least be consistent)

SuggestedRemedy
 Add in alpha order: "ECH envelope continuation header"

Proposed Response Response Status W
 PROPOSED ACCEPT.

CI 31A SC 31A P23 L33 # 185
Hajduczenia, Marek Charter Communicatio

Comment Type TR Comment Status D

Tables 31A-10/15 are missing content

SuggestedRemedy

Use the content per hajduczenia_3ca_1_0718.pdf.

NOTE 1: operand definitions are aligned with target primitive structure after updates proposed in multiple separate comments (comments are tagged MH_PRIMITIVES for cross referencing). Right now, we have major misalignment between primitive definitions, message structure, and operands.

NOTE 2: operand list for DISCOVERY_GATE MPCPDU is currently predicated on resolution of comment tagged MH_DISCOVERY and aligned with the proposed list of operands there

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

AI for Glen & Duane: talk to David whether it is OK to reference back from Annex 31A to clauses where messages are defined. Concerns about information repetition and redefinition.

CI 56 SC 56 P26 L3 # 184
Hajduczenia, Marek Charter Communicatio

Comment Type TR Comment Status A

Clause 56 requires many more changes to accommodate for the new Nx25G-EPON in the EFM architecture.

SuggestedRemedy

Add all the changes as shown in hajduczenia_3ca_2_0718.pdf. The existing set of changes to Table 56-1 already present in draft D1.1 to be moved into subclause 56.1.3

Response Response Status C

ACCEPT IN PRINCIPLE.

Per comment, with following changes:

- "FEC capability, as defined in Clause 142" to "FEC capability, as defined in Clause 143"
- "rate of 1000 Mb/s in both downstream" to "rate of 1 Gb/s in both downstream"

CI 56 SC 56 P27 L31 # 296
Remein, Duane Huawei

Comment Type T Comment Status D

The table footnote appears to be applicable to all asymmetric PON signaling systems.

SuggestedRemedy

Change from:

"aFor 10/1G-EPON Physical Layer signaling systems ..." to

"aFor asymmetric EPON Physical Layer signaling systems ..."

Proposed Response Response Status Z

REJECT.

This comment was WITHDRAWN by the commenter.

Replica of #297?

CI 56 SC 56 P27 L31 # 297
Remein, Duane Huawei

Comment Type T Comment Status A

Footnote also applies to Nx25 EPON.

SuggestedRemedy

Change footnote from:

"For 10/1G-EPON Physical Layer signaling systems ..." to:

"For 10/1G-EPON and Nx25G-EPON Physical Layer signaling systems ..."

Response Response Status C

ACCEPT IN PRINCIPLE.

See comment #255.

CI 56 SC 56 P27 L31 # 255
Lee, HH ETRI

Comment Type ER Comment Status A

10G/1G is out of scope. Footnote should be fixed.

SuggestedRemedy

change "10/1G-EPON" to EPON or Nx25G EPON.

Response Response Status C

ACCEPT IN PRINCIPLE.

Change "For 10/1G-EPON Physical Layer signaling" to "For Physical Layer signaling"

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Cl 141 SC 141.1 P28 L6 # 298
 Remein, Duane Huawei

Comment Type E Comment Status A

I find an active link to the current clause somewhat odd (here elsewhere) not to mention frustrating if accidentally clicked on.

SuggestedRemedy

Replace the following instance of "Clause 141" with "this clause" (or "This clause" as appropriate).

Pg/Line 28/6, 28/20, 28/40, 29/1, 31/3, 34/50, 35/3, 35/25, 35/44

Replace "Clause 141 PMD" with "Nx25G-EPON PMD" at 32/ 33, 35/30, 35/32 (table 141-4 title), 44/50

Response Response Status C

ACCEPT.

Cl 141 SC 141.1 P29 L47 # 302
 Remein, Duane Huawei

Comment Type T Comment Status A Clause 141 introduction

The text in sections 141.1 and 141.2 are somewhat disjointed and mostly incorrect now.

SuggestedRemedy

Replace with text shown in remain_3ca_1_0718.pdf (ms word version available upon request).

Response Response Status C

ACCEPT.

Implement together with comment #401 and #400

Cl 141 SC 141.1.3 P28 L30 # 299
 Remein, Duane Huawei

Comment Type T Comment Status A Clause 141 introduction

We no longer have PR PHYS

SuggestedRemedy

Change 5 instances of PR-S to PQ-S and 5 instances of PR-A to PQ-A

Response Response Status C

ACCEPT IN PRINCIPLE.

See comment #302.

Cl 141 SC 141.1.3 P28 L34 # 257
 Lee, HH ETRI

Comment Type ER Comment Status D bucket

Period is missing.

SuggestedRemedy

add period after "over a single SMF"

Proposed Response Response Status W

PROPOSED REJECT.

This is NOT intended to be a complete sentence.

Cl 141 SC 141.1.3 P28 L36 # 300
 Remein, Duane Huawei

Comment Type T Comment Status A Clause 141 introduction

Does "and 10 Gb/s and above" include 25 Gb/s and 50 Gb/s also (which would then overlap with symmetric power budgets)?

If remain_3ca_1_0718.pdf is accepted this comment can be withdrawn.

SuggestedRemedy

Change from:

"and 10 Gb/s and above" to

"and a lesser rate (typically 10 Gb/s or 25 Gb/s)"

Response Response Status C

ACCEPT IN PRINCIPLE.

See comment #302.

Cl 141 SC 141.1.3 P28 L36 # 258
 Lee, HH ETRI

Comment Type ER Comment Status D bucket

Period is missing.

SuggestedRemedy

add period after "over a single SMF"

Proposed Response Response Status W

PROPOSED REJECT.

This is NOT intended to be a complete sentence.

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CI 141 SC 141.1.3 P28 L42 # 256
 Lee, HH ETRI
 Comment Type ER Comment Status D bucket
 Remove the coma.
 SuggestedRemedy
 PR-S20: symmetric-rate, medium power budget.
 Proposed Response Response Status W
 PROPOSED REJECT.
 Correct as is

CI 141 SC 141.1.3 P28 L48 # 400
 Kramer, Glen Broadcom
 Comment Type TR Comment Status A Clause 141 introduction
 Editorial note and an action item to provide a consistent way to reference power budgets
 SuggestedRemedy
 Do the following:
 1) Adopt the naming convention as shown in kramer_3ca_4_0718.pdf
 2) Replace Table 141-1 with Tables 141-1 through 141-5 from kramer_3ca_3_0718.pdf
 3) Replace Tables 141-2 and 141-3 with Tables 141-6 and 141-7 from kramer_3ca_3_0718.pdf.
 4) Change 141.2.1 title to "Supported Combinations of OLT and ONU PMDs"
 5) Change 141.2.1.1 title to "PHY Links supporting medium power budget"
 6) Change 141.2.1.2 title to "PHY Links supporting high power budget"
 7) Add definition of GPON to subclause 1.4
 8) Add reference to G.983 to subclause 1.3
 9) Scrub the entire clause 141 and replace the "power budget" with "PHY link" where appropriate. Use proper PHY link type designation.
 Response Response Status C
 ACCEPT.

CI 141 SC 141.1.4 P29 L41 # 301
 Remein, Duane Huawei
 Comment Type E Comment Status A
 "symmetric-rate... and asymmetric-rate ... PMD sublayer" constitute more than one (layers should be plural)
 If remain_3ca_1_0718.pdf is accepted this comment can be withdrawn.
 SuggestedRemedy
 Per comment
 Response Response Status C
 ACCEPT IN PRINCIPLE.
 See comment #302.

CI 141 SC 141.2 P29 L46 # 401
 Kramer, Glen Broadcom
 Comment Type T Comment Status A Clause 141 introduction
 Need to show a list of all supported PMDs.
 SuggestedRemedy
 In section 141.2, after an introductory text that shows how PMD names are constructed, add the table shown in kramer_3ca_1_0718.pdf listing all supported PMD types. Later clauses use these types to show which PMDs can be paired together.
 Response Response Status C
 ACCEPT.

CI 141 SC 141.2 P31 L8 # 303
 Remein, Duane Huawei
 Comment Type T Comment Status A Clause 141 introduction
 A PMD transmitting at 25 Gb/s in both US and DS as allowed by this sentence is not asymmetric.
 If remain_3ca_1_0718.pdf is accepted this comment can be withdrawn.
 SuggestedRemedy
 Change:
 "and receiving at 25 GBd (or more) burst mode:" to
 "and receiving at a lesser rate (typically 10 GBd or 25 GBd) burst mode:"
 Response Response Status C
 ACCEPT IN PRINCIPLE.
 See comment #302.

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CI 141 SC 141.2 P31 L12 # 304

Remein, Duane

Huawei

Comment Type T Comment Status A Clause 141 introduction
{TBD} replacement

If remain_3ca_1_0718.pdf is accepted this comment can be withdrawn.

SuggestedRemedy

Change:
"... transmitting at {TBD} GBd continuous mode and receiving at {TBD} GBd burst mode:" to
"... operating at 25 GBd or 50 GBd, transmitting using continuous mode and receiving using burst mode:"

Response Response Status C

ACCEPT IN PRINCIPLE.

See comment #302.

CI 141 SC 141.2 P31 L18 # 305

Remein, Duane

Huawei

Comment Type T Comment Status A Clause 141 introduction
We do not define 10/1GBASE-PRX-U.

If remain_3ca_1_0718.pdf is accepted this comment can be withdrawn.

SuggestedRemedy

Change:
"... 10/1GBASE-PRX-U), transmitting at 1.25 GBd burst mode and receiving at 10.3125 GBd continuous mode:" to
"... PQ-A-U), transmitting at 10 GBd or 25 GBd burst mode and receiving at a higher rate (typically 25 GBd or 50 GBd) continuous mode:"

Response Response Status C

ACCEPT IN PRINCIPLE.

See comment #302.

CI 141 SC 141.2 P31 L21 # 306

Remein, Duane

Huawei

Comment Type T Comment Status A Clause 141 introduction
We do not define 10GBASE-PR-U

If remain_3ca_1_0718.pdf is accepted this comment can be withdrawn.

SuggestedRemedy

Change:
"... 10GBASE-PR-U), transmitting at 10.3125 GBd burst mode and receiving at 10.3125 GBd continuous mode:" to
"... (PQ-S-U)), operating at 25 GBd or 50 GBd, transmitting using burst mode and receiving using continuous mode:"

Response Response Status C

ACCEPT IN PRINCIPLE.

See comment #302.

CI 141 SC 141.3.1 P32 L33 # 307

Remein, Duane

Huawei

Comment Type T Comment Status D
An interface does not a service make "The following specifies the services provided by Clause 141 PMDs."

SuggestedRemedy

Change to "The following paragraphs specify the service interfaces to Nx25G-EPON PMDs."

Proposed Response Response Status Z

REJECT.

This comment was WITHDRAWN by the commenter.

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Cl 141 SC 141.3.1.2 P33 L1 # 308
 Remein, Duane Huawei
 Comment Type E Comment Status D bucket
 We have renamed these interfaces to PMD_UNITDATA[i].request, PMD_UNITDATA[i].indication, PMD_SIGNAL[i].request, and PMD_SIGNAL[i].indication. This should be reflected in the subclause titles in 141.3.1.2-141.3.1.5
 SuggestedRemedy
 Retitle sections to PMD_UNITDATA[i].request, PMD_UNITDATA[i].indication, PMD_SIGNAL[i].request, and PMD_SIGNAL[i].indication
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 141 SC 141.3.1.2 P33 L2 # 309
 Remein, Duane Huawei
 Comment Type E Comment Status D
 "Clause 142 PMA" does nothing to orient the reader.
 SuggestedRemedy
 Change to: "Nx25G-EPON PMA" (7x)
 Proposed Response Response Status Z
 REJECT.
 This comment was WITHDRAWN by the commenter.
 Clause reference is clearer (and has live link) while the proposed text does not.

Cl 141 SC 141.3.1.2 P33 L7 # 310
 Remein, Duane Huawei
 Comment Type T Comment Status R
 Given the Nx25G-EPON includes 25/10G-EPON this statement is incorrect "The Clause 142 PMA continuously sends the appropriate stream of bits to the PMD for transmission on the medium, at a nominal signaling speed of 25.78125 GBd in the case of Nx25G-EPON OLT and ONU PMDs. The Clause 142 PMA continuously sends the appropriate stream of bits to the PMD for transmission on the medium, at a nominal signaling speed of 10.3125 GBd in the case of 25/10G-EPON and 50/10G-EPON ONU PMDs."
 Perhaps it would be better to simply take about what the interface does and skip the informative part about it's rate.
 SuggestedRemedy
 Change to: ""The Nx25G-EPON PMA continuously sends a stream of bits to the PMD for transmission on the medium."

Response Response Status C
 REJECT.
 Current text is correct and provides information on bit rates offered by PMA down to PMD for the given PHY link.

Cl 141 SC 141.3.1.5 P33 L39 # 311
 Remein, Duane Huawei
 Comment Type E Comment Status D bucket
 Signal name "SIGNAL_- DETECT" breaks line (several times)
 SuggestedRemedy
 disable hyphenation on all signal names (Esc n s in frame).
 Proposed Response Response Status W
 PROPOSED ACCEPT.

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Cl 141 SC 141.3.2 P34 L1 # 199
Hajduczenia, Marek Charter Communicatio

Comment Type T Comment Status A

Figure 141-2 was updated to use [i] indication where per-wavelength test points are defined. The text was not updated accordingly, though

SuggestedRemedy

Remove the editorial note from Figure 141-2 (updates were already made)
Replace references to TP1, TP4, TP5, and TP8 with versions with [i] added
Change "points for use by implementers." to "points for use by implementers, defined on per channel basis."

Similarly, in 141.7, mark TP1 and TP5 instances with [i] indexes

Response Response Status C

ACCEPT.

Cl 141 SC 141.3.2 P34 L1 # 312
Remein, Duane Huawei

Comment Type T Comment Status A

TP1, TP4, TP5, and TP8 do not exist.

SuggestedRemedy

Change to TP1[i], TP4[i], TP5[i], and TP8[i] throughout this section and in 141.7, 141.7.14.1, 141.7.14.2 and in Figure 141-3

Response Response Status C

ACCEPT.

Cl 141 SC 141.4 P35 L50 # 200
Hajduczenia, Marek Charter Communicatio

Comment Type E Comment Status D bucket

No need to build one sentence paragraphs

SuggestedRemedy

Merge sentences in line 50 and 52 into a single paragraph.

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 141 SC 141.4 P36 L10 # 313
Remein, Duane Huawei

Comment Type T Comment Status D

Table 141-6 would be more useful if it included information about which wavelength goes with which PMD coexistence case (G or X).

SuggestedRemedy

Add a column labeled "Coexistence Class" with the following row entries:
row 1 (UW0) "G"
row 2 (UW1) "X"
row 3 (UW2) "G or X"

Proposed Response Response Status Z

REJECT.

This comment was WITHDRAWN by the commenter.

Cl 141 SC 141.4.1 P38 L37 # 188
Hajduczenia, Marek Charter Communicatio

Comment Type E Comment Status D bucket

Stranded TBD

SuggestedRemedy

Remove {TBD} in line 38, page 38

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 141 SC 141.5 P36 L27 # 315
 Remein, Duane Huawei

Comment Type T Comment Status A

This sentence, which is structured as found in CI 75.4, seems to be pointing to an odd place "A {XXX} compliant transceiver operates over the media types listed in Table 141-15 according to the specifications described in 141.10." The sentence in 75.4 points to 75.9 "Characteristics of the fiber optic cabling" while here we point to 141.10 (PICS). Also need to replace the {XXX}.

Same issues exit in 141.6 pg 38 line 49.

SuggestedRemedy

Change ref from "141.10" to "141.9"
 Change "{XXX}" to "PQ"
 in both locations

Response Response Status C

ACCEPT IN PRINCIPLE.

Per comment + change "The operating ranges for PQ power budget classes are defined in T able 141-1." to "The operating ranges for PQ PHY link types are defined in Table 141-1 through Table 141-5."

Apply the same changes in 141.6.

CI 141 SC 141.5.1 P36 L23 # 314
 Remein, Duane Huawei

Comment Type T Comment Status D bucket

if we're talk of both 25G-EPON and 50G-EPON we should use Nx25G-EPON. Same issue in 141.6 pg 38 line 45

SuggestedRemedy

Change from
 "25G-EPON and 50G-EPON OLT PMDs" to
 "Nx25G-EPON OLT PMDs"
 in both locations

Proposed Response Response Status W

PROPOSED ACCEPT.

Type changed from E to T

CI 141 SC 141.5.1 P36 L33 # 192
 Hajduczenia, Marek Charter Communicatio

Comment Type TR Comment Status A ton values

All transmit tables for ONU and OLT need to include Ton and Toff values of 128 ns as decided in May 2018

SuggestedRemedy

Add values of 128 ns to Ton/Toff rows where they are already present. Where not present, add row with these values into respective tables. Tables affected: 141-7, 141-8, 141-11, and 141-12.

Response Response Status C

ACCEPT IN PRINCIPLE.

Applicable to Table 141-11

CI 141 SC 141.5.1 P36 L40 # 261
 Johnson, John Broadcom

Comment Type T Comment Status A Table 141-7

Table 141-7, OLT PR20 Transmit Characteristics, requires populating.

SuggestedRemedy

Accept the values in the table shown in johnson_3ca_2_0718.pdf, slide x, to populate Table 141-7.

Response Response Status C

ACCEPT IN PRINCIPLE.

Use values in the table shown in johnson_3ca_2_0718.pdf, slide 8, to populate Table 141-7.

Also, replace 25GBASE with 25/25GBASE and 50GBASE with 50/50GBASE in the description row for individual PHY Link Types

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CI 141 SC 141.5.1 P36 L41 # 316
 Remein, Duane Huawei

Comment Type T Comment Status A
 In Table 141-7 what is a 25GBASE-PR20-D, 50GBASE-PR20-D, and 50/25GBASE-PR20-D?
 Similar issue exists in Table 141-13 pg 43 line 19.

SuggestedRemedy
 In Table 141-7 change from "25GBASE-PR20-D, "25GBASE-PQ11G-D2 25GBASE-PQ11X-D2" and from "50GBASE-PR20-D 50/25GBASE-PR20-D" to "50GBASE-PQ22G-D2 50GBASE-PQ22X-D2 50/25GBASE-PQ21G-D2 50/25GBASE-PQ21X-D2"

Make the same change in Table 141-13 replacing "D" with "U"

Response Response Status C
 ACCEPT IN PRINCIPLE.

See #261 for Table 141-7 and #264 for Table 141-13.

CI 141 SC 141.5.1 P36 L47 # 259
 Lee, HH ETRI

Comment Type ER Comment Status A
 Remove the coma.

SuggestedRemedy
 remove the coma in "Signaling rate (range)"

Response Response Status C
 ACCEPT IN PRINCIPLE.

See #261, #262, and #264.

CI 141 SC 141.5.1 P36 L48 # 260
 Lee, HH ETRI

Comment Type ER Comment Status A
 Remove the coma.

SuggestedRemedy
 remove the coma in "Side-mode suppression ratio (SMSR) (min)"

Response Response Status C
 ACCEPT IN PRINCIPLE.

See #261, #262, and #264.

CI 141 SC 141.5.1 P36 L52 # 384
 Harstead, Ed Nokia

Comment Type TR Comment Status A
 In Table 141-7, per harstead_3ca_1_0718 correct the value of Average launch power, each channel (min).

SuggestedRemedy
 Replace 2.5 dBm with 2 dBm. (In a separate comment, it will be proposed to move this value from the table and be put into a footnote).

Response Response Status C
 ACCEPT.

See #261, #262, #263, and #264.

CI 141 SC 141.5.1 P36 L52 # 386
 Harstead, Ed Nokia

Comment Type TR Comment Status A
 Table 141-7 shows Average launch power, each channel (min). This is dangerous. There will be confusion with the legacy method of specification if this is included in the table-- that the value would be enough for min ER and max TDP.

SuggestedRemedy
 Delete Average launch power, each channel (min) from the table. Add, in a footnote, the Average launch power, each channel (min) based on legacy specification methods. Specifically "Average launch power, each channel (min) = 2 dBm at Extinction ratio (min) and Transmitter and dispersion penalty (TDP). This will give module vendors a reference point to legacy specification methods, without causing any confusion.

Response Response Status C
 ACCEPT IN PRINCIPLE.

See #261, #262, #263, and #264.

Approved Responses

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CI 141 SC 141.5.1 P36 L53 # 271
 Johnson, John Broadcom

Comment Type T Comment Status A Delete Average launch power

The inclusion of an informative spec on minimum average launch power doesn't serve any purpose to specify a compliant TX. A TX that meets the requirements of minimum OMA minus TDP and minimum OMA is compliant, even for very low values of AVP associated with very high ER. This line should be removed from Table 141-7.

SuggestedRemedy

Delete the line for "Average launch power, each channel (min)" in Table 141-7.

Response Response Status C

ACCEPT.

See #261, #262, #263 and #264.

CI 141 SC 141.5.1 P37 L9 # 265
 Johnson, John Broadcom

Comment Type T Comment Status A minimum OMA minus TDP

APD RX sensitivity depends on ER due to avalanche multiplication noise in the one and zero rails. The currently accepted baseline APD receiver sensitivities assume that all TX have worst-case ER. By allowing TX with higher than minimum ER to launch slightly lower OMA, significant laser power savings is possible.

SuggestedRemedy

Create two separate spec lines for minimum OMA minus TDP, one for ER ≥ 9dB with min. value of 2.0dBm, and one for ER < 9dB with min. value of 2.1dBm, as shown in johnson_3ca_1_0718.pdf, slide 9.

Response Response Status C

ACCEPT.

Straw Poll. I support the response to this comment as written:

Yes: 11

No: 1

No opinion: 3

CI 141 SC 141.5.1 P37 L10 # 272
 Johnson, John Broadcom

Comment Type T Comment Status A footnote OMA minus TDP

As a reference value for comparison with legacy power specification methods, a footnote should be added to the line for Launch power in OMA minus TDP (min) giving the informative minimum average launch power for the specific worst case of minimum ER and maximum TDP.

SuggestedRemedy

Add footnote to "Launch power in OMA minus TDP, each channel (min) in Table 141-7 which reads, "For reference, this implies that the minimum average launch power per channel at minimum extinction ratio and maximum TDP is 2 dBm. This value is informative only."

Response Response Status C

ACCEPT.

See #261, #262, #263 and #264.

CI 141 SC 141.5.1 P37 L29 # 201
 Hajduczenia, Marek Charter Communicatio

Comment Type T Comment Status A

Table 141-8 title does not match new PMD names.

SuggestedRemedy

Change "OLT PR30" to "OLT PQ11, PQ21, and PQ22". Similar change to Table 141-10

Response Response Status C

ACCEPT.

CI 141 SC 141.5.1 P37 L37 # 385
 Harstead, Ed Nokia

Comment Type TR Comment Status A » launch power, each channel

Table 141–8 shows Average launch power, each channel (min). This corresponds to our new method of specification--2.8 dBm at reference ER and TDP. This is dangerous. There will be confusion with the legacy method of specification if this is included in the table-- that 2.8 dBm would be enough for min ER and max TDP.

SuggestedRemedy

Delete Average launch power, each channel (min) from the table. Add, in a footnote, the Average launch power, each channel (min) based on legacy specification methods. Specifically "Average launch power, each channel (min) = 4.8 dBm at Extinction ratio (min) and Transmitter and dispersion penalty (TDP). This will give module vendors a reference point to legacy specification methods, without causing any confusion.

Response Response Status C

ACCEPT IN PRINCIPLE.

See comment #386

CI 141 SC 141.5.1 P37 L43 # 242
 Lee, HH ETRI

Comment Type ER Comment Status D bucket

Remove the coma.

SuggestedRemedy

remove the coma in "Side-mode suppression ratio (SMSR) (min)"

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 141 SC 141.5.1 P37 L45 # 189
 Hajduczenia, Marek Charter Communicatio

Comment Type TR Comment Status A

What does it mean to have "-" in Table 141-8, Total average launch power column for PQ11 column? The given channel is not active? Does not transmit?

SuggestedRemedy

Replace "-" with "NA" if the column is not applicable, in this case more likely TBD should be used to provide specific value to be used.

For page 38, line 12 (difference in launch power ...), use "NA" since it is a single channel PMD

Similar changes in Table 141–12

Response Response Status C

ACCEPT IN PRINCIPLE.

In Table 141-8, copy value from Average launch power, each channel (max) (7.8) into Total average launch power (max) (-) value.

CI 141 SC 141.5.1 P37 L48 # 273
 Johnson, John Broadcom

Comment Type T Comment Status A Delete Average launch power

The inclusion of an informative spec on minimum average launch power doesn't serve any purpose to specify a compliant TX. A TX that meets the requirements of minimum OMA minus TDP and minimum OMA is compliant, even for very low values of AVP associated with very high ER. This line should be removed from Table 141-8.

SuggestedRemedy

Delete the line for "Average launch power, each channel (min)" in Table 141-8.

Response Response Status C

ACCEPT.

Approved Responses Specifications and Management Parameters for 25Gb/s, 50Gb/s, and 100Gb/s Passive Optical Networks 2r

Cl 141 SC 141.5.1 P38 L14 # 266
 Johnson, John Broadcom

Comment Type T Comment Status A minimum OMA minus TDP

APD RX sensitivity depends on ER due to avalanche multiplication noise in the one and zero rails. The currently accepted baseline APD receiver sensitivities assume that all TX have worst-case ER. By allowing TX with higher than minimum ER to launch slightly lower OMA, significant laser power savings is possible.

SuggestedRemedy

Create two separate spec lines for minimum OMA minus TDP, one for ER ≥ 9dB with min. value of 4.8dBm, and one for ER < 9dB with min. value of 4.9dBm, as shown in johnson_3ca_1_0718.pdf, slide 8.

Response Response Status C

ACCEPT.

Straw Poll. I support the response to this comment as written:

Yes: 11
 No: 1
 No opinion: 4

Cl 141 SC 141.5.1 P38 L14 # 274
 Johnson, John Broadcom

Comment Type T Comment Status A footnote OMA minus TDP

As a reference value for comparison with legacy power specification methods, a footnote should be added to the line for Launch power in OMA minus TDP (min) giving the informative minimum average launch power for the specific worst case of minimum ER and maximum TDP.

SuggestedRemedy

Add footnote to "Launch power in OMA minus TDP, each channel (min) in Table 141-8 which reads, "For reference, this implies that the minimum average launch power per channel at minimum extinction ratio and maximum TDP is 4.8 dBm. This value is informative only."

Response Response Status C

ACCEPT.

Cl 141 SC 141.5.1 P39 L6 # 243
 Lee, HH ETRI

Comment Type ER Comment Status A

There is a unnecessary empty column in "Channel wavelength ranges".

SuggestedRemedy

combine both columns.

Response Response Status C

ACCEPT IN PRINCIPLE.

See #261, #262, #263 and #264.

Cl 141 SC 141.5.1 P39 L36 # 244
 Lee, HH ETRI

Comment Type TR Comment Status A BER footnote

BER is better than or equal to 10⁻¹².

SuggestedRemedy

The BER of 10⁻¹² is achieved by the utilization of FEC as described in 142.2.2.9.

Response Response Status C

ACCEPT IN PRINCIPLE.

See #261, #262, #263 and #264.

Cl 141 SC 141.5.1 P42 L1 # 190
 Hajduczenia, Marek Charter Communicatio

Comment Type TR Comment Status A

No entry for 25/10 and 50/10 PMDs

SuggestedRemedy

Insert an editorial note indicating these PMDs are missing

Response Response Status C

ACCEPT IN PRINCIPLE.

Add a column similar to Table 141-11, referencing proper Table in Clause 75.

CI 141 SC 141.5.2 P38 L39 # 245
 Lee, HH ETRI

Comment Type ER Comment Status A

The section title and content are separated.

SuggestedRemedy

move the table 141-10—OLT PR20 Receive Characteristics after the section title of 141.5.2. Receiver optical specifications.

Response Response Status C

ACCEPT.

Text will be reflowed - note that such issues are typically addressed at publication time, when the content of the draft has stabilized.

CI 141 SC 141.5.2 P39 L1 # 262
 Johnson, John Broadcom

Comment Type T Comment Status A

Table 141-9, OLT PR20 Receive Characteristics, requires populating.

SuggestedRemedy

Accept the values in the table shown in johnson_3ca_2_0718.pdf, slide x, to populate Table 141-9.

Response Response Status C

ACCEPT IN PRINCIPLE.

Use values in the table shown in johnson_3ca_2_0718.pdf, slide 14, to populate Table 141-9.

Also, replace 25GBASE with 25/25GBASE and 50GBASE with 50/50GBASE in the description row for individual PHY Link Types

CI 141 SC 141.5.2 P39 L14 # 279
 Johnson, John Broadcom

Comment Type T Comment Status A Delete Average launch power

The inclusion of an informative spec on minimum average receive power doesn't serve any purpose to specify a compliant RX. An RX that meets the requirements of maximum receiver sensitivity (OMA) and maximum stressed receiver sensitivity (OMA) is compliant, even for very low values of AVP associated with very high ER signals. This line should be removed from Table 141-9.

SuggestedRemedy

Delete the line for "Average receive power, each channel (min)" in Table 141-9.

Response Response Status C

ACCEPT.

CI 141 SC 141.5.2 P39 L30 # 280
 Johnson, John Broadcom

Comment Type T Comment Status A te Receiver sensitivity (OMA)

As a reference value for comparison with legacy power specification methods, a footnote should be added to the line for Receiver sensitivity (OMA), each channel (max) giving the informative maximum unstressed average power receiver sensitivity for the specific worst case of minimum ER.

SuggestedRemedy

Add to the footnote to "Receiver sensitivity (OMA), each channel (max)" in Table 141-9, "For reference, this implies that the maximum average power unstressed receiver sensitivity measured with an ideal transmitter signal at minimum extinction ratio is -22 dBm. This value is informative only."

Response Response Status C

ACCEPT.

See #261, #262, #263 and #264.

Approved Responses

Specifications and Management Parameters for 25Gb/s, 50Gb/s, and 100Gb/s Passive Optical Networks 2r

Cl 141 SC 141.5.2 P40 L20 # 281
 Johnson, John Broadcom

Comment Type T Comment Status A Delete Average launch power

The inclusion of an informative spec on minimum average receive power doesn't serve any purpose to specify a compliant RX. An RX that meets the requirements of maximum receiver sensitivity (OMA) and maximum stressed receiver sensitivity (OMA) is compliant, even for very low values of AVP associated with very high ER signals. This line should be removed from Table 141-10.

SuggestedRemedy

Delete the line for "Average receive power, each channel (min)" in Table 141-10.

Response Response Status C

ACCEPT.

Cl 141 SC 141.5.2 P40 L26 # 282
 Johnson, John Broadcom

Comment Type T Comment Status A Receiver sensitivity (OMA)

As a reference value for comparison with legacy power specification methods, a footnote should be added to the line for Receiver sensitivity (OMA), each channel (max) giving the informative maximum unstressed average power receiver sensitivity for the specific worst case of minimum ER.

SuggestedRemedy

Add to the footnote to "Receiver sensitivity (OMA), each channel (max)" in Table 141-9, "For reference, this implies that the maximum average power unstressed receiver sensitivity measured with an ideal transmitter signal at minimum extinction ratio is -25 dBm. This value is informative only."

Response Response Status C

ACCEPT.

See #261, #262, #263 and #264.

Cl 141 SC 141.5.2 P42 L1 # 187
 Hajduczenia, Marek Charter Communicatio

Comment Type T Comment Status A

Table 141-12 title does not match new PMD names.

SuggestedRemedy

Change "ONU PR30" to "ONU PQ11, PQ21, and PQ22". Similar change to Table 141-14

Response Response Status C

ACCEPT.

Cl 141 SC 141.6 P39 L2 # 317
 Remein, Duane Huawei

Comment Type T Comment Status A

In Table 141-9 what are "25GBASE-PR20-D 50/25GBASE-PR20-D 50GBASE-PR20-D 25/10GBASE-PR20-D 50/10GBASE-PR20-D"?

SuggestedRemedy

Change from "25GBASE-PR20-D 50/25GBASE-PR20-D" to "25GBASE-PQ11G-U2 25GBASE-PQ11X-U2 50/25GBASE-PQ21G-U2 50/25GBASE-PQ21X-U2" and from "50GBASE-PR20-D" to "50GBASE-PQ22G-D2 50GBASE-PQ22X-D2" and from "25/10GBASE-PR20-D 50/10GBASE-PR20-D" to "25/10GBASE-PQ11G-D2 25/10GBASE-PQ11X-D2 50/10GBASE-PQ21G-D2 50/10GBASE-PQ21X-D2"

Response Response Status C

ACCEPT IN PRINCIPLE.

See comment #262.

Cl 141 SC 141.6 P39 L35 # 318
 Remein, Duane Huawei

Comment Type TR Comment Status A BER footnote

Footnote "a" does not need any TBDs, we have objectives covering BER. Same issue exists in Table 141-13 pg 43 line 45

SuggestedRemedy

Change "TBD" to "12" and "XX.X" to proper xref (142.2.2.4 in D1.1) in both tables

Response Response Status C

ACCEPT IN PRINCIPLE.

See #261, #262, #263 and #264.

Approved Responses

Specifications and Management Parameters for 25Gb/s, 50Gb/s, and 100Gb/s Passive Optical Networks 2r

CI 141 SC 141.6.1 P41 L27 # 267
 Johnson, John Broadcom

Comment Type T Comment Status A minimum OMA minus TDP

APD RX sensitivity depends on ER due to avalanche multiplication noise in the one and zero rails. The currently accepted baseline APD receiver sensitivities assume that all TX have worst-case ER. By allowing TX with higher than minimum ER to launch slightly lower OMA, significant laser power savings is possible.

SuggestedRemedy

Create two separate spec lines for minimum OMA minus TDP, one for ER ≥ 4.5dB with min. value of 0.5dBm, and one for ER < 4.5dB with min. value of 0.8dBm, as shown in johnson_3ca_1_0718.pdf, slide 7.

Response Response Status C

ACCEPT.

CI 141 SC 141.6.1 P41 L27 # 276
 Johnson, John Broadcom

Comment Type T Comment Status A footnote OMA minus TDP

As a reference value for comparison with legacy power specification methods, a footnote should be added to the line for Launch power in OMA minus TDP (min) giving the informative minimum average launch power for the specific worst case of minimum ER and maximum TDP.

SuggestedRemedy

Add footnote to "Launch power in OMA minus TDP, each channel (min) in Table 141-11 which reads, "For reference, this implies that the minimum average launch power per channel at minimum extinction ratio and maximum TDP is 4 dBm. This value is informative only."

Response Response Status C

ACCEPT.

See #261, #262, #263 and #264.

CI 141 SC 141.6.1 P42 L21 # 277
 Johnson, John Broadcom

Comment Type T Comment Status A Delete Average launch power

The inclusion of an informative spec on minimum average launch power doesn't serve any purpose to specify a compliant TX. A TX that meets the requirements of minimum OMA minus TDP and minimum OMA is compliant, even for very low values of AVP associated with very high ER. This line should be removed from Table 141-12.

SuggestedRemedy

Delete the line for "Average launch power, each channel (min)" in Table 141-12.

Response Response Status C

ACCEPT.

CI 141 SC 141.6.1 P42 L30 # 268
 Johnson, John Broadcom

Comment Type T Comment Status A minimum OMA minus TDP

APD RX sensitivity depends on ER due to avalanche multiplication noise in the one and zero rails. The currently accepted baseline APD receiver sensitivities assume that all TX have worst-case ER. By allowing TX with higher than minimum ER to launch slightly lower OMA, significant laser power savings is possible.

SuggestedRemedy

Create two separate spec lines for minimum OMA minus TDP, one for ER ≥ 6dB with min. value of 4.0dBm, and one for ER < 6dB with min. value of 4.2dBm, as shown in johnson_3ca_1_0718.pdf, slide 6.

Response Response Status C

ACCEPT.

CI 141 SC 141.6.1 P42 L30 # 278
 Johnson, John Broadcom

Comment Type T Comment Status A footnote OMA minus TDP

As a reference value for comparison with legacy power specification methods, a footnote should be added to the line for Launch power in OMA minus TDP (min) giving the informative minimum average launch power for the specific worst case of minimum ER and maximum TDP.

SuggestedRemedy

Add footnote to "Launch power in OMA minus TDP, each channel (min) in Table 141-12 which reads, "For reference, this implies that the minimum average launch power per channel at minimum extinction ratio and maximum TDP is 6 dBm. This value is informative only."

Response Response Status C

ACCEPT.

Approved Responses Specifications and Management Parameters for 25Gb/s, 50Gb/s, and 100Gb/s Passive Optical Networks 2r

CI 141 SC 141.6.2 P43 L50 # 253
 Lee, HH ETRI
 Comment Type TR Comment Status A
 PR30 and PR20 should have same BER specification.
 SuggestedRemedy
 Measured with conformance test signal at TP3 (see 141.7.11) for BER = 10⁻².
 Response Response Status C
 ACCEPT.
 See #261, #262, #263 and #264.

CI 141 SC 141.6.2 P44 L19 # 285
 Johnson, John Broadcom
 Comment Type T Comment Status A Delete Average launch power
 The inclusion of an informative spec on minimum average receive power doesn't serve any purpose to specify a compliant RX. An RX that meets the requirements of maximum receiver sensitivity (OMA) and maximum stressed receiver sensitivity (OMA) is compliant, even for very low values of AVP associated with very high ER signals. This line should be removed from Table 141-14.
 SuggestedRemedy
 Delete the line for "Average receive power, each channel (min)" in Table 141-14.
 Response Response Status C
 ACCEPT.

CI 141 SC 141.6.2 P44 L24 # 286
 Johnson, John Broadcom
 Comment Type T Comment Status A Receiver sensitivity (OMA)
 As a reference value for comparison with legacy power specification methods, a footnote should be added to the line for Receiver sensitivity (OMA), each channel (max) giving the informative maximum unstressed average power receiver sensitivity for the specific worst case of minimum ER.
 SuggestedRemedy
 Add to the footnote to "Receiver sensitivity (OMA), each channel (max)" in Table 141-14, "For reference, this implies that the maximum average power unstressed receiver sensitivity measured with an ideal transmitter signal at minimum extinction ratio is -25.7 dBm. This value is informative only."
 Response Response Status C
 ACCEPT.
 See #261, #262, #263 and #264.

CI 141 SC 141.7.1 P45 L3 # 319
 Remein, Duane Huawei
 Comment Type T Comment Status D bucket
 The use of the parenthetical "(channel)" here is superfluous (and makes for good comment bait)
 SuggestedRemedy
 Strike
 Proposed Response Response Status W
 PROPOSED REJECT.
 Comment type changed from E to T
 Text has been in use for a long time and never a cause for concern.

Approved Responses

Specifications and Management Parameters for 25Gb/s, 50Gb/s, and 100Gb/s Passive Optical Networks 2r

Cl 141 SC 141.7.9 P46 L2 # 249
 Lee, HH ETRI
 Comment Type TR Comment Status A
 missing 25 Gb/s PHYs.
 SuggestedRemedy
 For 10 Gb/s PHYs and 25 Gb/s PHYs
 Response Response Status C
 ACCEPT IN PRINCIPLE.
 Type changed from E to T
 Remove "For 10 Gb/s PHYs,"
 Strike note on page 46, lines 5-8

Cl 141 SC 141.7.13 P46 L21 # 191
 Hajduczenia, Marek Charter Communicatio
 Comment Type TR Comment Status A ton definitions
 Laser on/off timing measurement was defined for 10G-EPON in 75.7.14 via reference to 60.9.13.1 with updates to 10G-EPON specific values for particular parameters. The measurement procedure described in 60.9.13.1 is heavily referencing individual 1G-EPON reference tables and specific line code.
 To avoid interpretation issues and because of multi-lane operation of Nx25G-EPON, rather than taking the approach used in 10G-EPON, it is suggested that content in 141.7.13 be filled in based off the description included in 60.9.13.1, with all necessary updates to make this text applicable to Nx25G-EPON.
 SuggestedRemedy
 Replace content in 141.7.13 with content from hajduczenia_3ca_7_0718.pdf
 Response Response Status C
 ACCEPT IN PRINCIPLE.
 Per comment + add Editor' Note next to Figure 141-1—P2MP timing parameter definition, per channel "Figure needs revision (Homework for Glen)"

Cl 141 SC 141.7.13 P46 L22 # 320
 Remein, Duane Huawei
 Comment Type T Comment Status A ton definitions
 Laser Ton Toff definitions non-existent.
 SuggestedRemedy
 For 10G-EPON & 1G-EPON Ton & Toff are defined in 60.9.13.1.1. Copy that text to a new section, 141.7.13.1, making changes so it reads:
 Ton is denoted as the time beginning from the falling edge of the Tx_Enable line to the ONU PMD and ending at the time that the optical signal at TP2 of the ONU PMD is within 15% of its steady state parameters (average launched power, wavelength, RMS spectral width, transmitter and dispersion penalty, optical return loss tolerance, jitter, RIN{TBD}, extinction ratio and eye mask opening) as defined in Table 141-11 or Table 141-12 as appropriate. Ton is presented in Figure{TBD}. The data transmitted may be any valid 256B/257B symbols.

Toff is denoted as the time beginning from the rising edge of the Tx_Enable line to the ONU PMD and ending at the time that the optical signal at TP2 of the ONU PMD reaches the specified average launch power of off transmitter as defined in Table 141-11 or Table 141-12 as appropriate. Toff is presented in Figure{TBD}. The data transmitted may be any valid 256B/257B symbols.
 Response Response Status C
 ACCEPT IN PRINCIPLE.
 See comment #191

Approved Responses

Specifications and Management Parameters for 25Gb/s, 50Gb/s, and 100Gb/s Passive Optical Networks 2r

Cl 141 SC 141.7.13 P46 L26 # 321
 Remein, Duane Huawei

Comment Type T Comment Status A ton definitions

Motion #5 from the Pittsburgh meeting changed Ton and Toff to 128 ns. Ton & Toff are defined in Tables 141-11 and 141-12 although they is never referred to as "Ton" or Toff until here.

SuggestedRemedy

Change from
 "a) Ton is defined in 141.TBD, and its value is less than 512 ns (defined in T able 141-TBD)." to
 "a) Ton is defined in Table 141-11 and Table 141-12, and its value is less than 128 ns. and change from
 "e) Toff is defined in 141.TBD, and its value is less than 512 ns (defined in T able 141-TBD)." to
 "e) Toff is defined in Table 141-11 and Table 141-12, and its value is less than 128ns."

observe subscribing

Response Response Status C

ACCEPT IN PRINCIPLE.

See comment #191

Cl 141 SC 141.7.13 P46 L27 # 222
 Harstead, Ed Nokia

Comment Type TR Comment Status A ton definitions

Wrong value for Ton.

SuggestedRemedy

Per May 2018 Motion 5, Ton value is less than 128 ns

Response Response Status C

ACCEPT IN PRINCIPLE.

See comment #191

Cl 141 SC 141.7.13 P46 L27 # 250
 Lee, HH ETRI

Comment Type TR Comment Status A ton definitions

Motion#5 in Pittsburgh meeting:
 - Change Ton and Toff maximum values from 512 ns to 128 ns.

SuggestedRemedy

change 521 ns to 128 ns.

Response Response Status C

ACCEPT IN PRINCIPLE.

See comment #191

Cl 141 SC 141.7.13 P46 L32 # 251
 Lee, HH ETRI

Comment Type TR Comment Status A ton definitions

Motion#5 in Pittsburgh meeting:
 - Change Ton and Toff maximum values from 512 ns to 128 ns.

SuggestedRemedy

change 521 ns to 128 ns.

Response Response Status C

ACCEPT IN PRINCIPLE.

See comment #191

Cl 141 SC 141.7.13 P46 L32 # 241
 Harstead, Ed Nokia

Comment Type TR Comment Status R ton definitions

Max values for Ton, Toff, Tcdr and Treceiver_settling are indicated, but upstream bandwidth efficiency will be improved if vendors do more than just meet the max values, and signific antly reduce them. Encouragement should be provided with an explanation of why.

SuggestedRemedy

Add informative note: "Vendors are encouraged to not only meet the maximum specified values for Ton, Toff, Tcdr and Treceiver_settling, but to minimize these values as far as possible without adding significant cost. This will improve upstream bandwidth efficiency".

Response Response Status C

REJECT.

The proposed note does not add anything - any values specified as maximum values may be minimized.

Approved Responses

Specifications and Management Parameters for 25Gb/s, 50Gb/s, and 100Gb/s Passive Optical Networks 2r

CI 141 SC 141.7.13 P46 L32 # 223
 Harstead, Ed Nokia
 Comment Type TR Comment Status A ton definitions
 Wrong value for Toff.
 SuggestedRemedy
 Per May 2018 Motion 5, Toff value is less than 128 ns
 Response Response Status C
 ACCEPT IN PRINCIPLE.
 See comment #191

CI 141 SC 141.7.14.2 P47 L3 # 322
 Remein, Duane Huawei
 Comment Type T Comment Status A
 There are several issues with this figure.
 1) the method of introducing the variable link loss is unspecified and should be done via a optical attenuator to eliminate excessive delays due to fiber, which are not accounted for in the description.
 2) there are no limits place on the fiber length, which could adversely affect the measurement given the description which assumes that TP6 and TP7 are relatively close.
 3) there is a stray double sided arrow at ~line 19.
 SuggestedRemedy
 1) change "Variable link loss" to "variable optical attenuator"
 2) Add a note "All fiber segments are patch cords between 1 and 5 meters in length"
 3) strike the stray arrowed line.
 Response Response Status C
 ACCEPT IN PRINCIPLE.
 1) nothing prevents the use of a long fiber - it is immaterial to the nature of the test how the variable link attenuation is implemented
 2) imposing the distance limitations for a test intended to verify receiver settlign is unnecessary - receiver will settle the same way at 10m and 1000m of fiber
 3) stray arrow will be deleted

CI 141 SC 141.7.14.2 P47 L33 # 323
 Remein, Duane Huawei
 Comment Type T Comment Status A
 The figure is the test setup for measuring the parameter, not something else "Figure 141-3 illustrates the test setup for the OLT PMD receiver (upstream) Treceiver_settling time"
 SuggestedRemedy
 Change:
 "Figure 141-3 illustrates the test setup for the OLT PMD receiver (upstream) Treceiver_settling time" to
 "Figure 141-3 illustrates the test setup for measuring the OLT PMD receiver (upstream) Treceiver_settling time"

Response Response Status C
 ACCEPT.

CI 141 SC 141.9 P49 L28 # 416
 Ferretti, Vince Corning
 Comment Type TR Comment Status A post-deadline
 Fiber specification refences are out of date; TF feedback from May meeting suggested removing specific attenuation values and just refencing overall link loss.
 SuggestedRemedy
 Revised section 141.9 to remove specific attenuation values, add lower dispersion limit, update references to ITU-T and IEC specifications
 Response Response Status C
 ACCEPT IN PRINCIPLE.
 Remove Cable attenuation (max) and associated footnote from Table 141-15. Update all references per Ferretti_3ca_1a_0718.pdf.
 Insert Editor's Note: This subclause needs more detailed technical review to make sure it covers all use cases.

Approved Responses Specifications and Management Parameters for 25Gb/s, 50Gb/s, and 100Gb/s Passive Optical Networks 2r

Cl 141 SC 141.9.3 P50 L32 # 252
 Lee, HH ETRI
 Comment Type TR Comment Status A
 ITU-T G.671. am1 is superseded to ITU-T G.671 (2/12).
 SuggestedRemedy
 change ITU-T G.671. am1 to ITU-T G.671 (02/12).
 Response Response Status C
 ACCEPT IN PRINCIPLE.
 Changed type from E to T
 See comment #416.

Cl 142 SC 142.1 P54 L8 # 193
 Hajduczenia, Marek Charter Communicatio
 Comment Type T Comment Status D bucket
 "used with {NG-EPON type} point-to-multipoint (P2MP) networks" - we need proper replacement after PMD naming discussion in May 2018
 SuggestedRemedy
 Change "used with {NG-EPON type} point-to-multipoint (P2MP) networks" to "used with Nx25G-EPON point-to-multipoint (P2MP) networks"
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 142 SC 142.1 P54 L8 # 324
 Remein, Duane Huawei
 Comment Type E Comment Status D bucket
 Replace {NG-EPON type}
 SuggestedRemedy
 change to: Nx25G-EPON
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 142 SC 142.2 P54 L11 # 325
 Remein, Duane Huawei
 Comment Type T Comment Status D
 Dual Rate PCS
 Rather than create two PCS clauses for Nx25G-EPON, one for 25G and another, nearly identical at 10G we should structure this clause to handle both rates.
 Numerous comments submitted will be towards that end, all begin with the tag "Dual Rate PCS" for easy identification.
 SuggestedRemedy
 Add the following text to the end of this section:
 "In this clause the term xGMII is used to refer to both the 25GMII and the XGMII interfaces."
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 142 SC 142.2.1 P54 L31 # 326
 Remein, Duane Huawei
 Comment Type T Comment Status D 142.2.1
 Dual Rate PCS
 Change :
 "This subclause defines the PCS {NG-EPON type} supporting burst mode operation over the P2MP medium. The {NG-EPON type, symmetric} PCS is specified to support {NG-EPON types}, where both the receive and transmit paths operate at multiples of 25.78125 Gb/s rate. The {NG-EPON type, asymmetric} PCS supports {NG-EPON types}, in which OLT transmit path and ONU receive path operate at 25.78125 Gb/s, while the ONU transmit path and the OLT receive path operate at 10.3125 Gb/s rate. Figure XXX and Figure XXX show the relationship between the PCS sublayer and the ISO/IEC OSI reference model.
 The PCS functional block diagram is shown in 0."
 SuggestedRemedy
 To :
 "This subclause defines the Nx25G-EPON PCS supporting continuous or burst mode operation over the P2MP medium. For symmetric versions of Nx25G-EPON the PCS is specified to support receive and transmit paths both operating at the same number and type of xGMII. For asymmetric versions of Nx25G-EPON the PCS supports channel rate asymmetry, channel number asymmetry or a combination of both channel rate and channel number asymmetry. The PCS supports xGMII rates of 25.78125 Gb/s and 10.3125 Gb/s. Figure 142-1 shows the relationship between the PCS sublayer and the ISO/IEC OSI reference model.
 The PCS functional block diagram is shown in Figure 142-2."
 Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.
 See comment #194

Cl 142 SC 142.2.1 P54 L32 # 194
Hajduczenia, Marek Charter Communicatio

Comment Type T Comment Status D 142.2.1
Text of overview needs an update

SuggestedRemedy

Use the following text:

This subclause defines the Nx25G-EPON PCS supporting burst mode operation over the P2MP medium. The Nx25G-EPON PCS is specified to support PQ-type PMDs, where
- both the receive and transmit paths operate at the multiples of 25.78125 Gb/s rate (25/25G-EPON, 50/25G-EPON, and 50/50G-EPON), or
- the receive path operates at the multiples of 25.78125 Gb/s rate and the transmit path operates at 10.3125 Gb/s (25/10G-EPON and 50/10G-EPON ONU), or
- the transmit path operates at the multiples of 25.78125 Gb/s rate and the receive path operates at 10.3125 Gb/s (25/10G-EPON and 50/10G-EPON OLT).

This subclause also specifies a FEC mechanism to increase the optical link budget or the fiber distance. Figure 142-1 show the relationship between the PCS sublayer and the ISO/IEC OSI reference model. The PCS functional block diagram is shown in 142-2.

Proposed Response Response Status W
PROPOSED ACCEPT.

Cl 142 SC 142.2.2 P54 L52 # 195
Hajduczenia, Marek Charter Communicatio

Comment Type T Comment Status D 142.2.2
Text of PCS transmit function needs an update

SuggestedRemedy

Use the following text:

This subclause defines the transmit direction of the Nx25G-EPON PCS. In the OLT, the PCS transmit function operates in a continuous mode at the multiples of 25.78125 Gb/s rate. In the ONU, the PCS transmit function operates in burst mode at the multiples of 25.78125 Gb/s rate (25/25G-EPON, 50/25G-EPON, and 50/50G-EPON) or at 10.3125 Gb/s rate (25/10G-EPON and 50/10G-EPON). The PCS transmit function includes a mandatory LDPC FEC encoder. The functional block diagram for the PCS transmit function is shown in 141-2. The PCS transmit function consists of the following functional blocks:

Proposed Response Response Status W
PROPOSED ACCEPT.

Cl 142 SC 142.2.2 P54 L53 # 327
Remein, Duane Huawei

Comment Type E Comment Status D 142.2.2
remove {NG-EPON type}

SuggestedRemedy

Change from :

"This subclause defines the transmit direction of the PCS for {NG-EPON type}." to:

"This subclause defines the transmit direction of the Nx25G-EPON PCS.

Proposed Response Response Status W
PROPOSED ACCEPT IN PRINCIPLE.

See comment #195

Cl 142 SC 142.2.2 P55 L1 # 328
Remein, Duane Huawei

Comment Type T Comment Status D 142.2.2
Dual Rate PCS
Remove {NG-EPON type, symmetric} and {NG-EPON type, asymmetric}

SuggestedRemedy

Change from:

"This subclause defines the transmit direction of the Nx25G-EPON PCS. In the OLT, the PCS transmit function operates at a 25.78125 Gb/s rate, as specified herein ({NG-EPON type, symmetric}), or at a {TBD} Gb/s rate, as specified in {TBD} ({NG-EPON type, asymmetric}). For all {NG-EPON type}, the ONU PCS operates in a burst mode in the transmit direction. The PCS includes a mandatory LDPC FEC encoder. The functional block diagram for the PCS transmit function is shown in 0. The transmit function consists of the following functional blocks." to:

"This subclause defines the transmit direction of the Nx25G-EPON PCS. In the OLT, the PCS transmit function operates at a 25.78125 Gb/s rate in a continuous mode. In the ONU, the PCS transmit function operates in a burst mode at a rate of either 25.78125 Gb/s or 10.3125 Gb/s rate depending on the type of PMD. The PCS includes an LDPC FEC encoder which is mandatory for operation at the 25.78125 Gb/s rate."

Proposed Response Response Status W
PROPOSED ACCEPT IN PRINCIPLE.

See comment #195

CI 142 SC 142.2.2 P56 L6 # 329
 Remein, Duane Huawei

Comment Type T Comment Status D

Fix this (there is not Tx/Enc block, Data Det block or scrambler):

- Transmit/Encode block (see 142.2.2.1),
- Data Detect block (ONU only, see 142.2.2.7),
- 64B/66B to 256B/257B Transcoder (see 142.2.2.1.3),
- Scrambler (see 142.2.2.8),
- FEC Encoder (see 142.2.2.9), and
- Gear Box (see 142.2.2.10)."

SuggestedRemedy

Change to:

"The transmit function consists of the following functional blocks. A PCS Input block (see 142.2.2.1) which includes the 64B/66B encoder, 64B/66B to 256B/257B Transcoder functions. The PCS Input block also feeds data to the FEC Encoder function. A PCS Framing block (see 142.2.2.2) which identifies and adds framing information to the data stream. A PCS Transmit block (see 142.2.2.3) which multiplexes the FEC Parity into the data stream. Lastly the PCS includes a Gearbox block (see 142.2.2.10) which converts the data stream to the format expected by the PMA sublayer."

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Change the list on page 56, lines 7-12 to read:

- PCS Input (see 142.2.2.1),
- PCS Framing (see 142.2.2.2),
- PCS Transmit (see 142.2.2.3), and
- Gearbox (see 142.2.2.10).

There is no need to provide summary description of each function where it is described in more detail in each and every subclause

CI 142 SC 142.2.2.1 P56 L51 # 330
 Remein, Duane Huawei

Comment Type T Comment Status D

Dual Rate PCS

Corrected wording for the paragraph beginning "The Transmit/Encode functional block, which no longer exists."

SuggestedRemedy

Replace paragraph with:

The PCS Input functional block accepts two consecutive 36-bit transfers from the 25GMII (or XGMII in the case of a 10 Gb/s) interface and converts them into a single 72-bit tx_raw vector. The Input block discards all RATE_ADJ_EQs to allow for insertion of FEC parity block by the Output process (See 142.x.x). IBI_EQs not required to complete a 256B/257B block at the end of a transmission are also discarded at the Input block. All other 72-bit vectors are encoded into a single 64B/66B block. Four 64B/66B blocks are accumulated and transcoded into a single scrambled 256B/257B block and copied to the FEC Encoder. A single bit indicating the accompanying 256B/257B vector has been scrambled is appended to the vector which is then stored in the INPUT_FIFO.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Replace paragraph with:

The PCS Input functional block accepts two consecutive 36-bit transfers from the xGMII interface and converts them into a single 72-bit tx_raw vector. The Input block discards all RATE_ADJ_EQs to allow for insertion of FEC parity block by the Output process (see TBD 142.x.x). IBI_EQs not required to complete a 256B/257B block at the end of a transmission are also discarded at the Input block. All other 72-bit vectors are encoded into a single 64B/66B block. Four 64B/66B blocks are accumulated and transcoded into a single scrambled 256B/257B block and copied to the FEC Encoder. A single bit indicating the accompanying 256B/257B vector has been scrambled is appended to the vector which is then stored in the INPUT_FIFO.

CI 142 SC 142.2.2.1.1 P57 L5 # 331
 Remein, Duane Huawei

Comment Type E Comment Status D

What is a 25BGASE?

bucket

SuggestedRemedy

Change "25BGASE-PR" to "Nx25G-EPON"

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 142 SC 142.2.2.1.1 P57 L7 # 196
 Hajduczenia, Marek Charter Communicatio
 Comment Type E Comment Status D bucket
 HEX representation: a-f symbols are written now in lower caps or upper caps, with no consistency
 SuggestedRemedy
 Suggest to use all upper caps in hex numbers, less : "0x" designator indicating hex value Base standard seems to be inconsistent in thus respect today
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 142 SC 142.2.2.1.2 P57 L13 # 198
 Hajduczenia, Marek Charter Communicatio
 Comment Type T Comment Status D
 Multiple references to "25GBASE-PR PCS"
 SuggestedRemedy
 Change globally to "Nx25G-EPON PCS" to designate PCS defined in Clause 142
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 142 SC 142.2.2.1.2 P57 L13 # 197
 Hajduczenia, Marek Charter Communicatio
 Comment Type T Comment Status D bucket
 Multiple references to "25GBASE-PR"
 SuggestedRemedy
 Change globally to "25GBASE-PQ" since PQ is the proper designator for new 256/257 bit coding, less all occurrences of "25GBASE-PR PCS"
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 142 SC 142.2.2.1.2 P57 L14 # 332
 Remein, Duane Huawei
 Comment Type T Comment Status D
 Dual Rate PCS
 Why is this statement pertinent? "The 10GBASE-R PCS encodes each of the other control characters into a 7-bit C code."
 The two para in this section which both ref to Table 142-1 can be combined and applied to both 25GMII and 10GMII.
 SuggestedRemedy
 Change the section to read:
 "The control characters and their mappings to Nx25G-EPON control codes are specified in Table 142-1. The representations of the control characters are the control codes. Control characters are transferred over the xGMII as an 8-bit value. The Nx25G-EPON PCS encodes the start and terminate control characters implicitly using the block type field. The Nx25G-EPON PCS does not encode the ordered set control codes. All control code values that do not appear in the table shall not be transmitted and are treated as an error if received."
 Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.

Change the section to read:
 "The control characters and their mappings to Nx25G-EPON control codes are specified in Table 142-1. The representations of the control characters are the control codes. Control characters are transferred over the xGMII as an 8-bit value. The Nx25G-EPON PCS encodes the start and terminate control characters implicitly using the block type field. The Nx25G-EPON PCS does not encode the ordered set control codes. All control code values that do not appear in Table 142-1 shall not be transmitted and are treated as an error if received."

Questions to be answered:
 -is error indication a requirement (if so, needs a separate SHALL statement)

Cl 142 SC 142.2.2.1.2 P57 L14 # 202
 Hajduczenia, Marek Charter Communicatio
 Comment Type T Comment Status D
 Information out of context "The 10GBASE-R PCS encodes each of the other control characters into a 7-bit C code."
 SuggestedRemedy
 Strike this sentence, we do not reuse anything from 10GBASE-R
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Approved Responses

Specifications and Management Parameters for 25Gb/s, 50Gb/s, and 100Gb/s Passive Optical Networks 2r

Cl 142 SC 142.2.2.1.2 P57 L22 # 333
 Remein, Duane Huawei
 Comment Type T Comment Status D
 Table 142-1 need several updates.
 SuggestedRemedy
 Replace "Parity Placeholder" and "/P/" with "Rate Adjust" and "/RA/" on row 3 resp.
 Add new row 4 to read: "InterBurst Idle", "/IBI/", "0x09", "0x09"
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 142 SC 142.2.2.2 P57 L1 # 408
 Hajduczenia, Marek Charter Communicatio
 Comment Type TR Comment Status D
 No definition of upstream burst structure
 SuggestedRemedy
 Use hajduczenia_3ca_3_0718.pdf for text and drawing of the upstream burst structure
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 142 SC 142.2.2.1.2 P57 L22 # 334
 Remein, Duane Huawei
 Comment Type T Comment Status D
 Dual Rate PCS
 The table should apply to both 25G and 10G MIIs
 SuggestedRemedy
 Change headers from "25GMII ..." to "xGMII ..."
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 142 SC 142.2.2.1.3 P57 L36 # 335
 Remein, Duane Huawei
 Comment Type T Comment Status D
 The transcoder no longer passed anything to the scrambler block which no longer exists.
 SuggestedRemedy
 Change the section to read:
 "The 64B/66B to 256B/257B transcoder converts four consecutive 64B/66B blocks the into one scrambled 256B/257B block as described in 91.5.2.5."
 Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.
 Per comment
 Question: do we need to rename the transcover to transceiver/scrambler now that it really does both functions?

CI 142 SC 142.2.2.2 P57 L40 # 336
 Remein, Duane Huawei

Comment Type T Comment Status D

Text to replace 142.2.2.2

SuggestedRemedy

142.2.2.2 PCS Framer

The PCS Framer process monitors data from the INPUT_FIFO and transfers it to the TX_FIFO, inserting inter-burst idle (IBI), start of burst synchronization pattern (SP), parity placeholders (PAR_PLACEHLDR), and end of burst delimiter (EBD) as appropriate. While the INPUT_FIFO is empty the PCS Framer process appends IBI to the TX_FIFO. When the INPUT_FIFO first becomes not empty, indicating the beginning of a burst, the SP is appended to the TX_FIFO. Once the complete SP is appended to the TX_FIFO the input process begins transferring data from the INPUT_FIFO to the TX_FIFO. When sufficient data for a full FEC information codeword has been transferred to the TX_FIFO, or the end of the burst is detected as indicated by an empty INPUT_FIFO, the PCS Framer process appends sufficient PAR_PLACEHLDR blocks to the TX_FIFO to allow insertion of the FEC parity codeword into the data stream by the PCS Transmit process. Additional FEC codewords are allowed for until the end of the transmission is indicated by an empty INPUT_FIFO, at which point the PCS Framer appends the EDB to the TX_FIFO followed by IBI.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

142.2.2.2 PCS Framer

The PCS Framer process monitors data from the INPUT_FIFO and transfers it to the TX_FIFO, inserting inter-burst idle (IBI), start of burst delimiter (SBD), parity placeholders (PAR_PLACEHLDR), and end of burst delimiter (EBD) as appropriate. While the INPUT_FIFO is empty the PCS Framer process appends IBI to the TX_FIFO. When the INPUT_FIFO first becomes not empty, indicating the beginning of a burst, the SP is appended to the TX_FIFO. Once the complete SBD is appended to the TX_FIFO the input process begins transferring data from the INPUT_FIFO to the TX_FIFO. When sufficient data for a full FEC codeword has been transferred to the TX_FIFO, or the end of the burst is detected as indicated by an empty INPUT_FIFO, the PCS Framer process appends sufficient PAR_PLACEHLDR blocks to the TX_FIFO to allow insertion of the FEC parity codeword into the data stream by the PCS Transmit process. Additional FEC codewords are allowed for until the end of the transmission is indicated by an empty INPUT_FIFO, at which point the PCS Framer appends the EDB to the TX_FIFO followed by IBI.

Fixes:

- stray spaces
- INPUR... should be INPUT
- start of burst delimiter (SBD)
- renamed FEC information codeword to FEC codeword (

CI 142 SC 142.2.2.2 P57 L40 # 203
 Hajduczenia, Marek Charter Communicatio

Comment Type E Comment Status D bucket

Empty sections

SuggestedRemedy

Add {TBD} statements to the following sections: 142.2.2.2, 142.2.2.3, 142.2.2.4, 142.2.2.5

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

See comment #336, #337, #338

CI 142 SC 142.2.2.2 P57 L42 # 337
 Remein, Duane Huawei

Comment Type T Comment Status D

Text to replace 142.2.2.3

SuggestedRemedy

The PCS Transmit process transfers data from the TX_FIFO or FEC Encoder to the Gearbox functional block.

On each transition of the CLK_OUT to true the Transmit process retrieves one 258-bit block of data from the TX-FIFO. If the retrieved 258-bit block is SP[0] and Transmitting is false, indicating the beginning of a transmission, the PMA_SIGNAL.request is set to true indicating that the laser should be turned on, and the lower 257-bits of the 258-bit block are sent to the Gearbox. If the retrieved 258-bit block is EDB and Transmitting is true, indicating the end of a transmission, the PMA_SIGNAL.request is set to false indicating that the laser should be turned off, and the lower 257-bits of the 258-bit block are sent to the Gearbox. If the retrieved 258-bit block is PAR_PLACEHLDR, indicating a FEC parity codeword should be inserted in the data stream, 257-bits of the parity are retrieved from the FEC engine and sent to the Gearbox. In all other cases, i.e., normal transmission data, the lower 257-bits of the 258-bit block retrieved from the TX_FIFO are sent to the Gearbox.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

The PCS Transmit process transfers data from the TX_FIFO or FEC Encoder to the Gearbox.

On each transition of the CLK_OUT to True the Transmit process retrieves one 258-bit block of data from the TX-FIFO. If the retrieved 258-bit block is SP[0] and Transmitting is False, indicating the beginning of a transmission, the PMA_SIGNAL.request is set to true indicating that the laser needs to be turned on, and the lower 257-bits of the 258-bit block are sent to the Gearbox. If the retrieved 258-bit block is EDB and Transmitting is true, indicating the end of a transmission, the PMA_SIGNAL.request is set to False indicating that the laser needs to be turned off, and the lower 257-bits of the 258-bit block are sent to the Gearbox. If the retrieved 258-bit block is PAR_PLACEHLDR, indicating a FEC parity codeword needs to be inserted in the data stream, 257-bits of the parity are retrieved from the FEC engine and sent to the Gearbox. In all other cases, i.e., normal transmission data, the lower 257-bits of the 258-bit block retrieved from the TX_FIFO are sent to the Gearbox.

Changes

- stray spaces
- true > True for consistency
- false > False for consistency
- removed "functional block" from Gearbox
- replaced "should" with "needs", since it is not intended to be an optional requirement

Questions

- unclear what "lower 257 bits" are and whether it is clear enough

CI 142 SC 142.2.2.4 P57 L44 # 338
 Remein, Duane Huawei

Comment Type E Comment Status D bucket

Remove 142.2.2.4 FEC Encoding and 142.2.2.5 Gearbox as these are duplicates of 142.2.2.9 & 142.2.2.10

SuggestedRemedy

Per comment

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 142 SC 142.2.2.6 P57 L48 # 339
 Remein, Duane Huawei

Comment Type E Comment Status D

Change "142.2.2.6 PCS Transmit" to "142.2.2.6 PCS Transmission path" to avoid confusion with 142.2.2.3

SuggestedRemedy

Per comment

Proposed Response Response Status W

PROPOSED REJECT.

The name matches the name in Figure 142–2—PCS Functional Block Diagram

CI 142 SC 142.2.2.6.1 P48 L4 # 410
 Laubach, Mark Broadcom

Comment Type T Comment Status D

Modify to refelect PCS state diagrams adopted at the last meeting.

SuggestedRemedy

Insert new constant into 142.2.2.6.1 Constants in alphabetical order:

"CD

TYPE: 10-bit integer

Value: 0x3CA

The CD is used for code word alignment synchronization."

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

"CD

TYPE: 10-bit integer

Value: 0x3CA

The constant is used for codeword alignment synchronization."

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Cl 142 SC 142.2.2.6.1 P58 L35 # 340
 Remein, Duane Huawei
 Comment Type T Comment Status D bucket
 There are numerous references to "Transmit Process" in the draft, some refer to MPRS others to PCS. We should be specific.
 SuggestedRemedy
 "PCS Input Process" at: 58 line 35 is correct. Use "MPRS Input Process" everywhere else.
 Proposed Response Response Status W
 PROPOSED ACCEPT.
 Comemnt type changed from E to T

Cl 142 SC 142.2.2.6.1 P58 L37 # 341
 Remein, Duane Huawei
 Comment Type E Comment Status D
 Remove the Editors note
 SuggestedRemedy
 Per comment
 Proposed Response Response Status W
 PROPOSED REJECT.
 Removing the comment while keeping in overlappign variables is hardly a resolution of the problem at hand.

Cl 142 SC 142.2.2.6.2 P58 L45 # 411
 Laubach, Mark Broadcom
 Comment Type T Comment Status D
 Modify to refelect PCS state diagrams adopted at the last meeting.
 SuggestedRemedy
 Insert new variable into 142.2.2.6.2 Variables in alphabetical order:
 "PARITY_STAGING_BUFFER[]
 TYPE: array of 2570 bits.
 The PARITY_STAGING_BUFFER holds the 2560-bit calculated parity value along with the 10-bit CD value (see 142.2.2.9.1). The total size of 2570 bits aligns represents the same size as ten 257-bit line encoding blocks."
 Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.
 "PARITY_STAGING_BUFFER[]
 TYPE: array of 2570 bits
 This variable holds the 2560-bit calculated parity value along with the 10-bit CD value (see 142.2.2.9.1). The total size of 2570 bits holds ten 257-bit long blocks."
 Changes: simplified wording, removed spare "."

Cl 142 SC 142.2.2.6.2 P58 L49 # 342
 Remein, Duane Huawei
 Comment Type T Comment Status D
 Dual Rate PCS
 Change "25GMII clock" to "xGMII clock"
 SuggestedRemedy
 Per comment
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 142 SC 142.2.2.6.2 P60 L18 # 343
 Remein, Duane Huawei
 Comment Type E Comment Status D bucket
 There are numerous references to "Input Process" in the draft, some refer to MPRS others to PCS. We should be specific.
 SuggestedRemedy
 Use "PCS Input Process" at: pg/line, 60/18 and "MPRS Input Process" everywhere else (as is done at pg 102 line 4).
 Proposed Response Response Status W
 PROPOSED ACCEPT.
 Changed type from E to T

Cl 142 SC 142.2.2.6.3 P60 L31 # 412
 Laubach, Mark Broadcom
 Comment Type T Comment Status D
 Modify to refelect PCS state diagrams adopted at the last meeting.
 SuggestedRemedy
 Insert new function into 142.2.2.6.3 Functions in alphabetical order:
 "FecParity()
 The first call to this function returns a vector containing the first 257 bits from the PARITY_STAGING_BUFFER, i.e. PARITY_STAGING_BUFFER<256:0>. Each subsequent call increments the indexes by 257 and returning a vector with the next 257 bits in the buffer. On the 10th call the last 257 bits are returned, i.e. PARITY_STAGING_BUFFER<2569:2312>, and the function resets to return PARITY_STAGING_BUFFER<256:0> on the next call. This emulates a circular buffer of size 10 by 257-bits."
 Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.
 "FecParity()
 Upon initiation, the first call to this function returns a vector containing the first 257 bits from the PARITY_STAGING_BUFFER, i.e. PARITY_STAGING_BUFFER<256:0>. Each subsequent call returns the subsequent 257 bits from the buffer. On the 10th call, the last 257 bits are returned, i.e. PARITY_STAGING_BUFFER<2569:2312>, and the function resets to return PARITY_STAGING_BUFFER<256:0> on the next call. This emulates a circular buffer of size 10 x 257-bits."
 Changes: removed implementation details, focusing on behavior only. Removed stray spaces.

Cl 142 SC 142.2.2.6.3 P60 L33 # 344
 Remein, Duane Huawei
 Comment Type T Comment Status D
 What is "FIFO F"?
 SuggestedRemedy
 Change Append(v), Fill(v), GetHead(), and IsEmpty() to F.Append(v), F.Fill(v), F.GetHead(), and F.IsEmpty().
 Proposed Response Response Status W
 PROPOSED REJECT.
 Unclear what these changes are supposed to achieve and what "F." prefix is indtended to mean in this case

Cl 142 SC 142.2.2.6.4 P61 L20 # 345
 Remein, Duane Huawei
 Comment Type E Comment Status D
 Reorder the PCS transmission path state diagrams into their logical order (Input, Frammer, Transmit). Update references.
 SuggestedRemedy
 Per comment
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 142 SC 142.2.2.6.4 P61 L48 # 413
 Laubach, Mark Broadcom
 Comment Type T Comment Status D
 Modify to refelect PCS state diagrams adopted at the last meeting.
 SuggestedRemedy
 Change "FecParity<256:0>" to "FecParity()".
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Approved Responses specifications and Management Parameters for 25Gb/s, 50Gb/s, and 100Gb/s Passive Optical Networks 2r

Cl 142 SC 142.2.2.6.4 P62 L10 # 346
 Remein, Duane Huawei
 Comment Type T Comment Status D
 Figure 142-3 Exit conditions out of NEXT_VECTOR confusing.
 SuggestedRemedy
 Unrotate and place below NEXT_VECTOR not in a joint line with other defined exits (UCT, else).
 Proposed Response Response Status W
 PROPOSED ACCEPT.
 Also, update the Figure number to be 142-6

Cl 142 SC 142.2.2.7 P62 L43 # 347
 Remein, Duane Huawei
 Comment Type E Comment Status D bucket
 Strike 142.2.2.7 Data detector {TBD}, 142.2.2.7.1 Burst Mode operation (ONU only) {TBD}, and 142.2.2.8 Scrambler See 49.2.6.
 SuggestedRemedy
 Per comment
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 142 SC 142.2.2.9 P64 L1 # 204
 Hajduczenia, Marek Charter Communicatio
 Comment Type ER Comment Status D bucket
 FEC encoding for the transmit function is already covered in 142.2.2.4
 SuggestedRemedy
 Move content from 142.2.2.9 to 142.2.2.4 and updated cross references accordingly.
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 142 SC 142.2.2.9 P64 L3 # 205
 Hajduczenia, Marek Charter Communicatio
 Comment Type T Comment Status D
 Overview text needs an update
 SuggestedRemedy
 Change "The {NG-EPON type} PCS shall encode the transmitted data stream using {TBD} FEC." to "The Nx25G-EPON PCS shall encode the transmitted data stream using 3072 x 17664 LDPC FEC, defined in 142.2.2.9.1."
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 142 SC 142.2.2.9.1 P64 L34 # 414
 Laubach, Mark Broadcom
 Comment Type T Comment Status D
 Modify to refelect PCS state diagrams adopted at the last meeting.
 SuggestedRemedy
 Modify the figure to refelect PCS state diagrams adopted at the last meeting. Remove the 1) the circle underneath "K-bit information" on the left side of the figure, 2) remove the shorter arrow between that circle and the "Zero Padding" box and extend the remaining arrow to the same box, 3) remove the down and right arrow and label "K-bit information", and 4) "N-bit FEC codeword" to "Parity Staging Buffer". Up to the Editor to continue using the mux symbol or to replace with a buffer representation.
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 142 SC 142.2.2.9.1 P64 L46 # 415
 Laubach, Mark Broadcom

Comment Type T Comment Status D

Modify to refelect PCS state diagrams adopted at the last meeting.

SuggestedRemedy

Insert new text paragraph after Figure 142-6:

"The LDPC encoder as shown in Figure 142-6 places the M-bit FEC parity bits into the PARITY_STAGING_BUFFER for use by the PCS Transmit process (142.2.2.6) and the FecParity() function. The buffer is comprised of the 2560 bits of calculated parity along with the 10-bit CD (codeword delimiter) constant. This results in the parity bits assigned to PARITY_STAGING_BUFFER<2559:0> and the 10-bit CD value to PARITY_STAGING_BUFFER<2569:2560>. The transmission order starts with bit 0 and ends with bit 2569."

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

"The LDPC encoder as shown in Figure 142-6 places the M-bit FEC parity bits into the PARITY_STAGING_BUFFER for use by the PCS Transmit process (see 142.2.2.6) and the FecParity() function. The buffer is comprised of 2560 bits of calculated parity along with the 10-bit codeword delimiter (CD). This results in the parity bits assigned to PARITY_STAGING_BUFFER<2559:0> and the 10-bit CD value to PARITY_STAGING_BUFFER<2569:2560>. The transmission order starts with bit 0 and ends with bit 2569."

Cl 142 SC 142.2.2.10 P74 L25 # 348
 Remein, Duane Huawei

Comment Type T Comment Status D

142.2.2.10 Gearbox
 text to replace "{TBD}"

Note in this proposed change I've suggested a 16-bit interface between the PCS and PMA. This could also be a 1-bit interface as defined in 105.4.1 Inter-sublayer service interface. We would need to allow for both the 25.78125 and the 10.312 rates as 105.4 only allows for 25G rate. Also we might need to adopt the cl 105 nomenclature of IS_UNITDATA.request, IS_UNITDATA.indication, and IS_SIGNAL.indication. I could not find a definition of an IS_SIGNAL.request as we use in PON.

SuggestedRemedy

Replace with:

"The gearbox adapts between the 257-bit width of the PCS blocks and the 16-bit width of the PMA interface. It receives the 257-bit blocks. When the transmit channel is operating in normal mode, the gearbox sends 16 bits of transmit data at a time via the PMA_UNITDATA.request primitive. The primitive is fully packed with bits. The bits shall be packed into the tx_data-group in sequence with the lowest numbered bit of the block going into the lowest numbered bit of the part of tx_data-group<15:0> bits containing bits from that block (see {equivalent to Figure 49–5}). The internal data-path width between the PCS and PMA is an implementation choice. Depending on the path width, the gearbox functionality may not be necessary."

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Replace with:

"The gearbox adapts between the 257-bit width of the PCS blocks and the 16-bit width of the PMA interface. It receives the 257-bit blocks. When the transmit channel is operating in the normal mode, the gearbox sends 16 bits of transmit data at a time via the PMA_UNITDATA.request primitive. The primitive is fully packed with bits. The bits shall be packed into the tx_data-group in sequence with the lowest numbered bit of the block going into the lowest numbered bit of the part of tx_data-group<15:0> bits containing bits from that block (see TBD {equivalent to Figure 49–5}). The internal data-path width between the PCS and PMA is an implementation choice. "

Questions:

- what is "fully packed primitive"
- what is "normal mode" for transmit channel?

Removed implementation dependent statement "Depending on the path width, the gearbox functionality may not be necessary."

Cl 142 SC 142.2.3 P74 L38 # 349
 Remein, Duane Huawei
 Comment Type T Comment Status D
 We no longer require a separate descrambler
 SuggestedRemedy
 strike "— Descrambler (see 142.2.3.5),"
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 142 SC 142.2.3.2.4 P76 L23 # 406
 Kramer, Glen Broadcom
 Comment Type T Comment Status D
 Motion 10 at the last meeting accepted FEC delimiter match with the Hamming distance of 0 (i.e., an exact match). This allows the SD to be simplified and not use Compare function and Match variable. Also, by convention, constants should be shown in all caps. FecDecodeFail and FecDecodeSuccess are two dependent variables -- we can just use a single boolean instead of these two. Typo in FEC_CW_SIZE constant.
 SuggestedRemedy
 Replace the synchronization state diagram in figure 142-14 with the state diagram shown in kramer_3ca_8_0718.pdf
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 142 SC 142.2.3.2.4 P76 L23 # 350
 Remein, Duane Huawei
 Comment Type T Comment Status D
 I believe the figure is 142-14
 SuggestedRemedy
 Change "Figure 76–20" to "Figure 142-14" and remove red highlight.
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 142 SC 142.2.3.2.4 P76 L50 # 351
 Remein, Duane Huawei
 Comment Type T Comment Status D
 Correctly name Figure 142-14
 SuggestedRemedy
 Change to "Synchronizer state diagram"
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 142 SC 142.2.3.5 P77 L9 # 352
 Remein, Duane Huawei
 Comment Type T Comment Status D
 Remove 142.2.3.5 Descrambler
 See 49.2.10.
 This is done in the transcoder now.
 SuggestedRemedy
 Per comment
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 142 SC 142.2.3.6 P77 L14 # 353
 Remein, Duane Huawei
 Comment Type T Comment Status D
 142.2.3.6 256B/257B to 64B/66B transcoder description is in error.
 SuggestedRemedy
 Change section text to read:
 The 256B/257B to 64B/66B transcoder converts one scrambled 256B/257B block received from the PCS Deframer functional block into four consecutive 64B/66B blocks as described in 91.5.3.5 and returns the result to the Output functional block.
 Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.

Change section text to read:
 The 256B/257B to 64B/66B transcoder converts one scrambled 256B/257B block received from the PCS Deframer into four consecutive 64B/66B blocks as described in 91.5.3.5 and returns the result to the Output.

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Specifications and Management Parameters for 25Gb/s, 50Gb/s, and 100Gb/s Passive Optical Networks 2r

Cl 142 SC 142.2.3.7 P77 L18 # 354
 Remein, Duane Huawei
 Comment Type T Comment Status D
 142.2.3.7 Receive/Decode no longer exists
 SuggestedRemedy
 Change to "142.2.3.7 64B/66B Decoder"
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 142 SC 142.3 P78 L20 # 355
 Remein, Duane Huawei
 Comment Type E Comment Status D bucket
 This is the Nc25G-EPON PMA
 SuggestedRemedy
 Replace {NG-EPON type} with Nx25G-EPON
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 142 SC 142.3 P78 L21 # 206
 Hajduczenia, Marek Charter Communicatio
 Comment Type T Comment Status D bucket
 Title needs an update
 SuggestedRemedy
 Change to "Nx25G-EPON PMA"
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 143 SC 143 P82 L3 # 356
 Remein, Duane Huawei
 Comment Type T Comment Status D 143 rewrite
 Resolution to Editors note and comment 52 against D1.0.
 SuggestedRemedy
 See remain_3ca_2_0718.pdf. Some figures in this clause are provided in source file remain_3ca_3_0718.fm and pdf version of that source.
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 143 SC 143.1 P82 L17 # 234
 Harstead, Ed Nokia
 Comment Type TR Comment Status D 143 rewrite
 Sentence reads "up to four PHYs requiring up to four 25 Gigabit Media Independent Interfaces".
 SuggestedRemedy
 Replace "four" with up to N=2.
 Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.

Cl 143 SC 143.1 P82 L18 # 394
 Powell, Bill Nokia
 Comment Type TR Comment Status D 143 rewrite
 Current text includes "up to four PHYs requiring up to four 25 Gb/s..."
 SuggestedRemedy
 Change text to read:
 "...inter face with up to N=2 PHYs requiring up to N=2 25 Gigabit Media Independent Interfaces (25GMII)s"
 Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.
 See comment #356

Cl 143 SC 143.2 P82 L8 # 235
 Harstead, Ed Nokia
 Comment Type TR Comment Status D 143 rewrite
 Sentence reads "of up to four 25GMII)s".
 SuggestedRemedy
 Replace "four" with up to N=2.
 Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.
 See comment #356

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Cl 143 SC 143.2 P82 L48 # 395
 Powell, Bill Nokia
 Comment Type **TR** Comment Status **D** 143 rewrite
 Point "b)" still includes "four" describing 25GMII PHYs
SuggestedRemedy
 Change point "b)" to read:
 "The MPRS converts between the MAC serial data stream and the parallel data paths of up to N=2 25GMII's servicing separate PHYs."
 Proposed Response Response Status **W**
 PROPOSED ACCEPT IN PRINCIPLE.
 See comment #356

Cl 143 SC 143.2 P84 L54 # 357
 Remein, Duane Huawei
 Comment Type **E** Comment Status **D** 143 rewrite
 item "e)" gets lost.
SuggestedRemedy
 Insert a line feed or new line to ensure this text starts on the next page. Might increase the size of the fig so no text can occupy the same page.
 Proposed Response Response Status **W**
 PROPOSED ACCEPT IN PRINCIPLE.
 See comment #356

Cl 143 SC 143.2.2 P85 L1 # 390
 Powell, Bill Nokia
 Comment Type **TR** Comment Status **D** Clause 143 rewrite
 Title of CL 143.2.2 still includes 100 Gb/s
SuggestedRemedy
 Change title of CL 143.2.2 to:
 "25 Gb/s and 50 Gb/s operation over P2MP media"
 Proposed Response Response Status **W**
 PROPOSED ACCEPT IN PRINCIPLE.
 Wrong reference: was 142.2.2, should be 143.2.2 (fixed)

Cl 143 SC 143.2.2 P85 L1 # 358
 Remein, Duane Huawei
 Comment Type **T** Comment Status **D** 143 rewrite
 "25 Gb/s, 50 Gb/s, and 100 Gb/s operation over P2MP media". Will "this clause" also address 10G?
SuggestedRemedy
 Add "10 Gb/s," to this list (2x). In the para below the clause title add "For additional details on operation at 10 Gb/s see 143.5.xxx."
 Proposed Response Response Status **W**
 PROPOSED ACCEPT IN PRINCIPLE.
 See comment #356

Cl 143 SC 143.2.2.1 P85 L13 # 236
 Harstead, Ed Nokia
 Comment Type **TR** Comment Status **D** 143 rewrite
 Sentence reads "all four MPRS channels".
SuggestedRemedy
 Replace "four" with up to N=2.
 Proposed Response Response Status **W**
 PROPOSED ACCEPT IN PRINCIPLE.
 See comment #356

Cl 143 SC 143.2.2.1 P85 L15 # 396
 Powell, Bill Nokia
 Comment Type **TR** Comment Status **D** 143 rewrite
 Lines 15-16 contain a sentence that should be dropped that mentions four channels and 100 Gb/s.
SuggestedRemedy
 Delete the sentence reading:
 "An implementation containing all four channels supports 25 Gb/s, 50 Gb/s, and 100 Gb/s MAC data rates."
 Proposed Response Response Status **W**
 PROPOSED ACCEPT IN PRINCIPLE.
 See comment #356

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Cl 143 SC 143.2.2.1 P85 L21 # 391
 Powell, Bill Nokia
 Comment Type TR Comment Status D 143 rewrite
 Several rows of table 143-1 still include 100 Gb/s
 SuggestedRemedy
 DC1 Row - Drop "and 100 Gb/s" from Col.3
 DC2/DC3 Rows - Drop "at 100 Gb/s" from Col.3
 UC1 Row - Drop "and 100 Gb/s" from Col.3
 UC2/UC3 Rows - Drop "at 100 Gb/s" from Col.3
 Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.
 See comment #356

Cl 143 SC 143.2.3.1 P86 L7 # 359
 Remein, Duane Huawei
 Comment Type T Comment Status D 143 rewrite
 While true(ish) the following statement is incomplete. "Within the PCS, each EQ is converted into a single 66-bit block, according to the 64B/66B encoding rules (see 142.2.2.9)." Why does the MPRS need to describe the details of the PCS?
 SuggestedRemedy
 Strike the sentence.
 Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.
 See comment #356

Cl 143 SC 143.2.3.1 P86 L13 # 216
 Doo, Kyeonghwan ETRI
 Comment Type ER Comment Status D 143 rewrite
 Replace "25XGMII transfer" in Figure 143-2 with "25GMII"
 SuggestedRemedy
 Change "25XGMII" to "25GMII"
 Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.
 See comment #356

Cl 143 SC 143.2.3.3 P86 L42 # 217
 Doo, Kyeonghwan ETRI
 Comment Type E Comment Status D 143 rewrite
 Replace "see Figure 143-5" with "see Figure 143-3"
 SuggestedRemedy
 Change "143-5" to "143-3"
 Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.
 See comment #356

Cl 143 SC 143.2.4 P88 L36 # 237
 Harstead, Ed Nokia
 Comment Type TR Comment Status D 143 rewrite
 Sentence reads "all four MPRS channels".
 SuggestedRemedy
 Replace "four" with up to N=2.
 Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.
 See comment #356

Cl 143 SC 143.2.4 P88 L46 # 229
 Harstead, Ed Nokia
 Comment Type TR Comment Status D 143 rewrite
 Sentence includes "100 Gb/s" and mentions "four MPRS channels."
 SuggestedRemedy
 remove "100 Gb/s" and "four MPRS channels."
 Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.
 See comment #356

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Cl 143 **SC 143.2.4** **P88** **L46** # **238**
 Harstead, Ed Nokia
Comment Type **TR** **Comment Status** **D** 143 rewrite
 Sentence reads "all four MPRS channels".
SuggestedRemedy
 Replace "four" with up to N=2.
Proposed Response **Response Status** **W**
 PROPOSED ACCEPT IN PRINCIPLE.
 See comment #356

Cl 143 **SC 143.2.2 25** **P85** **L1** # **225**
 Harstead, Ed Nokia
Comment Type **TR** **Comment Status** **D** 143 rewrite
 Title includes "100 Gb/s"
SuggestedRemedy
 remove "100 Gb/s"
Proposed Response **Response Status** **W**
 PROPOSED ACCEPT IN PRINCIPLE.
 See comment #356

Cl 143 **SC 143.2.4.1** **P89** **L1** # **392**
 Powell, Bill Nokia
Comment Type **TR** **Comment Status** **D** 143 rewrite
 Figure 143-6 still includes 4 US channels (UC0-3)
SuggestedRemedy
 Drop UC2 & UC3 lines from figure and change summation of instantaneous data rate at top of figure accordingly.
Proposed Response **Response Status** **W**
 PROPOSED ACCEPT IN PRINCIPLE.
 See comment #356

Cl 143 **SC 143.2.2 25** **P85** **L3** # **226**
 Harstead, Ed Nokia
Comment Type **TR** **Comment Status** **D** 143 rewrite
 Sentence includes "100 Gb/s"
SuggestedRemedy
 remove "100 Gb/s"
Proposed Response **Response Status** **W**
 PROPOSED ACCEPT IN PRINCIPLE.
 See comment #356

Cl 143 **SC 143.2.4.1** **P89** **L29** # **393**
 Powell, Bill Nokia
Comment Type **TR** **Comment Status** **D** 143 rewrite
 Figure 143-7 still includes 4 US channels (UC0-3)
SuggestedRemedy
 Re-draw figure with only UC0 & UC1 lines (drop UC2 & UC3 lines)
Proposed Response **Response Status** **W**
 PROPOSED ACCEPT IN PRINCIPLE.
 See comment #356

Cl 143 **SC 143.2.2 25** **P85** **L16** # **227**
 Harstead, Ed Nokia
Comment Type **TR** **Comment Status** **D** 143 rewrite
 Sentence includes "100 Gb/s" and mentions "four channels."
SuggestedRemedy
 remove "100 Gb/s" and "four channels."
Proposed Response **Response Status** **W**
 PROPOSED ACCEPT IN PRINCIPLE.
 See comment #356

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Cl 143 SC 143.2.2.25 P85 L20 # 228
 Harstead, Ed Nokia
 Comment Type TR Comment Status D 143 rewrite
 Table 143-1 has several mentions of "100 Gb/s"
 SuggestedRemedy
 remove all "100 Gb/s"
 Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.
 See comment #356

Cl 143 SC 143.4.1.1 P93 L45 # 397
 Powell, Bill Nokia
 Comment Type TR Comment Status D 143 rewrite
 Sentence reads "four PLS service interfaces"
 SuggestedRemedy
 Remove "four"
 Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.
 See comment #356

Cl 143 SC 143.4.1 P92 L54 # 239
 Harstead, Ed Nokia
 Comment Type TR Comment Status D 143 rewrite
 Sentence reads "of up to four 25GMIs".
 SuggestedRemedy
 Replace "four" with up to N=2.
 Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.
 See comment #356

Cl 143 SC 143.4.3 P97 L41 # 360
 Remein, Duane Huawei
 Comment Type T Comment Status D 143 rewrite
 in Fig 143-12 TX_FIFO is now ENV_TX
 SuggestedRemedy
 per comment
 Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.
 See comment #356

Cl 143 SC 143.4.1.1 P93 L # 240
 Harstead, Ed Nokia
 Comment Type TR Comment Status D 143 rewrite
 Sentence reads "four PLS service interfaces"
 SuggestedRemedy
 Remove text
 Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.
 See comment #356

Cl 143 SC 143.4.3.2 P98 L16 # 361
 Remein, Duane Huawei
 Comment Type E Comment Status D 143 rewrite
 Assuming "3.1" refers to subclause 3.1 it should be in forest green.
 SuggestedRemedy
 per comment
 Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.
 See comment #356

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Specifications and Management Parameters for 25Gb/s, 50Gb/s, and 100Gb/s Passive Optical Networks 2r

CI 143 SC 143.4.3.3 P98 L18 # 362
 Remein, Duane Huawei
 Comment Type T Comment Status D 143 rewrite
 Missing definitions for IEI_EQ and IBI_EQ
 SuggestedRemedy
 Add entry for IBI_EQ and ref. definition CI 142.
 Add following for IEI_EQ in 143.4.3.3:
 IEI_EQ
 TYPE: 72-bit vector
 Value: 0xF 10 10 10 10
 The IEI_EQ constant indicates that the MPRS is between bursts and there is no envelope being transmitted by the subla
 Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.
 See comment #356

CI 143 SC 143.4.3.3 P98 L33 # 363
 Remein, Duane Huawei
 Comment Type T Comment Status D 143 rewrite
 This definition is incorrect: "The value of an EQ which represents idle space between transmissions."
 SuggestedRemedy
 Change "between" to "within"
 Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.
 See comment #356

CI 143 SC 143.4.3.3 P98 L35 # 364
 Remein, Duane Huawei
 Comment Type T Comment Status D 143 rewrite
 PARITY_PLACEHLDR should be removed here and in 143.4.4.2 pg 104 line 47.
 SuggestedRemedy
 per comment
 Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.
 See comment #356

CI 143 SC 143.4.3.4 P98 L45 # 365
 Remein, Duane Huawei
 Comment Type TR Comment Status D 143 rewrite
 TxActive is not defined
 SuggestedRemedy
 Add the following definition:
 TxActive[ch]
 TYPE: Boolean
 Variable TxActive indicates the transmission status of MPRS channel ch. When TxActive is true, the MPRS channel ch outputs MAC data or Inter Envelope Idle. When TxActive is false, the channel ch onl
 Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.
 See comment #356

CI 143 SC 143.4.3.4 P98 L48 # 366
 Remein, Duane Huawei
 Comment Type T Comment Status D 143 rewrite
 Ch should be a 1-bit integer
 SuggestedRemedy
 per comment
 Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.
 See comment #356

CI 143 SC 143.4.3.4 P98 L52 # 367
 Remein, Duane Huawei
 Comment Type T Comment Status D 143 rewrite
 CwdLeft no longer exists in the SD. It was replaced with EnvLeft
 SuggestedRemedy
 Remove CwdLeft definition
 Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.
 See comment #356

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Cl 143 SC 143.4.3.4 P99 L6 # 368
 Remein, Duane Huawei
 Comment Type T Comment Status D 143 rewrite
 This definition of EnvLeft implies that there is a fixed max time between US Grants (2.56 ns * 2^22) "if negative this variable represents the number of EQ periods since the end of the last envelope on the channel".
 SuggestedRemedy
 Change the definition to be non-rollover
 Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.
 See comment #356

Cl 143 SC 143.4.3.4 P99 L18 # 369
 Remein, Duane Huawei
 Comment Type T Comment Status D 143 rewrite
 GRANT_MARGIN is not longer used in these SD's
 SuggestedRemedy
 Remove definition.
 Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.
 See comment #356

Cl 143 SC 143.4.3.4 P99 L33 # 370
 Remein, Duane Huawei
 Comment Type E Comment Status D 143 rewrite
 There are numerous references to "Output Process" in the draft, we are likely to adopt an output process for the PCS also. We should be specific.
 SuggestedRemedy
 Use "MPRS Output Process" everywhere in D1.1 (as is done on pg 108 line 35).
 Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.
 See comment #356

Cl 143 SC 143.4.3.4 P99 L51 # 230
 Harstead, Ed Nokia
 Comment Type TR Comment Status D 143 rewrite
 Sentence reads, "For 100 Gb/s devices N = 4..."
 SuggestedRemedy
 Remove that text; we only talk about N=1 or 2.
 Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.
 See comment #356

Cl 143 SC 143.4.3.5 P100 L39 # 371
 Remein, Duane Huawei
 Comment Type T Comment Status D 143 rewrite
 Comparing EnvLeft to GRANT_MARGIN is no longer valid
 SuggestedRemedy
 Change " == GRANT_MARGIN" to " <= 0"
 Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.
 See comment #356

Cl 143 SC 143.4.3.6.1 P102 L8 # 372
 Remein, Duane Huawei
 Comment Type E Comment Status D 143 rewrite, bucket
 a envelope s/b an envelope
 SuggestedRemedy
 per comment
 Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.
 See comment #356

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Cl 143 SC 143.4.4 P104 L33 # 373
 Remein, Duane Huawei
 Comment Type E Comment Status D 143 rewrite, bucket
 There are numerous references to "Receive Process" in the draft, we are likely to adopt a receive process for the PCS also. We should be specific.
 SuggestedRemedy
 Use "MPRS Receive Process" everywhere in D1.1.
 Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.
 See comment #356

Cl 143 SC 143.4.4.1 P104 L40 # 218
 Doo, Kyeonghwan ETRI
 Comment Type ER Comment Status D 143 rewrite
 Replace "See 143.4.4.1." with "See 143.4.3.1."
 SuggestedRemedy
 Change "143.4.4.1" to "143.4.3.1"
 Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.
 See comment #356

Cl 143 SC 143.4.4.2 P104 L45 # 219
 Doo, Kyeonghwan ETRI
 Comment Type ER Comment Status D 143 rewrite
 Replace "See 143.4.4.2." with "See 143.4.3.3."
 SuggestedRemedy
 Change "143.4.4.2" to "143.4.3.3" on line 45, 48
 Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.
 See comment #356

Cl 143 SC 143.4.4.2 P105 L12 # 374
 Remein, Duane Huawei
 Comment Type T Comment Status D 143 rewrite
 RX_FIFO in Figure 143-15 and RX-FIFO at pg 106 line 10 s/b ENV_RX.
 SuggestedRemedy
 per comment
 Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.
 See comment #356

Cl 143 SC 143.4.4.3 P105 L28 # 220
 Doo, Kyeonghwan ETRI
 Comment Type ER Comment Status D 143 rewrite
 Replace "See 143.4.4.3." with "See 143.4.3.4."
 SuggestedRemedy
 Change "143.4.4.3" to "143.4.3.4" on line 28, 31, and 34
 Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.
 See comment #356

Cl 143 SC 143.4.4.3 P105 L38 # 375
 Remein, Duane Huawei
 Comment Type T Comment Status D 143 rewrite
 This phrase is incorrect "and runs at half the frequency of TX_CLK"
 SuggestedRemedy
 Strike the phrase
 Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.
 See comment #356

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Cl 143 SC 143.4.4.3 P106 L13 # 231
 Harstead, Ed Nokia
 Comment Type **TR** Comment Status **D** 143 rewrite
 Sentence reads, "For 100 Gb/s devices N = 4..."
 SuggestedRemedy
 Remove that text; we only talk about N=1 or 2.
 Proposed Response Response Status **W**
 PROPOSED ACCEPT IN PRINCIPLE.
 See comment #356

Cl 143 SC 143.4.4.3 P106 L20 # 376
 Remein, Duane Huawei
 Comment Type **E** Comment Status **D** 143 rewrite
 We should be positionally specific in this definition: "The RxEQ variable represents the most recent EQ received from a 25GMII interface."
 SuggestedRemedy
 Change;
 "EQ received from" to:
 "EQ received by the MPRS from"
 Proposed Response Response Status **W**
 PROPOSED ACCEPT IN PRINCIPLE.
 See comment #356

Cl 143 SC 143.4.4.4 P106 L31 # 209
 Doo, Kyeonghwan ETRI
 Comment Type **ER** Comment Status **D** 143 rewrite
 It's a typo : "eq,64:71>"
 SuggestedRemedy
 Change "eq,64:71>" to "eq<64:71>"
 Proposed Response Response Status **W**
 PROPOSED ACCEPT IN PRINCIPLE.
 See comment #356

Cl 143 SC 143.4.4.4 P106 L51 # 210
 Doo, Kyeonghwan ETRI
 Comment Type **ER** Comment Status **D** 143 rewrite
 It's a typo : "octet_index < 8,"
 SuggestedRemedy
 Change "octet_index < 8," to "octet_index < 8;"
 Proposed Response Response Status **W**
 PROPOSED ACCEPT IN PRINCIPLE.
 See comment #356

Cl 143 SC 143.4.4.5.2 P109 L17 # 377
 Remein, Duane Huawei
 Comment Type **T** Comment Status **D** 143 rewrite
 Figure 143–17 needs updating, no PARITY_PLACEHLDR.
 SuggestedRemedy
 Replace with RATE_ADJ_EQ
 Proposed Response Response Status **W**
 PROPOSED ACCEPT IN PRINCIPLE.
 See comment #356

Cl 144 SC 144 P113 L1 # 403
 Kramer, Glen Broadcom
 Comment Type **T** Comment Status **D**
 Clause 144 should include additional material, such as a subclause for Channel Control Protocol.
 SuggestedRemedy
 Adopt the outline for Clause 144 as shown in kramer_3ca_5_0718.pdf
 Proposed Response Response Status **W**
 PROPOSED ACCEPT.
 Implement changes to Clause 144 outline AFTRE all other Cluse 144 comments are implemented

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CI 144 SC 144 P113 L1 # 407
 Hajduczenia, Marek Charter Communicatio

Comment Type TR Comment Status D
 Architecture overview for Clause 144 is missing

SuggestedRemedy

Adopt text per hajduczenia_3ca_8_0718.pdf, containing new text of introduction, architecture for ONU and OLT, parser and multiplexer state diagrams.

Proposed Response Response Status W
 PROPOSED ACCEPT.

CI 144 SC 144 P113 L1 # 224
 Harstead, Ed Nokia

Comment Type TR Comment Status D
 Title includes "100G EPON"

SuggestedRemedy

Replace with Nx25G EPON

Proposed Response Response Status W
 PROPOSED ACCEPT.

CI 144 SC 144 P113 L1 # 232
 Harstead, Ed Nokia

Comment Type TR Comment Status D
 Title includes "100G EPON"

SuggestedRemedy

Replace with Nx25G EPON

Proposed Response Response Status W
 PROPOSED ACCEPT.

Duplicate of comment #224 from the same author

CI 144 SC 144.3.3 P116 L6 # 179
 Hajduczenia, Marek Charter Communicatio

Comment Type TR Comment Status D
 We are very inconsistent in the way we specify Opcode for Discovery GATE and the way we reference to it in text

SuggestedRemedy

Change all instances of "DISCOVERY GATE" to "DISCOVERY_GATE" (observe case)
 Change all instances of "DISCOVERY" when referring to the message Opcode (e.g., Figure 144-3) to "DISCOVERY_GATE"

Proposed Response Response Status W
 PROPOSED ACCEPT.

CI 144 SC 144.3.3 P117 L6 # 399
 Kramer, Glen Broadcom

Comment Type TR Comment Status D delimiter announcement
 Figure 144-2 is missing information or shows incorrect information being passed between the OLT and the ONUs

SuggestedRemedy

DISCOVERY GATE is missing Min and Max RSSI fields.
 REGISTER shows target Laser ON/OFF (should not be there).
 REGISTER and DISCOVERY GATE show a single SyncTime field. Should be SP1 Count, SP2 Count, [SP3 Count]
 REGISTER_ACK should echo the same SP Count values.

Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.

DISCOVERY GATE is missing Min and Max RSSI field (need to be added in Figure 144-2).

CI 144 SC 144.3.3.1 P119 L17 # 181
 Hajduczenia, Marek Charter Communicatio

Comment Type T Comment Status D
 Discovery Processing service interfaces do not sink and process DISCOVERY GATE MPCPDU.

SuggestedRemedy

Remove "OpcodeRx = DISCOVERY" from Figure 144-5

Proposed Response Response Status W
 PROPOSED ACCEPT.

CI 144 SC 144.3.3.1 P119 L22 # 182
Hajduczenia, Marek Charter Communicatio

Comment Type TR Comment Status D

No service interface definition for DISCOVERY GATE MPCPDU
MH_DISCOVERY

SuggestedRemedy

Implement changes shown in hajduczenia_3ca_6_0718.pdf - only changes are shown, i.e., new Figure 144-6, new Figure 144-11 with associated text, and new primitive definition (MCC:MACI(DISCOVERY_GATE ...) in 144.3.3.5 + changes to Figure 144-3, Figure 144-6, and existing primitive in 144.3.3.5

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 144 SC 144.3.3.1 P119 L27 # 378
Remein, Duane Huawei

Comment Type TR Comment Status D

Per definition 1 EQ is 64 data bits and 8 control bits, therefore any number of EQs cannot equate to some number of ns.

The same issue exists at line 35, and at Pg 119 line 27 and line 35.

Note that is previous EPON clauses this confusion was avoided by using a defined term time_quantum (different and distinct from TQ) to refer to the 16 ns required for a TQ to be transmitted at a given rate.

SuggestedRemedy

Change "in the units of 1 EQ" to "in the units of 1 EQ divided by 25 Gb/s"

Proposed Response Response Status W

PROPOSED ACCEPT.

Discussion needed, since now EQ is transferred on 25GMII and XGMII and clock rates are different, so we'd better specify EQ in terms of number of bits on xMII interface and also expressed in units of time. The proposed solution addresses it only for 25GMII.

CI 144 SC 144.3.3.1 P119 L28 # 379
Remein, Duane Huawei

Comment Type T Comment Status D

Ton and Toff are not specified in CI 75 and it is now 128 ns.

SuggestedRemedy

pg 119 line 28 change "Table 75-8 and Table 75-9" to "Table 141-11 and Table 141-12".

pg 119 line 31 change "VA LUE: 0xC8 (512 ns, default value)" to "VA LUE: 0x32 (128 ns, default value)"

pg 119 line 36 change "Table 75-8 and Table 75-9" to "Table 141-11 and Table 141-12".

pg 119 line 39 change "VA LUE: 0xC8 (512 ns, default value)" to "VA LUE: 0x32 (128 ns, default value)"

Pg 120 line 20 change "75.7.14" to "Table 75-8 and Table 75-9"

Pg 120 line 26 change "75.7.14" to "Table 75-8 and Table 75-9"

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 144 SC 144.3.3.2 P120 L28 # 380
Remein, Duane Huawei

Comment Type T Comment Status D

An oddly self-deprecating definition of local time.

SuggestedRemedy

This variable holds the value of the local timer used to control MPCP operation. This variable is advanced by a timer at 390.625 MHz, and is equivalent to one EQ at 25 Gb/s. At the OLT the counter shall track the transmit clock, while at the ONU the counter shall track the receive clock. For accuracy of receive clock, see {TBD 65.3.1.2}. It is reloaded with the received timestamp value (from the OLT) by the {TBD Control Parser (see Figure 64-11)}. Changing the value of this variable while running using Layer Management is highly undesirable and is unspecified.
TYPE: 32 bit unsigned

Update the reference in 144.3.6.2 to point to this definition.

Proposed Response Response Status W

PROPOSED ACCEPT.

Commenter likely means circular reference.

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Cl 144 SC 144.3.3.2 P121 L1 # 233
 Harstead, Ed Nokia
 Comment Type **TR** Comment Status **D**
 The behavior of a "100G-EPON ONU" is described..
 SuggestedRemedy
 Delete description, or modify for 25G and 50G ONUs.
 Proposed Response Response Status **W**
 PROPOSED ACCEPT IN PRINCIPLE.
 See comment #409

Cl 144 SC 144.3.3.6 P125 L16 # 402
 Kramer, Glen Broadcom
 Comment Type **T** Comment Status **D**
 Per action item from May 2018 comment #104, we are to remove bit-level parsing and message field extraction from the state diagrams.
 SuggestedRemedy
 Replace state diagrams in figures 144-6 and 144-7 with a single state diagram shown in kramer_3ca_2_0718.pdf
 Proposed Response Response Status **W**
 PROPOSED ACCEPT.

Cl 144 SC 144.3.3.5 P121 L36 # 180
 Hajduczenia, Marek Charter Communicatio
 Comment Type **E** Comment Status **D** bucket
 Message definitions are not sorted correctly
 SuggestedRemedy
 Use the following sort order:
 MAC:MADI
 MAC:MADR
 MCC:MACI
 MCC:MACR
 Within each group, sort alphanumerically by the next character after "("
 Proposed Response Response Status **W**
 PROPOSED ACCEPT.

Cl 144 SC 144.3.3.5 P123 L8 # 381
 Remein, Duane Huawei
 Comment Type **T** Comment Status **D** PendingGrant
 "PendingGrant" seem to be "Pending Envelopes"
 SuggestedRemedy
 Change all instances of "PendingGrants" to "PendingEnvelopes"
 Proposed Response Response Status **W**
 PROPOSED ACCEPT.

CI 144 SC 144.3.3.6 P125 L30 # 174
 Hajduczenia, Marek Charter Communicatio

Comment Type TR Comment Status D

MH_PRIMITIVES

Per discussion at the May 2018 meeting, showing data packing with bit-level information (see SEND DISCOVERY WINDOW state in Figure 144-6 as an example) is unnecessary - we already have bit-level definitions of message format, showing where individual fields are packed and in what order. Such detailed definitions can be compressed without loss of information, resulting in more compact state diagrams and removing unnecessary data replication

Suggested Remedy

The following changes need to be done:

Figure 144-6, state SEND DISCOVERY WINDOW, change content to read as follows and resize as needed:

```
DataTx <= (DISCOVERY_GATE|ChMap|StartTime|GrantLength|DiscoveryInfo)
MCI:MADR(DA, SA, m_sdu_ctl)
```

Figure 144-7, state SIGNAL, change content to read as follows and resize as needed:

```
(Flags|PendingGrants|DiscoveryInfo|LaserOnTime|LaserOffTime|Status) <= DataRx
MCC:MACI(REGISTER_REQ, Status, Flags, PendingGrants, RTT, LaserOnTime,
LaserOffTime, DiscoveryInfo)
```

Figure 144-8, state REGISTER, change content to read as follows and resize as needed:

```
DataTx <=
(REGISTER|PLID|MLID|Status|SyncTime|PendingGrants|LaserOnTime|LaserOffTime)
MCI:MA_DATA.request(DA, SA, m_sdu_ctl)
```

Figure 144-10, state REGISTER_REQUEST, change content to read as follows and resize as needed:

```
DataTx <=
(REGISTER_REQ|Status|PendingGrants|DiscoveryInfo|LaserOnTimeCapability|LaserOffTimeCapability)
MCI:MA_DATA.request(DA, SA, m_sdu_ctl)
InsideDiscoveryWindow <= false
```

Figure 144-10, state REGISTER_PENDING, change content to read as follows and resize as needed:

```
(PLID|MLID|SyncTime|LaserOnTime|LaserOffTime) <= DataRx
Status <= accepted
if (LaserOnTimeCapability > LaserOnTime)
  LaserOnTime <= LaserOnTimeCapability
if (LaserOffTimeCapability > LaserOffTime)
  LaserOffTime <= LaserOffTimeCapability
MCC:MACI(REGISTER, SA, PLID, MLID, Status)
```

Figure 144-10, state REGISTER_ACK, change content to read as follows and resize as

needed:

```
Registered <= True
DataTx <= (REGISTER_ACK|Ack|PLID|MLID|SyncTime)
MCI:MADR(DA, SA, m_sdu_ctl)
```

Figure 144-10, state LOCAL_DEREGISTER, change content to read as follows and resize as needed:

```
DataTx <= (REGISTER_REQ|Status <= deregister)
MCI:MA_DATA.request(DA, SA, m_sdu_ctl)
MCC:MACI(REGISTER_REQ, Status <= deregister)
```

Figure 144-12, state RECEIVE_REPORT, change content to read as follows and resize as needed:

```
(NumNonEmptyQ|ReportTime|LLID[7]|QueueLength[7]) <= DataRx
MCC:MACI(REPORT, RTT, ReportCount, ReportList)
[start mpcp_timer, mpcp_timeout]
```

Figure 144-13, state PERIODIC_TRANSMISSION, change content to read as follows and resize as needed (NOTE: ReportList parameters was removed, per comment tagged as MH_REPORT1):

```
DataTx <= (REPORT|NumNonEmptyQ <= 0)
MCI:MADR(DA, SA, m_sdu_ctl)
```

Figure 144-13, state SEND_REPORT, change content to read as follows and resize as needed (NOTE 1: ReportList parameters was removed, per comment tagged as MH_REPORT1; NOTE 2: ReportTime parameter was removed per comment tagged as MH_REPORT2)

```
DataTx <= (REPORT|NumNonEmptyQ|LLID[7]|QueueLength[7])
MCI:MADR(DA, SA, m_sdu_ctl)
```

Figure 144-15, state PERIODIC_TRANSMISSION, change content to read as follows and resize as needed:

```
DataTx <= (GATE|ChMap <= 0)
MCI:MADR(DA, SA, m_sdu_ctl)
```

Figure 144-15, state SEND_GATE, change content to read as follows and resize as needed:

```
DataTx <= (GATE|ChMap|StartTime|LLID[7]|Length[7]|Fragment[7]|ForceReport[7])
MCI:MADR(DA, SA, m_sdu_ctl)
```

Figure 144-16, state CHECK_START_TIME, change content to read as follows and resize as needed:

```
(ChMap|StartTime|LLID[7]|Length[7]|Fragment[7]|ForceReport[7]) <= DataRx
```

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

For change to Figure 144-16, see comment #404. For changes to Figure 144-6 and 144-7 (they become merged), see comment #402. Remaining changes per comment

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CI 144 SC 144.3.3.6 P127 L20 # 175
 Hajduczenia, Marek Charter Communicatio
 Comment Type TR Comment Status D PendingGrant
 In D1.0, the field "Pending Grants" was changed to "Pending Envelopes" - this change needs to be propagated through the draft now
 SuggestedRemedy
 Replace "PendingGrants" with "PendingEnvelopes" in the following locations: Figure 144-3 (2x), Figure 144-4 (1x), Figure 144-5 (1x), 144.3.3.2 (including change of "pending grants that" to "pending envelopes that"), 144.3.3.5 (change primitive parameter name to PendingEnvelopes and definition, where present), Figure 144-7 (2x), Figure 144-8 (2x), Figure 144-10 (1x).
 Proposed Response Response Status W
 PROPOSED ACCEPT.

CI 144 SC 144.3.4 P130 L19 # 186
 Hajduczenia, Marek Charter Communicatio
 Comment Type TR Comment Status D
 MH_PRIMITIVES
 MH_REPORT2
 The Report Time field was dropped from REPORT MPCPDU in D1.0. It is still present in primitives and operands
 SuggestedRemedy
 Remove ReportTime in the following locations:
 - Figure 144-11 (2 instances)
 - 144.3.4.5, definition of MCC:MACR(DA, REPORT, NumNonEmptyQ, ReportTime, LLID[7], QueueLength[7]) primitive and ReportTime parameter on page 132, line 1
 - 144.3.4.5, definition of MCC:MACI(REPORT, RTT, NumNonEmptyQ, ReportTime, LLID[7], QueueLength[7]) primitive and ReportTime parameter on page 132, line 18
 - Figure 144-12, one instance
 - Figure 144-13, two instances
 Proposed Response Response Status W
 PROPOSED ACCEPT.

CI 144 SC 144.3.4.6 P132 L43 # 176
 Hajduczenia, Marek Charter Communicatio
 Comment Type TR Comment Status D
 REPORT associated primitives show the use of "ReportList" parameter, that is not defined anywhere
 SuggestedRemedy
 MH_REPORT1
 Remove "ReportList" parameter in Figure 144-12 (page 132, line 43) and Figure 144-13 (page 133, line 23)
 Proposed Response Response Status W
 PROPOSED ACCEPT.

CI 144 SC 144.3.5 P134 L7 # 207
 Hajduczenia, Marek Charter Communicatio
 Comment Type T Comment Status D
 "Grant Length #n field, see 144.3.7.1" uses not the correct field name - it is Envelope Length as of D1.1
 SuggestedRemedy
 Change all instances of "Grant Length" with "Envelope Length"
 Proposed Response Response Status W
 PROPOSED ACCEPT.

CI 144 SC 144.3.5 P134 L15 # 208
 Hajduczenia, Marek Charter Communicatio
 Comment Type E Comment Status D bucket
 "pending envelopes" uses wrong capitalization
 SuggestedRemedy
 Change to "Pending Envelopes" + fix reference to read 144.3.7.3
 Proposed Response Response Status W
 PROPOSED ACCEPT.

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CI 144 SC 144.3.5 P134 L28 # 177
 Hajduczenia, Marek Charter Communicatio

Comment Type TR Comment Status D

In D1.0, the GATE MPCPDU definition was modified to use an compound field Envelope Allocation and defining subfields instead of defining them individually. This simplified message structure, but requires alignment of individual primitives

SuggestedRemedy

Implement changes shown in hajduczenia_3ca_5_0718.pdf - all changes are tracked for visibility (both figures and text alike) - only sections / portions changed are shown

Proposed Response Response Status W
 PROPOSED ACCEPT.

CI 144 SC 144.3.5.2 P135 L8 # 382
 Remein, Duane Huawei

Comment Type E Comment Status D ChIndex

ChIndex is never used in the draft.

SuggestedRemedy

Strike the definition

Proposed Response Response Status W
 PROPOSED ACCEPT.

CI 144 SC 144.3.5.2 P135 L15 # 178
 Hajduczenia, Marek Charter Communicatio

Comment Type TR Comment Status D

in D1.1, the GATE MPCPDU Channel Assignment field uses only bits 0-1 to encode 2 channels. ChMap definition still uses bits 0-3

SuggestedRemedy

Change "value of bits 0 through 3 of the" to "value of the" to remove repetition of the range Change size from 4-bit to 8-bit to match the size of the Channel Assignment field in the GATE MPCPDU - no issue with keeping the variable larger even though most bits will be set to zero anyway

Proposed Response Response Status W
 PROPOSED ACCEPT.

CI 144 SC 144.3.5.5 P136 L10 # 183
 Hajduczenia, Marek Charter Communicatio

Comment Type E Comment Status D bucket

In state diagrams that are being added, we consistently use state names where individual compound words are combined using "_". In older state diagrams, we use names with compound words using " " (space) to combine them together. The use of space is confusing, especially when names of states are referenced anywhere

SuggestedRemedy

Align with the new state name methodology, i.e., use "_" as combiner for state names where more than one word exists. In here, change "WAIT FOR GATE" to "WAIT_FOR_GATE". Scrub the whole draft

Proposed Response Response Status W
 PROPOSED ACCEPT.

CI 144 SC 144.3.5.5 P136 L18 # 211
 Doo, Kyeonghwan ETRI

Comment Type TR Comment Status D

wrong the number of bits for ChMap

SuggestedRemedy

Change "DataTx[48:50]" to "DataTx[48:51]" in SEND GATE box of Fig. 144-15

Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.

Changed type from E to T

See comment #174

CI 144 SC 144.3.5.5 P136 L19 # 212
 Doo, Kyeonghwan ETRI

Comment Type TR Comment Status D

mismatching StarTime with DataTx

SuggestedRemedy

Change "DataTx[46:87]" to "DataTx[56:87]" in SEND GATE box of Fig. 144-15

Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.

Changed type from E to T

See comment #174

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Cl 144 SC 144.3.7.2 P144 L3 # 405
 Kramer, Glen Broadcom
 Comment Type T Comment Status D
 It would be more convenient to show REPORT MPCPDU format with an array of 7 LLID reports, as was done for Envelope Allocations in GATE MPCPDU.
 SuggestedRemedy
 Use the same structure for REPORT MPCPDU format (Figure 144-21) as was used for GATE MPCPDU format (Figure 144-20). The new structure is shown in kramer_3ca_7_0718.pdf.
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 144 SC 144.3.7.6 P150 L25 # 398
 Kramer, Glen Broadcom
 Comment Type TR Comment Status D
 Wrong padding size in DISCOVERY GATE MPCPDU
 SuggestedRemedy
 Padding length should be 24 octets, not 26.
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 144 SC 144.3.7.7 P150 L30 # 409
 Hajduczenia, Marek Charter Communicatio
 Comment Type TR Comment Status D
 New SYNC_PATTERN MPCPDU is needed to address the need for dynamic configuration of Sync Pattern zones (value and/or duration)
 SuggestedRemedy
 See hajduczenia_3ca_4_0718.pdf for motivation and hajduczenia_3ca_94_0718.pdf for all changes in Clause 144 needed to accommodate the new mechanism, including new MPCPDU, changes to existing MPCPDUs, state diagrams, and associated text. All changes to the original D1.1 MPCP Clause are marked in red, including strike-throughs where appropriate.
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl Title SC Title P1 L17 # 254
 Lee, HH ETRI
 Comment Type TR Comment Status R
 100G is out of scope.
 SuggestedRemedy
 delete 100 Gb/s in the title.
 Response Response Status C
 REJECT.
 This text MUST match title of the PAR