Cl **FM** *SC* **FM** *P* **1** *L* **2** # 47

Grow, Robert RMG Consulting

Comment Type **E** *Comment Status* **D** *LATE*

This project is targeted as an amendment to the ongoing revision of P802.3. See parallel projects for examples of front matter and notes appropriate for an amendment to 802.3-20xx.

SuggestedRemedy

Replace front matter Introduction (page 9) with Front Matter from P802.3/D2.0. Replace references to IEEE Std 802.3-2018 with IEEE Std 802.3-20xx, and edit page 1 line 28 paragraph accordingly.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
Insert Editor's note at P1 L27:
"Editor's Note (to be removed prior to Working Group ballot) - the Task Force review draft and front matter represent alignment to IEEE 802.3-2018. Editor to replace front matter and check alignment of remaining text to the IEEE P802.3da draft of the IEEE 802.3 revision either prior to presubmission of IEEE P802.3da to working group ballot or when the IEEE 802.3 revision enters SA ballot, whichever comes first"

Cl **FM** *SC* **FM** *P* **1** *L* **35** # 48

Grow, Robert RMG Consulting

Comment Type **E** *Comment Status* **D** *LATE*

Drafts should be copyrighted with correct year.

SuggestedRemedy

Replace 202x with 2021 (assuming next draft is released this year), and place corresponding year in the draft footer

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **FM** *SC* **FM** *P* **4** *L* **7** # 49

Grow, Robert RMG Consulting

Comment Type **E** *Comment Status* **D** *LATE*

Obsolete note (seocnd paragraph). Current style manual numbers consecutively with Arabic numerals so the paragraph is no longer needed.

SuggestedRemedy

Remove paragraph from note.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **1** *SC* **1.4.50aa** *P* **18** *L* **15** # 29

Jones, Peter Cisco

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

Reach is not specified for other BASE-T PHYs.

SuggestedRemedy

Delete "medium up to at least TBD m reach".
Delete related editors note

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **148** *SC* **148.4.4** *P* **23** *L* **22** # 30

Jones, Peter Cisco

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

Missing state diagram conventions clause.

SuggestedRemedy

Insert State diagram conventions clause based on 126.3.6.1) before 148.4.4.2 PLCA Control variables , 148.4.5.2 Variables and 148.4.7.2 Variables

"The body of this subclause is composed of state diagrams, including the associated definitions of variables, constants, and functions. Should there be a discrepancy between a state diagram and descriptive text, the state diagram prevails.
The notation used in the state diagrams follows the conventions of 21.5. State diagram timers follow the conventions of 14.2.3.2. The notation ++ after a counter or integer variable indicates that its value is to be incremented.

Proposed Response *Response Status* **W**

PROPOSED REJECT.
This information is included in the base standard, specifically in 148.1.1 and subclauses. It is not shown in the amendment because it is not amended.

Cl **148** *SC* **148.4.7.5** *P* **31** *L* **9** # 31

Jones, Peter Cisco

Comment Type **T** *Comment Status* **D** *D-PLCA*

Transition from DISABLED to WAIT_BEADCON in D-PLCA Control State Diagram should not be a UCT.

SuggestedRemedy

Add (plca_en+dplca_en) as transition condition

Proposed Response *Response Status* **W**

PROPOSED REJECT.
The open ended arc (plca_reset + !dplca_en + !plca_en) into DISABLED keeps the state diagram locked in the disabled state whenever either of these conditions is not true (or if reset is asserted)

Cl **148** *SC* **148.4.7.5** *P* **31** *L* **26** # 32

Jones, Peter Cisco

Comment Type **T** *Comment Status* **D** *D-PLCA*

dplca_new_age not defined in D-PLCA Control State Diagram.

SuggestedRemedy

Add dplca_new_age to 148.4.7.2 Variables .

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
TFTD
Insert the following prior to dplca_txop_claim (P29 L32)
dplca_new_age
Internal variable used to synchronize the D-PLCA Control State Diagram with the D-PLCA Aging State Diagram so that changes in the node ID allocation occur at the end of a cycle of transmit opportunities.

Values: TRUE or FALSE

Cl **148** *SC* **148.4.7.6** *P* **32** *L* **19** # 33

Jones, Peter Cisco

Comment Type **T** *Comment Status* **X** *D-PLCA*

in D-PLCA Aging State Diagram the action for TXOP_END clear's entire table at a time, regardless of the individual entry age. This should be based on each entries age.

SuggestedRemedy

Proposed change to be circulated before comment resolution.

Proposed Response *Response Status* **W**

TFTD

Cl **148** *SC* **148.4.7.6** *P* **32** *L* **19** # 34

Jones, Peter Cisco

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

Typo in D-PLCA Aging State Diagram TXOP_END action: SOFT_AGAIN_CYCLES

SuggestedRemedy

Change SOFT_AGAIN_CYCLES to SOFT_AGING_CYCLES

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **168** *SC* **168** *P* **35** *L* **32** # 46

Grow, Robert RMG Consulting

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

The acronym PHY is not appropriate for Physical Layer ["10BASE-T1M Physical Layer (PHY)]. Because Physical Layer device and Physical Layer entity identical definitions of the same Physical Layer sublayers, recommend going with Physical Layer device as is the case in Figure 168-1.

SuggestedRemedy

10BASE-T1M Physical Layer device (PHY)

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
Implement commenter's proposed remedy and add editor's note at P35 L29 (before text), "Editor's Note (to be removed prior to Working Group ballot) - the use of the acronym PHY is aligned with the expected resolution of comments in the IEEE Std 802.3 revision; Alignment should be checked prior to 802.3da entering WG ballot."

Cl **168** *SC* **168.4** *P* **53** *L* **18** # 35

Jones, Peter Cisco

Comment Type **E** *Comment Status* **D** *Editorial*

Typo in clause name

SuggestedRemedy

Change Iphysical to Physical

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **168** *SC* **168.4** *P* **53** *L* **25** # 36

Jones, Peter Cisco

Comment Type **T** *Comment Status* **D** *Link Monitor*

PCS_STATUS and LINK MONITOR are not used/needed.

SuggestedRemedy

Delete "PCS_STATUS and LINK MONITOR", associated editors note,clause 168.4.4 (Link Monitor function) and any other material related to these two functions

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
Delete:
P35L21: delete item 1 relating to pcs_status in the editor's note, and remove number from item 2.
P39L32: 168.2.6 PCS_STATUS indication and subclauses
P40L46: PCS_STATUS.indication from Fig 168-3
P53L25: LINK MONITOR and PCS_STATUS.indication from Fig 168-10, and editors note at L48
P56L1: 168.4.4 Link Monitor function (all text, figures, notes and subclauses) through P57L3
P69L34: PICS item PMA4

Cl **168** *SC* **168.7.3** *P* **62** *L* **28** # 38

Fischer, Peter BKS Kabel-Service AG

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

As we consider more devices connected to the link and longer length as in cg, the requirements have to be improved. This was an outcome of the interoperability discussion of 09-08.

SuggestedRemedy

Add text from clause 146.7.1.4 and increase the values by 10dB. Use 10dB step for each E-level increasement and add a table:
The differential to common mode conversion requirement applies to unshielded link segments and depends on the electromagnetic noise environment. The requirements of Table 146–5 shall be met based on the local environment as described by the electromagnetic classifications given in Table 146–7, E1 or E2.
Implement the following formulas and a plateau at 50dB:
TCL E1: 60-20*log(f/10)
TCL E2: 70-20*log(f/10)
Additional information: This leads to 48dB@40MHz for E1 versus 50dB@40MHz for E2. The graphs differ only from 31MHz upwards to a maximum of 2dB@40MHz.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
TFTD (Task Force to Discuss)
Needs technical presentation, analysis and justification.
(See Fischer_IEEE P802.3da Multidrop_09222021.pdf)

Cl **168** *SC* **168.7.3** *P* **62** *L* **32** # 39

Fischer, Peter BKS Kabel-Service AG

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

These links are used in very noisy area. Therefore optional shielded links should be allowed. Add coupling attenuation and leave alien crosstalk for unshielded links.

SuggestedRemedy

Use the text of 146.7.1.5 and add a similar table as table 146-6:
The coupling attenuation requirement applies to shielded link segments and depends on the electromagnetic noise environment. The requirements in Table 146–6 shall be met based on the local environment as described by the electromagnetic classifications given in Table 146–7, E1, E2, or E3.
Additional information: As above for TCL also for AC the limit shall be increased as we consider more nodes and longer length. The following limits should be implemented:
AC E1: 66-20*log(f), Plateau 60dB
AC E2: 76-20*log(f), Plateau 70dB
AC E3: 86-20*log(f), Plateau 80dB
Change tables on page 72 accordingly.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
TFTD
Needs technical presentation and justification for the requirement levels.
(See Fischer_IEEE P802.3da Multidrop_09222021.pdf)

Recommend keeping alien crosstalk for all links. (shielded links have alien crosstalk as well, not measured by coupling attenuation)

Cl **168** *SC* **168.7.3** *P* **62** *L* **33** # 40

Fischer, Peter BKS Kabel-Service AG

Comment Type **ER** *Comment Status* **D** *EMC*

Add text and a table for electromagnetic classification.

SuggestedRemedy

Use the text of 146.7.1.6 and add a similar table as table 146-7:
Electromagnetic classifications for the link segment local environments are given in Table 146–7, for E1, E2, or E3.
Change tables on page 72 accordingly.

Proposed Response *Response Status* **W**

PROPOSED REJECT.
146.7.1.6 provides no requirements, only repeats information found in other standards. If the corresponding comment referencing levels E1, E2, and E3 is accepted in a way that needs reference, reference to the existing table in clause 146 (146-7) will suffice (as in the commenter's suggested resolution). No need to duplicate the information.

Cl **168** *SC* **168.8.3** *P* **62** *L* **46** # 41

Fischer, Peter BKS Kabel-Service AG

Comment Type **E** *Comment Status* **D** *Editorial*

Typo

SuggestedRemedy

Exchange 'DC' by 'dc'; See also table 168-3

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **168** *SC* **168.8.3** *P* **62** *L* **47** # 42

Fischer, Peter BKS Kabel-Service AG

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

The statement 'in either polarity, under all operating conditions indefinitely' means additional diode network increasing the cost and reduce the usable power. Plus and Minus must be defined by the MDI connectors by introducing a mechanical protection against incorrect insertion.

SuggestedRemedy

Write: ... applied across BI_DA+ and BI_DA– as defined in 168.8.1.

Proposed Response *Response Status* **W**

PROPOSED REJECT.
Polarity swap may also occur within the wiring. Defining the polarity at MDI only would be insufficient.

Cl **168** *SC* **168.8.3** *P* **62** *L* **48** # 43

Fischer, Peter BKS Kabel-Service AG

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

There is not mentioned that the MDI connector shall be still operating after withdrawal and reinsertion under load to include hot plugging.

SuggestedRemedy

Add a sentence: The MDI connectors shall be operating after No# of cycles of withdrawal and insertion cycles.

Proposed Response *Response Status* **W**

PROPOSED REJECT.
Reliability of connectors is generally out of scope for 802.3, but would appropriately be defined in a referenced IEC specification.

Cl **168** *SC* **168.10** *P* **64** *L* **38** # 37

Jones, Peter Cisco

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

Editors note says "Consider whether any of these are dependent on the mixing segment delay (length), and, if so, suggest modifications to be consistent with the objectives. "
I don't think any of the items in table 168.4 are affected by mixing segment delay (length). Other PHY clauses (e.g., 10BASE-T1L) do not include propagation delay in their Delay constraints

SuggestedRemedy

Remove editors note.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.
TFTD
While the editor believes the commenter is correct that these are not the impacted by mixing segment delay, multidrop is different from point to point PHYs in that collisions need to be accounted for, and those need propagation delay. The editor also notes that the crafting of this table in 802.3cg took several tries. Participants are asked to carefully consider before deleting the note.

Cl **168** *SC* **168.11.4.6** *P* **72** *L* **6** # 44

Fischer, Peter BKS Kabel-Service AG

Comment Type **TR** *Comment Status* **D** *Mixing Segment*

MXS1: As there is only one pair at the MDI the word 'any' can be misleading.

SuggestedRemedy

Write: Measured between the pair of the MDI attachment points.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
Commenter is incorrect, on the multidrop segment there are many pairs of MDI; however, the wording in the Description portion of MXS1 and MXS3 is somewhat misleading. It also needs to be reflected in the requirements (168.7.1 and 168.7.3 on page 62)
Suggest:
Change:
P62L20: "The mixing segment shall meet the insertion loss characteristics TBD." to "The mixing segment shall meet the insertion loss characteristics TBD between each pair of MDI attachment points."
P62L30: "between any two MDI attachment points." to "between each pair of MDI attachment points."
P72L6 and P72L11: Change Value/Comment text from "between any pair of MDI attachment points" to "between each pair of MDI attachment points"

Cl **168** *SC* **168.11.4.7** *P* **72** *L* **24** # 45

Fischer, Peter BKS Kabel-Service AG

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

MDI2: Include hot plugging

SuggestedRemedy

Add number of operation cycles under load.

Proposed Response *Response Status* **W**

PROPOSED REJECT.
Reliability of connectors is generally out of scope for 802.3, but would appropriately be defined in a referenced IEC specification