Cl **FM** *SC* **FM**   *P* **10** *L* **3** # 822

Grow, Robert   RMG Consulting

Comment Type **E** *Comment Status* **R**   *OOS*

This boxed paragraph is part of the published standard, so the self reference should be IEEE Std, not a project designation

SuggestedRemedy

Replace "P802.3cy" with "IEEE Std 802.3cy-202x"

Response   *Response Status* **C**

REJECT.

This comment does not apply to the substantive changes between IEEE P802.3cy D2.1 and D2.21. Hence it is not within the scope of the recirculation ballot.

The commenter is encouraged to re-submit the comment for initial IEEE-SA ballot. If the commenter is not a member of the Standards Association ballot group for P802.3cy, the comments may be submitted as non-binding via the Chair's Standard Offer.

Cl **1** *SC* **1.4.128a**   *P* **22** *L* **7** # 823

Grow, Robert   RMG Consulting

Comment Type **E** *Comment Status* **R**   *OOS*

Grammar, "a" should have been deleted in editing out "network".

SuggestedRemedy

"...specification for 25 Gb/s Ethernet …"

Response   *Response Status* **C**

REJECT.

This comment does not apply to the substantive changes between IEEE P802.3cy D2.1 and D2.21. Hence it is not within the scope of the recirculation ballot.

The commenter is encouraged to re-submit the comment for initial IEEE-SA ballot. If the commenter is not a member of the Standards Association ballot group for P802.3cy, the comments may be submitted as non-binding via the Chair's Standard Offer.

Cl **165** *SC* **165.1**   *P* **36** *L* **11** # 824

Grow, Robert   RMG Consulting

Comment Type **E** *Comment Status* **R**   *OOS*

PHY is not the acronym for Physical Layer, the cited sublayers are appropriately a Physical Layer device. (See Figure 165-1.)

SuggestedRemedy

25GBASE-T1 Physical Layer device (PHY)

Response   *Response Status* **C**

REJECT.

This comment does not apply to the substantive changes between IEEE P802.3cy D2.1 and D2.21. Hence it is not within the scope of the recirculation ballot.

The commenter is encouraged to re-submit the comment for initial IEEE-SA ballot. If the commenter is not a member of the Standards Association ballot group for P802.3cy, the comments may be submitted as non-binding via the Chair's Standard Offer.

Cl **165** *SC* **165.1.3.1**   *P* **38** *L* **35** # 813

Dawe, Piers   Nvidia

Comment Type **E** *Comment Status* **R**   *OOS*

tx_group130x65B - as it's 65 bits, lower case b would avoid ambiguity

SuggestedRemedy

Change tx_group130x65B to tx_group130x65b (6 instances)

Response   *Response Status* **C**

REJECT.

This comment does not apply to the substantive changes between IEEE P802.3cy D2.1 and D2.21. Hence it is not within the scope of the recirculation ballot.

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

Cl **165**
SC **165.1.3.1**

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10/18/2022 8:34:15 AM

Cl **165**   *SC* **165.1.3.1**   *P* **38**   *L* **48**   # 821

Dawe, Piers   Nvidia

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

"In the training mode (see 165.4.2.4), the PCS transmits and receives PAM2 training frames to synchronize to the PHY frame..." but "PHY frame" is not defined.

SuggestedRemedy

Change to "synchronize to the PHY frame..." to "synchronize to the RS-FEC superframes that follow, ..."

Response   *Response Status* **C**

REJECT.

This comment does not apply to the substantive changes between IEEE P802.3cy D2.1 and D2.21. Hence it is not within the scope of the recirculation ballot.

The commenter is encouraged to re-submit the comment for initial IEEE-SA ballot. If the commenter is not a member of the Standards Association ballot group for P802.3cy, the comments may be submitted as non-binding via the Chair's Standard Offer.

Cl **165**   *SC* **165.2.2.2**   *P* **45**   *L* **3**   # 825

Grow, Robert   RMG Consulting

Comment Type **E**   *Comment Status* **R**   *OOS*

The defined terms master PHY and slave PHY are lower case in 1.4.389 and 1.4.535 definitions. This amendment should follow that precident. Reconsider if MASTER and SLAVE should be all caps.

SuggestedRemedy

Change MASTER PHY and SLAVE PHY to master PHY and SLAVE PHY throughout. (Pages 45, 63, 65, 81, 91, 97, 117.)

Response   *Response Status* **C**

REJECT.

This comment does not apply to the substantive changes between IEEE P802.3cy D2.1 and D2.21. Hence it is not within the scope of the recirculation ballot.

Cl **165**   *SC* **165.2.2.4.3**   *P* **46**   *L* **26**   # 819

Dawe, Piers   Nvidia

Comment Type **E**   *Comment Status* **R**   *OOS*

This says that the effect of receipt of this primitive, PMA_UNITDATA.indication(rx_symb), is unspecified. That's not correct.

SuggestedRemedy

Change "is unspecified" to "is specified in 165.3.2.3.1".

Response   *Response Status* **C**

REJECT.

This comment does not apply to the substantive changes between IEEE P802.3cy D2.1 and D2.21. Hence it is not within the scope of the recirculation ballot.

Cl **165**   *SC* **165.3.2.2.16**   *P* **57**   *L* **34**   # 810

Dawe, Piers   Nvidia

Comment Type **E**   *Comment Status* **R**   *OOS*

pL,33

SuggestedRemedy

pL,89 ?

Response   *Response Status* **C**

REJECT.

This comment does not apply to the substantive changes between IEEE P802.3cy D2.1 and D2.21. Hence it is not within the scope of the recirculation ballot.

The commenter is encouraged to re-submit the comment for initial IEEE-SA ballot. If the commenter is not a member of the Standards Association ballot group for P802.3cy, the comments may be submitted as non-binding via the Chair's Standard Offer.

Cl **165**   *SC* **165.3.2.2.16**   *P* **58**   *L* **3**   # 811

Dawe, Piers   Nvidia

Comment Type **E**   *Comment Status* **R**   *OOS*

#1 #2 #L

SuggestedRemedy

1 2 L (as in other figures, e.g. 65B block, 165B block 2 ...)

Response   *Response Status* **C**

REJECT.

This comment does not apply to the substantive changes between IEEE P802.3cy D2.1 and D2.21. Hence it is not within the scope of the recirculation ballot.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **165**   Page 2 of 6
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   *SC* **165.3.2.2.16**   10/18/2022 8:34:15 AM
SORT ORDER: Clause, Subclause, page, line

Cl **165**   *SC* **165.3.2.2.17**   *P* **58**   *L* **27**   # 815

Dawe, Piers   Nvidia

Comment Type **E**   *Comment Status* **R**   *OOS*

Galois Field

SuggestedRemedy

Galois field

Response   *Response Status* **C**

REJECT.

This comment does not apply to the substantive changes between IEEE P802.3cy D2.1 and D2.21. Hence it is not within the scope of the recirculation ballot.

Cl **165**   *SC* **165.3.2.2.17**   *P* **58**   *L* **39**   # 812

Dawe, Piers   Nvidia

Comment Type **E**   *Comment Status* **R**   *OOS*

Need to define all the items in the equation (except well-known functions and operators, and j here which is just a counter). Also, "alpha is a primitive element of the finite field defined by the primitive polynomial 0x409 = x^10 + x^3 + 1" is too vague; it's not clear if it means that alpha is defined by 0x409 (how), or that the finite field is defined by 0x409, or that alpha is 0x409, or what.

SuggestedRemedy

Add: "In this subclause, x is the indeterminate variable."
Change "In Equation (165-1), alpha is a primitive element of the finite field defined by the primitive polynomial 0x409 = x^10 + x^3 + 1."
to an unambiguous definition, e.g.
"In Equation (165-1), alpha, a primitive element of the finite Galois field GF(2^10), is the primitive polynomial 0x409 = x^10 +x^3 +1."

Response   *Response Status* **C**

REJECT.

This comment does not apply to the substantive changes between IEEE P802.3cy D2.1 and D2.21. Hence it is not within the scope of the recirculation ballot.

Cl **165**   *SC* **165.3.2.2.17**   *P* **58**   *L* **49**   # 809

Dawe, Piers   Nvidia

Comment Type **E**   *Comment Status* **R**   *OOS*

This says "$m_{i,0}$ is the first bit transmitted" while on the next page "$c_{935} = m_{845}$ is transmitted first". Seems contradictory.

SuggestedRemedy

Maybe this means: For each 10-bit message symbol mi, $m_{i,0}$ is the first bit transmitted. Similarly for $p_{i,0}$ on the next page.

Response   *Response Status* **C**

REJECT.

This comment does not apply to the substantive changes between IEEE P802.3cy D2.1 and D2.21. Hence it is not within the scope of the recirculation ballot.

Cl **165**   *SC* **165.3.2.2.17**   *P* **59**   *L* **34**   # 814

Dawe, Piers   Nvidia

Comment Type **E**   *Comment Status* **R**   *OOS*

GF add and GF multiply are not defined, although one can guess that GF means Galois field. Unfortunately, other clauses have used these terms without defining them, so we can't just point elsewhere in 802.3.

SuggestedRemedy

Please define or give a reference for Galois field addition and Galois field multiplication.

Response   *Response Status* **C**

REJECT.

This comment does not apply to the substantive changes between IEEE P802.3cy D2.1 and D2.21. Hence it is not within the scope of the recirculation ballot.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **165**   Page 3 of 6
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   *SC* **165.3.2.2.17**   10/18/2022 8:34:15 AM
SORT ORDER: Clause, Subclause, page, line

Cl **165**   *SC* **165.3.2.2.17**   *P* **59**   *L* **54**   # 808

Dawe, Piers   Nvidia

Comment Type **E**   *Comment Status* **R**   OOS

Unfortunate page break splitting so many columns in the table.

SuggestedRemedy

Increase the orphan rows setting so the table stays on one page

Response   *Response Status* **C**

REJECT.

This comment does not apply to the substantive changes between IEEE P802.3cy D2.1 and D2.21. Hence it is not within the scope of the recirculation ballot.

The commenter is encouraged to re-submit the comment for initial IEEE-SA ballot. If the commenter is not a member of the Standards Association ballot group for P802.3cy, the comments may be submitted as non-binding via the Chair's Standard Offer.

Cl **165**   *SC* **165.3.2.3.1**   *P* **63**   *L* **1**   # 807

Dawe, Piers   Nvidia

Comment Type **E**   *Comment Status* **R**   OOS

"It obtains block lock to the PHY frames during PAM2 training using synchronization bits provided in the training frames" but "PHY frame" is not defined. As we are in training, there will be training frames present.

SuggestedRemedy

Change "PHY frames" to "training frames"

Response   *Response Status* **C**

REJECT.

This comment does not apply to the substantive changes between IEEE P802.3cy D2.1 and D2.21. Hence it is not within the scope of the recirculation ballot.

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Cl **165**   *SC* **165.3.7.3**   *P* **68**   *L* **21**   # 817

Dawe, Piers   Nvidia

Comment Type **E**   *Comment Status* **R**   OOS

Following D2.1 comment 785, there are three more 65B blocks to be changed to 64B/5B blocks.
Names can be more consistent.
Also, "65B RS-FEC" is a confusing name, as the FEC doesn't really operate on 65-bit blocks but on a 9360-bit payload, and 165.3.2.2.17 says "the particular Reed-Solomon code is denoted as RS-FEC(936,846)". There are two "64B/65B RS-FEC", three "65B RS-FEC frame" and 4 other "65B RS-FEC"

SuggestedRemedy

Change "65B transmitted blocks" to "64B/65B transmit(ted) blocks", "65B transmit block" to "64B/65B transmit(ted) block", "65B received blocks" to "64B/65B received blocks".
Here, "65B RS-FEC" can be changed to "RS-FEC".
Change the three "65B RS-FEC frame" to "RS-FEC frame"
Rename the remaining "65B RS-FEC" e.g. to RS-FEC(936,846).
With editorial licence.

Response   *Response Status* **C**

REJECT.

This comment does not apply to the substantive changes between IEEE P802.3cy D2.1 and D2.21. Hence it is not within the scope of the recirculation ballot.

The commenter is encouraged to re-submit the comment for initial IEEE-SA ballot. If the commenter is not a member of the Standards Association ballot group for P802.3cy, the comments may be submitted as non-binding via the Chair's Standard Offer.

Cl **165**   *SC* **165.4**   *P* **73**   *L* **16**   # 816

Dawe, Piers   Nvidia

Comment Type **E**   *Comment Status* **D**   OOS

802.3 specs define the sublayers in top-to-bottom order. Compare Clause 149, for example.

SuggestedRemedy

Swap 165.5 PMA electrical specifications and 165.4 Physical Medium Attachment (PMA) sublayer

Proposed Response   *Response Status* **Z**

REJECT.

This comment was WITHDRAWN by the commenter.

This comment does not apply to the substantive changes between IEEE P802.3cy D2.1 and D2.21. Hence it is not within the scope of the recirculation ballot.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **165**   Page 4 of 6
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   *SC* **165.4**   10/18/2022 8:34:15 AM
SORT ORDER: Clause, Subclause, page, line

Cl **165**   *SC* **165.4.2.4.10**   *P* **79**   *L* **43**   # 818

Dawe, Piers   Nvidia

Comment Type **E**   *Comment Status* **R**   *OOS*

After cleaning up "Partial PHY frame count" (D2.1 comment 786), the draft uses "partial frame" 27 times and "partial PHY frame" three times

SuggestedRemedy

Change the three remaining "partial PHY frame" to "partial frame"

Response   *Response Status* **C**

REJECT.

This comment does not apply to the substantive changes between IEEE P802.3cy D2.1 and D2.21. Hence it is not within the scope of the recirculation ballot.

The commenter is encouraged to re-submit the comment for initial IEEE-SA ballot. If the commenter is not a member of the Standards Association ballot group for P802.3cy, the comments may be submitted as non-binding via the Chair's Standard Offer. Please consider listing specific locations where changes are needed.

Cl **165**   *SC* **165.5.2**   *P* **93**   *L* **25**   # 820

Dawe, Piers   Nvidia

Comment Type **E**   *Comment Status* **R**   *OOS*

Do the wavy lines across the connectors represent other pairs in a multilane PHY as in Figure 136-2, or provision for other "alien crosstalk" signals in a bigger connector? 165.8.1 says "2-pin connector with a shield". Figure 136-2 shows Signal_i shield and Link shield. Also, the diagonal line and "25GBASE-T1" don't help. The figure title says it's 25GBASE-T1, pointers usually have arrowheads, and words such as "cable" or "bulk cable" would better represent the two signal lines.

SuggestedRemedy

Delete the wavy lines, "25GBASE-T1" and diagonal line. Add the shield.

Response   *Response Status* **C**

REJECT.

This comment does not apply to the substantive changes between IEEE P802.3cy D2.1 and D2.21. Hence it is not within the scope of the recirculation ballot.

The commenter is encouraged to re-submit the comment for initial IEEE-SA ballot. If the commenter is not a member of the Standards Association ballot group for P802.3cy, the comments may be submitted as non-binding via the Chair's Standard Offer.

Cl **165**   *SC* **165.5.3.3**   *P* **95**   *L* **6**   # 804

Dawe, Piers   Nvidia

Comment Type **E**   *Comment Status* **R**   *OOS*

In the explanation "this is equivalent...", "at least" should be deleted following the change to make the bandwidth at line 5 a value rather than a one-sided limit.

SuggestedRemedy

Delete "at least"

Response   *Response Status* **C**

REJECT.

This comment does not apply to the substantive changes between IEEE P802.3cy D2.1 and D2.21. Hence it is not within the scope of the recirculation ballot.

The commenter is encouraged to re-submit the comment for initial IEEE-SA ballot. If the commenter is not a member of the Standards Association ballot group for P802.3cy, the comments may be submitted as non-binding via the Chair's Standard Offer.

Cl **165**   *SC* **165.11.4.2.5**   *P* **118**   *L* **10**   # 806

Dawe, Piers   Nvidia

Comment Type **E**   *Comment Status* **R**   *OOS*

PICS uses "frame" twice and "PHY frame" 4 times. The normative material it refers to in 165.3.6.1 uses "RS-FEC frame" 10 times or more, "frame" once.

SuggestedRemedy

Here, change all "frame" and "PHY frame" to "RS-FEC frame". In 165.3.6.1, change "four frames after" to "four RS-FEC frames after".

Response   *Response Status* **C**

REJECT.

This comment does not apply to the substantive changes between IEEE P802.3cy D2.1 and D2.21. Hence it is not within the scope of the recirculation ballot.

The commenter is encouraged to re-submit the comment for initial IEEE-SA ballot. If the commenter is not a member of the Standards Association ballot group for P802.3cy, the comments may be submitted as non-binding via the Chair's Standard Offer.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **165**   Page 5 of 6
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   *SC* **165.11.4.2.5**   10/18/2022 8:34:15 AM
SORT ORDER: Clause, Subclause, page, line

Cl **165**   *SC* **165.11.4.5**   *P* **128**   *L* **28**   # 805

Dawe, Piers   Nvidia

Comment Type   **E**   *Comment Status* **R**   *OOS*

Maximum link delay in PICS is out of date

SuggestedRemedy

Change 94 to 60

Response   *Response Status* **C**

REJECT.

This comment does not apply to the substantive changes between IEEE P802.3cy D2.1
and D2.21. Hence it is not within the scope of the recirculation ballot.

The commenter is encouraged to re-submit the comment for initial IEEE-SA ballot. If the
commenter is not a member of the Standards Association ballot group for P802.3cy, the
comments may be submitted as non-binding via the Chair's Standard Offer.

Note that this issue is only associated with the PICS comment field synchronization and
the technical content of the draft is correct as is.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **165**   Page 6 of 6
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   *SC* **165.11.4.5**   10/18/2022 8:34:15 AM
SORT ORDER: Clause, Subclause, page, line