Cl **00** *SC* **0** *P* **1** *L* **1** # 1

Abramson, David — Texas Instruments

Comment Type **TR** *Comment Status* **A** *OK*

There is a total of 20 comments that Andy Gardner will be resubmitting for me. These comments (from D1.4 comments) are numbers: 92, 94, 119, 118, 111, 112, 116, 121, 98, 108, 109, 99, 124, 126, 127, 128, 100, 105, 130, 131

SuggestedRemedy

See proposed changes from resubmitted comments

Response *Response Status* **C**

ACCEPT. EZ.

The comments referred to above have been renumbered as 2-21 in this database. This comment is accepted since it is just a pointer to those comments.

Cl **104** *SC* **104.4.3.6** *P* **49** *L* **26** # 2

Abramson, David — Texas Instruments

Comment Type **TR** *Comment Status* **A** *DaveA*

This comment applies to Figure 104-6.
The state diagram requires the pd_fault variable to be set to true when fault_detected occurs. What is fault_detected? How can I design a PD to do this?

SuggestedRemedy

Add appropriate definitions for fault_detected and pd_fault.

Response *Response Status* **C**

ACCEPT.

Change fault_detected TRUE definition to read as:
"TRUE: the PD no longer requires power as the result of an implementation specific error condition."

Add pd_fault bit to table 104-8 bit 11.

Example (not for inclusion): The PD has gone offline due to a thermal overload and needs to cool off.

Cl **104** *SC* **104.4.4** *P* **50** *L* **6** # 3

Abramson, David — Texas Instruments

Comment Type **TR** *Comment Status* **A** *DaveA*

This comment applies to Table 104-4.
The PD must be capable of producing a "Vgood" shunt for a 17mA current (item 1 of the table), but must draw less than 20mA whenever the Voltage is less than Vsig_disable (Isignature_limit).
This requires a current limit between 17mA and 20mA (+/- 8%). I believe this puts unnecessary requirements on the PD that will increase its cost.

SuggestedRemedy

Change Isignature_limit to 24mA.

Response *Response Status* **C**

ACCEPT.

See comments 128.

Cl **104** *SC* **104.4.6** *P* **51** *L* **41** # 4

Abramson, David — Texas Instruments

Comment Type **E** *Comment Status* **A** *DaveA*

This comment applies to item 7 of table 104-6.
We need to reference section 104.4.6.1 for the inrush enable delay time (tpower_dly)

SuggestedRemedy

Add "104.4.6.1" to additional information column.

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.1.3** *P* **34** *L* **45** # 5

Abramson, David Texas Instruments

Comment Type **E** *Comment Status* **A** *DaveA*

A PoDL system.is defined as Type A or Type B..A Type A+B system is..
How can we have Type A+B if it has to be Type A or Type B?

SuggestedRemedy

change to: "is defined as either Type A, Type B, or Type A+B. This will match 104.4.1 as well.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE. EZ.

Change

" is defined as Type A or Type B."

to

"is defined as either Type A, Type B, or Type C." This will match 104.4.1 as well.

Cl **104** *SC* **104.3.3.1** *P* **36** *L* **28** # 6

Abramson, David Texas Instruments

Comment Type **E** *Comment Status* **A** *DaveA*

"Prior to application of normal operating voltage." What exactly is "normal"? Clause 33 just says "operating". Why have we added "normal"

SuggestedRemedy

remove "normal" throughout this section (and rest of draft if used in a similar manner).

Response *Response Status* **C**

ACCEPT IN PRINCIPLE. EZ.

Editor given license to search and replace "normal operating" with just "normal".

Cl **104** *SC* **104.3.3.3** *P* **37** *L* **51** # 7

Abramson, David Texas Instruments

Comment Type **TR** *Comment Status* **A** *DaveA*

The difference between power_applied and pi_powered is not clear

SuggestedRemedy

Explain the difference or consolidate them into one variable and update state diagram accordingly.

Response *Response Status* **C**

ACCEPT.

Change pi_powered to power_stable.

The definition of power_stable is:

TRUE: the PSE has begun steady state operation.
FALSE: the PSE is either not applying full operating voltage or has begun applying full operating voltage but is still in the POWER_UP state.

Cl **104** *SC* **104.3.3.3** *P* **38** *L* **1** # 8

Abramson, David Texas Instruments

Comment Type **E** *Comment Status* **A** *DaveA*

power_not_available is the only variable we use in the negative

SuggestedRemedy

Change power_not_available to power_available and update state diagram accordingly.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE. EZ.

Editor given license to make the change.

Cl **104** *SC* **104.3.3.6** *P* **40** *L* **10** # 9

Abramson, David Texas Instruments

Comment Type **E** *Comment Status* **A** *DaveA*

This comment applies to figure 104-4, IDLE state.
Why are we calling out pi_detecting and pi_powered as set to FALSE? There is no way to get to IDLE with those set to TRUE. We don't call out pi_discharge_en.

SuggestedRemedy

remove pi_powered and pi_detecting assignments from IDLE.

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.3.3.6** *P* **40** *L* **16** # 10

Abramson, David Texas Instruments

Comment Type **TR** *Comment Status* **R** *DaveA*

This comment applies to figure 104-4, DETECTION state.
The "start Tdet" assignment is missing.

SuggestedRemedy

Add "start Tdet" to the DETECTION state.

Response *Response Status* **C**

REJECT.

Change Figure 104-5 to Figure 104-4 cont'd.

The tdet stop and start assigments were moved to the detection state machine shown in figure 104-5 on page 41.

Cl **104** *SC* **104.3.3.6** *P* **40** *L* **48** # 11

Abramson, David Texas Instruments

Comment Type **ER** *Comment Status* **A** *DaveA*

This comment applies to Figure 104-4.
Do we need to call out values for pi_sleeping and pi_powered if they haven't changed from the previous state? I think no.

SuggestedRemedy

Remove pi_sleeping and pi_powered assignments in the sleep state. The whole state machine should be checked for this situation. The overload state has the same problem.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Remove superfluous pi_sleeping and pi_powered assignments in SETTLE_SLEEP.

Remove pi_detecting and pi_powered in IDLE state.

Remove pi_powered and pi_sleeping from SLEEP state.

Retain assignments in OVERLOAD state since the overload_detected entry arc has multiple entry points.

See comment 106.

Cl **104** *SC* **104.3.4.1** *P* **41** *L* **32** # 12

Abramson, David Texas Instruments

Comment Type **E** *Comment Status* **A** *DaveA*

Poor wording: "All detection currents at the PI shall be within the Ivalid current range as specified in Table 104-2 with a valid PD detection signature connected as specified in Table 104-4.

SuggestedRemedy

Reword: "All detection currents at the PI shall be within the Ivalid current range, as specified in Table 104-2, when connected to a valid PD detection signature as specified in Table 104-4."

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.3.6** *P* **42** *L* **41** # 13

Abramson, David Texas Instruments

Comment Type **E** *Comment Status* **A** *DaveA*

"prior to application offull operating voltage."

SuggestedRemedy

add space in "of full"

Response *Response Status* **C**

ACCEPT. EZ.

OBE by 24.

Cl **104** *SC* **104.3.6** *P* **43** *L* **7** # 14

Abramson, David Texas Instruments

Comment Type **E** *Comment Status* **A** *DaveA*

This comment applies to the additional information column in Table 104-3.
Be consistant with the "and" when multiple sections/tables are referenced. Currently both "and" and "&" are used.

SuggestedRemedy

Replace all "and"s and "&"s with commas.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE. EZ.

Replace "&" with "and" throughout the tables.

Cl **104** *SC* **104.3.6** *P* **43** *L* **15** # 15

Abramson, David Texas Instruments

Comment Type **ER** *Comment Status* **A** *DaveA*

This comment applies to Item 3 in Table 104-3.
Section 104.3.6.1 (additional information column) doesn't mention anything about dV/dt.

SuggestedRemedy

Add section to explain these specs (if needed) and correct the section referenced. Or remove the additional information reference.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Should reference 104.3.6.3. Change subclause title to "PSE ripple and transients".

Fix cross reference to be 104.3.6.3 and see 75 (do later).

Cl **104** *SC* **104.3.6** *P* **44** *L* **13** # 16

Abramson, David Texas Instruments

Comment Type **TR** *Comment Status* **A** *DaveA*

This comment applies to Table 104-3 (continued).
The MVFS threshold is the same same as for existing AT PoE, but the operating current can by more than twice as high (1.36A according to Table 104-1).
In addition, event the new BT standard has doubled the MPS window width (4-14mA) for a maximum load current of 1.73A (1.27x larger than PoDL).
I believe PDs need to drop their current to below 2mA in sleep mode (acutally Isleep_pd is 100uA), so why not lower the minimum?

SuggestedRemedy

Increase the MVFS current range from (5mA to 10mA) to (2mA to 10mA).

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Change MFVS range from 5mA to 10mA to 2.5mA to 10mA.

Cl **104** *SC* **104.3.6.4** *P* **45** *L* **23** # 17

Abramson, David Texas Instruments

Comment Type **T** *Comment Status* **A** *DaveA*

"The specification for Tinrush in Table 104-3 applies to the PSE power up time allowed for a PD after completion of detection."
The Tinrush timer does not start until after an optional classification cycle.

SuggestedRemedy

Change sentece to: ".after completion of detection and optional classification."

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.4.3.3** *P* **47** *L* **22** # 18

Abramson, David Texas Instruments

Comment Type **TR** *Comment Status* **A** *DaveA*

variable POR is poorly defined.
Is power-on reset defined somewhere? This is a data spec after all.

SuggestedRemedy

Change variable to something like "pd_reset" as in PoE. See Clause 33 for proper text.

Response *Response Status* **C**

ACCEPT.

Replace POR with pd_reset and define as in 802.3at:
"An implementation-specific control variable that unconditionally resets the PD state diagram to the RESET state.
Values:
TRUE: The device has been reset.
FALSE: The device has not been reset (default)."

Editorial license to fix PD state machine accordingly.

Cl **104** *SC* **104.4.3.3** *P* **47** *L* **26** # 19

Abramson, David Texas Instruments

Comment Type **ER** *Comment Status* **A** *DaveA*

The definitions of the "present_XXX" varaibles are poor.

SuggestedRemedy

Change definition of TRUE and FALSE for present_det_sig, present_iwakeup, and present_mfvs from "present the xxx signature" and "do not present the xxx signature." to: "the xxx signature is to be applied to the PD PI." and "the xxx signature is not to be applied to the PD PI."

Response *Response Status* **C**

ACCEPT.

See comment 275.

Cl **104** *SC* **104.6.1** *P* **54** *L* **27** # 20

Abramson, David Texas Instruments

Comment Type **E** *Comment Status* **A** *DaveA*

We shouldn't call out a direct implementation.

SuggestedRemedy

Change "the master device" to "a master device" or "an example of the master device"

Response *Response Status* **C**

ACCEPT IN PRINCIPLE. EZ.

Change reference text to "the block diagram of a master device."

Cl **104** *SC* **104.6.3.1** *P* **55** *L* **38** # 21

Abramson, David Texas Instruments

Comment Type **E** *Comment Status* **A** *DaveA*

This paragraph seems to have a different line spacing than the rest

SuggestedRemedy

Fix if this is true.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE. EZ.

Cl **30** *SC* **14.1.1.3** *P* **21** *L* **38** # 22

Amason, Dale NXP

Comment Type **E** *Comment Status* **A** *OK*

Typo in definition of unknown attribute. Should be "true state not yet known".

Typo repeated numerous times: 30.14.1.1.4, .5, .6

SuggestedRemedy

Change "know" to "known"

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **6.4.3** *P* **59** *L* **12** # 23

Amason, Dale NXP

Comment Type **E** *Comment Status* **A** *OK*

Figure 104-12
Font size in certain blocks very small.

SuggestedRemedy

Check font size against minimum allowed in IEEE Style Guide. Consider re-drawing figure to make font more easily readible.

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104..3.5** *P* **42** *L* **41** # 24

Andrewartha, Mike Microsoft

Comment Type **ER** *Comment Status* **A** *OK*

Typo: "offull" should be "of full"

SuggestedRemedy

Change "offull" to "of full"

Response *Response Status* **C**

ACCEPT. EZ.

See comment 13.

Cl **00** *SC* **0** *P* *L* # 25

Andrewartha, Mike Microsoft

Comment Type **E** *Comment Status* **A** *OK*

PDF document file bookmarks have extraneous entries that are not clause or subclause headings. For example under 104.3 the first 6 paragraphs appear as bookmarks.

SuggestedRemedy

Correct the paragraph types and regenerate the PDF file to eliminate the extraneous bookmark entries.

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.5.2** *P* **53** *L* **28** # 26

Andrewartha, Mike Microsoft

Comment Type **TR** *Comment Status* **A** *OK*

This paragraph defines a requirement for the PSE to withstand short circuit current of I_LIM max indefinitely. This appears to contradict the requirements in 104.3.6.2.1 for limiting output current for a period of TLIM.

SuggestedRemedy

Remove the contradiction or clarify the intent through appropriate changes in one section or the other.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Delete " The magnitude of the current through such a short circuit shall not exceed ILIM max as defined in Table 104–3." from 104.5.3. PSE output current at short circuit condition is defined in 104.3.6.2.1.

Cl **104** *SC* **104.3.6.2.1** *P* **44** *L* **45** # 27

Andrewartha, Mike Microsoft

Comment Type **TR** *Comment Status* **A** *OK*

This subclause needs clarification to indicate the required PSE behavior on an overload condition. The PSE state diagram has an overload state and there are variables and associated timers described the state diagram does not show detection of an overload condition, starting or stopping the associated timers or removing power. 104.3.6.2.1 immplies that a PSE can remeove power during a current limiting condition but has no rules for doing so.

SuggestedRemedy

Add appropriate language to the subclause and/or transitions to the state diagram to clearly explain the required operation in the event of a short circuit condition as well as the details of overload detection, timeout and resulting power removal

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

OBE by 98.

Cl **104** *SC* **104.5.2** *P* **53** *L* **28** # 28

Andrewartha, Mike Microsoft

Comment Type **TR** *Comment Status* **R** *OK*

The draft does not address the system level impact of a short circuit. 104.5.2 states a requirement that the PSE is not damaged if the PI is shorted for an indefinite time but it does not address the resulting temperature rise in the link segment, presumably a cable. Without knowing more about the cable construction we don't know the impact of a short.

SuggestedRemedy

Add appropriate language to ensure that a short circuit does not result in an exothermic event in the link segment. Possible remedies include:

A time limit before PSE shutdown on short circuit, rather than the current indefinite requirement.

Appropriate cable construction requirements to ensure that the worst case I_LIM current does not cause an unsafe temperature rise in the link segment.

Other solutions as may be envisioned by the task force.

Response *Response Status* **C**

REJECT.

System level behavior is beyond the scope of the standard.

A PSE is required to remove power during a current limiting event after a max delay of 75ms. After overload, re-detection is required before power can be re-applied. This makes it unlikely that the cable can be overheated in response to a short circuit condition.

Cl **00** *SC* **0** *P* **1** *L* **2** # 29

Anslow, Pete Ciena

Comment Type **E** *Comment Status* **A** *OK*

This will be an amendment of IEEE Std 802.3-2015

SuggestedRemedy

Change the variable base_year to 2015 in all files in the book. This should set all instances of "IEEE Std 802.3-201x" and "IEEE Std 802.3-2012" to "IEEE Std 802.3-2015"

Response *Response Status* **C**

ACCEPT. EZ.

Cl **00** *SC* **0** *P* **1** *L* **30** # 30

Anslow, Pete Ciena

Comment Type **E** *Comment Status* **A** *OK*

The copyright year should be set to the year that the draft is published in.

SuggestedRemedy

Change the variable copyright_year to 2016 in all files in the book.

Response *Response Status* **C**

ACCEPT. EZ. See comment 69.

Cl **FM** *SC* **FM** *P* **10** *L* **13** # 31

Anslow, Pete Ciena

Comment Type **E** *Comment Status* **A** *OK*

The description of this amendment has to be completed

SuggestedRemedy

Change "IEEE Std 802.3xxTM-201x" to: "IEEE Std 802.3buTM-201x" and fill in the description of the amendment.

Response *Response Status* **C**

ACCEPT. EZ.

See comment 386.

Cl **30** *SC* **30** *P* **17** *L* **4** # 32

Anslow, Pete Ciena

Comment Type **E** *Comment Status* **A** *OK*

The editing instruction needs to specify where to edit.

SuggestedRemedy

Change to: "Change the first paragraph of Clause 30 as follows:

Response *Response Status* **C**

ACCEPT. EZ.

Cl **30** *SC* **30.2.2.1** *P* **17** *L* **13** # 33

Anslow, Pete Ciena

Comment Type **E** *Comment Status* **A** *OK*

For amended clauses, the usual practice is to include one of each level of heading above an amended subclause. Here, 30.2 and 30.2.2 are missing.

SuggestedRemedy

Add the headings for 30.2 and 30.2.2

Response *Response Status* **C**

ACCEPT. EZ.

Cl **30** *SC* **30.2.3** *P* **18** *L* **1** # 34

Anslow, Pete Ciena

Comment Type **E** *Comment Status* **A** *OK*

Figure 30-3 is being changed by the P802.3br draft, which is likely to complete before P802.3bu. However, the replacement in this draft does not take the .3br changes into account.

SuggestedRemedy

Change the editing instruction to: "Replace Figure 30-3 (as modified by IEEE Std 802.3br-201x) with the following:"
Use the version in the P802.3br draft as the basis for the changes being made here.

Response *Response Status* **C**

ACCEPT. EZ.

Cl **30** *SC* **30.2.5** *P* **19** *L* **3** # 35

Anslow, Pete Ciena

Comment Type **E** *Comment Status* **A** *OK*

P802.3br, which is likely to complete before P802.3bu, is already adding Tables 30-8 and 30-9.
Also, the last sentence of the first paragraph of 30.2.5 refers to this set of tables and has to be modified to account for any extra tables.

SuggestedRemedy

Change the added table to Table 30-10.
Show the last sentence of the first paragraph of 30.2.5 as changing from "... are specified in Table 30-1a through Table 30-9." to "... are specified in Table 30-1a through Table 30-10."

Response *Response Status* **C**

ACCEPT. EZ.

Cl **30** *SC* **30.14** *P* **20** *L* **45** # 36

Anslow, Pete Ciena

Comment Type **E** *Comment Status* **A** *OK*

There is no editing instruction for 30.14.
P802.3br, which is likely to complete before P802.3bu, is already adding 30.14.

SuggestedRemedy

Insert an editing instruction: "Insert 30.15 after 30.14 (as inserted by IEEE Std 802.3br-201x) as follows:"
Renumber 30.14 to be 30.15.

Response *Response Status* **C**

ACCEPT. EZ.

See 260.

Cl **30** *SC* **30.14.1.1.2** *P* **21** *L* **30** # 37

Anslow, Pete Ciena

Comment Type **E** *Comment Status* **A** *OK*

"Clause 45" should be a cross-reference

SuggestedRemedy

Make "Clause 45" a cross-reference (with format ClauseNumber) here and throughout the subclauses of 30.14 (10 instances)

Response *Response Status* **C**

ACCEPT. EZ.

Cl **30** *SC* **30.14.1.1.4** *P* **22** *L* **15** # 38

Anslow, Pete Ciena

Comment Type **E** *Comment Status* **A** *OK*

When referencing other places in the standard, we do not include "subclause"

SuggestedRemedy

Change "in subclause 104.3.1" to "in 104.3.1"
In 30.14.1.1.5, change "in subclause 104.4.1" to "in 104.4.1"

Response *Response Status* **C**

ACCEPT. EZ.

See 194.

Cl **45** *SC* **45.2** *P* **27** *L* **13** # 39

Anslow, Pete Ciena

Comment Type **TR** *Comment Status* **A** *OK*

P802.3bn, which is likely to complete before P802.3bu, is already allocating Device address 12 to "OFDM PMA/PMD".

SuggestedRemedy

Change the device address for "Power unit" to 13 and show the changes to Tables 45-1 and 45-2 with respect to the tables as modified by IEEE Std 802.3bn-201x.
Change 45.2.7a to 45.2.7b

Response *Response Status* **C**

ACCEPT. EZ.

See comment 323.

Cl **45** *SC* **45.2.7a** *P* **28** *L* **15** # 40

Anslow, Pete Ciena

Comment Type **E** *Comment Status* **A** *OK*

In Table 45-211e, the register names should not end in "register"

SuggestedRemedy

Remove "register" from the three register names in Table 45-211e

Response *Response Status* **C**

ACCEPT. EZ.

Cl **45** *SC* **45.2.7a.2.6** *P* **31** *L* **6** # 41

Anslow, Pete Ciena

Comment Type **E** *Comment Status* **A** *OK*

"45.2" should be a cross-reference.

SuggestedRemedy

Make "45.2" a cross-reference.

Response *Response Status* **C**

ACCEPT. EZ.

Cl **45** *SC* **45.2.7a.2.8** *P* **31** *L* **15** # 42

Anslow, Pete Ciena

Comment Type **E** *Comment Status* **A** *OK*

Many bit combinations are reserved for future use in Clause 45. This is shown in the tables and not listed in the text.

SuggestedRemedy

Delete the sentence "The combinations '1010' thru '1111' for bits 12.1.6:3 have been reserved for future use."
Also, in 45.2.7a.2.9, delete the paragraph "The combinations '111' and '110' for bits 12.1.2:0 have been reserved for future use."

Response *Response Status* **C**

ACCEPT. EZ.

See 209.

Cl **104** *SC* **104.1.2** *P* **33** *L* **33** # 43

Anslow, Pete Ciena

Comment Type **E** *Comment Status* **A** *OK*

Space missing in "IEEE802.3"

SuggestedRemedy

Change "IEEE802.3" to "IEEE 802.3"

Response *Response Status* **C**

ACCEPT. EZ.

See 213.

Cl **104** *SC* **104.1.2** *P* **33** *L* **6** # 44

Anslow, Pete Ciena

Comment Type **E** *Comment Status* **A** *OK*

http://www.ieee802.org/3/WG_tools/editorial/requirements/words.html requires: Physical Layer (always capped)

SuggestedRemedy

Change "physical layers" to "Physical Layers" page 33 lines 6 and 36, page 53 line 35
Change "physical layer" to "Physical Layer" page 33 line 9
Change "Physical layer" to "Physical Layer" page 33 line 16

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** SC **104.1.2** P **34** L **1** # 45

Anslow, Pete Ciena

Comment Type **E** *Comment Status* **A** *OK*

According to the IEEE style manual figure titles should be "centered below the figure" (as per the 802.3 Frame template).

SuggestedRemedy

Move the titles for all figures to be centred below the figure. This applies to Figures 104-1 through 104-13.

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** SC **104.2** P **35** L **18** # 46

Anslow, Pete Ciena

Comment Type **TR** *Comment Status* **A** *OK*

Subclause 1.2.6 is:
1.2.6 Accuracy and resolution of numerical quantities
Unless otherwise stated, numerical limits in this standard are to be taken as exact, with the number of significant digits and trailing zeros having no significance.

Consequently trailing zeros after the decimal point are generally not shown in 802.3.

SuggestedRemedy

On page 35 line 18 and page 62 line 19, change "6.0omega" to "6 omega" (use a non-breaking space (Ctrl space) between the number and its unit).
In Tables 104-1, 104-3, 104-4, 104-6, 104-7, remove all trailing zeros after the decimal point.

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** SC **104.2** P **35** L **32** # 47

Anslow, Pete Ciena

Comment Type **E** *Comment Status* **A** *OK*

The footnotes to Table 104-1 are not according to the IEEE style manual. They should be numbered a, b, etc. and be associated with the table.

SuggestedRemedy

Place the insertion point at the position for the footnote (e.g. at the end of "VPSE(max) (V)"), then Special, Footnote will insert a suitable table footnote.

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** SC **104.3.4.1** P **41** L **40** # 48

Anslow, Pete Ciena

Comment Type **E** *Comment Status* **A** *OK*

The IEEE style manual says:
"An em dash (-) should be used to indicate the lack of data for a particular cell in a table."

SuggestedRemedy

Insert an em dash (Ctrl-q Shft-q) in all empty cells in the Min and Max column of Tables 104-2, 104-3, 104-4, 104-5, 104-6, 104-7

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** SC **104.7** P **61** L **2** # 49

Anslow, Pete Ciena

Comment Type **E** *Comment Status* **A** *OK*

The quoted clause title is incorrect in three places on Page 104.7 and in the title of 104.7.4

SuggestedRemedy

In the title of 104.7, the first sentence of 104.7.1, in the Table in 104.7.2.2, and in the title of 104.7.4, change the text after "Clause 104," to "Single-Pair Power over Data Lines (PoDL)" to match the title of Clause 104.

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** SC **104.7.2.2** P **61** L **43** # 50

Anslow, Pete Ciena

Comment Type **E** *Comment Status* **A** *OK*

"IEEE Std 802.3xx-201x" should be "IEEE Std 802.3bu-201x"

SuggestedRemedy

Change "IEEE Std 802.3xx-201x" to "IEEE Std 802.3bu-201x"

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.7.3** *P* **62** *L* **1** # 51

Anslow, Pete Ciena

Comment Type **E** *Comment Status* **A** *OK*

The table in 104.7.3 "Major capabilities/options" is empty.

SuggestedRemedy

Either add some entries or remove the section.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Editor given license to work with PICs editor to populate table in 104.7.3.

See comments 84 and 88.

Cl **104** *SC* **104.7.4.1** *P* **62** *L* **16** # 52

Anslow, Pete Ciena

Comment Type **E** *Comment Status* **A** *OK*

The order of columns in the tables in 104.7.4.1 through 104.7.4.7 is not the same as for the PICS in all other recent amendments and the 802.3 template.

SuggestedRemedy

Move the Value/Comment column in the tables in 104.7.4.1 through 104.7.4.7 to be between the Subclause and Status columns.

Response *Response Status* **C**

ACCEPT. EZ.

See comment 235.

Cl **104A** *SC* **104A.1** *P* **71** *L* **12** # 53

Anslow, Pete Ciena

Comment Type **E** *Comment Status* **A** *OK*

It is a good idea to give all equations like this an equation number so that they can easily be referenced.

SuggestedRemedy

Add equation number 104A-1 by applying paragraph tag "Aequation". Change "... Is given by:" to "... Is given by Equation (104A-1):" where "Equation (104A-1)" is a cross-reference with format "EquationNumber"

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.6.2** *P* **55** *L* **6** # 54

Beaudoin, Denis TI

Comment Type **T** *Comment Status* **R** *OK*

: There doesn't seem to be any support for polarity inversion as supported on most other POE clauses. In previous POE clauses there is a Bridge Diode that allows either polarity operation.

SuggestedRemedy

Add support for either polarity at the slave end of the link.

Texas Instruments dbeaudoin@ti.com W: 214-480-3287/77 M: 214-475-9193

Response *Response Status* **C**

REJECT.

PoDL does not provide for polarity inversion because it is not intended for use in traditional LAN wiring applications. Polarity protection is left to the implementor.

Cl **104** *SC* **104** *P* **33** *L* **0** # 55

Brown, Matt APM

Comment Type **E** *Comment Status* **A** *OK*

Many figures use Calibri font. For graphics, the style manual recommends use of Arial or Times New Roman.

SuggestedRemedy

Change font to one of the recommended fonts in the following figures:
Figure 104-{1,2,4,5,6,9,10,11,13}

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104** *P* **33** *L* **0** # 56

Brown, Matt APM

Comment Type **E** *Comment Status* **A** *OK*

Many figure use font size that is too small read. Rendered at 4-6 pt. Style guide recommends 8 pt.

SuggestedRemedy

Increase font size to at least 8 pt in the following figures:
Figure 104-{7,8,12}

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.6.1** *P* **54** *L* **29** # 57

Carlson, Steven High Speed Design, In

Comment Type **ER** *Comment Status* **A** *OK*

Figure 104-7- SCCP master block diagram
The figure looks more appropriate for an IC datasheet than a standards document.

SuggestedRemedy

In Figure 104-7- SCCP master block diagram, remove the triangle symbol (presumably a receiver buffer, but not explicitly called out as such) and label the input line SCCP RX. Label the transmit line SCCP TX and remove the SPST graphic.

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.6** *P* **54** *L* **19** # 58

Carlson, Steven High Speed Design, In

Comment Type **ER** *Comment Status* **A** *OK*

The current text, "SCCP is an open-drain, half-duplex bidirectional serial data bus," implies a partiuclaur implementation.

SuggestedRemedy

Change to:

SCCP is a current-sinking, wire-OR (e.g. open-drain or open-collector), half-duplex bidirectional serial data bus.

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.6.2** *P* **55** *L* **6** # 59

Carlson, Steven High Speed Design, In

Comment Type **ER** *Comment Status* **A** *OK*

In Figure 104-8-SCCP slave block diagram, the same issues are present in the figure.

SuggestedRemedy

Please change the figure per the previous comment on Figure 104-7- SCCP master block diagram. Remove the "and ROM" as this assumes a particular implementation.

Response *Response Status* **C**

ACCEPT. EZ.

See comment 57.

Cl **104** *SC* **104.7.4.1** *P* **62** *L* **15** # 60

Carlson, Steven High Speed Design, In

Comment Type **ER** *Comment Status* **A** *OK*

The PICS table does not follow the standard column format of

Item Feature Subclause Value/Comment Status Support

SuggestedRemedy

Re-arrange columns to

Item Feature Subclause Value/Comment Status Support

Response *Response Status* **C**

ACCEPT. EZ.

See comment 235.

Cl **104** *SC* **104.6.3.4** *P* **57** *L* **40** # 61

Carlson, Steven High Speed Design, In

Comment Type **TR** *Comment Status* **A** *OK*

Table 104-7-SCCP electrical requirements lists electrical requirments for SCCP, but no rise or fall times are specified, nor is a maximum bus capacitance.

SuggestedRemedy

Add rise and fall time, and bus capacitance specifications to Table 104-7.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Add a bus capacitance spec based on max link segment capacitance based on 40m 22 AWG.

Rise time and fall time to be added per 121.

See 121 and 255.

Cl **104** *SC* **104.7.4** *P* **62** *L* **1** # 62

Chabot, Craig UNH-IOL

Comment Type **ER** *Comment Status* **A** *OK*

Changes to the text made for D2.0 have altered Shalls throughout the text, and therefore, a PICS revision is required.

SuggestedRemedy

See chabot_3bu_1_0116

Response *Response Status* **C**

ACCEPT.

TFTD. See comments 200 and 212.

Cl **104** *SC* **104.3.3.6** *P* **40** *L* **5** # 63

Chacon, ??? ???

Comment Type **T** *Comment Status* **A** *OK*

BallotID 20080305GOT: Based on the convention where a pi_* signal is assigned only if a state changes its value when such state is entered, the following changes should be made for consistency. However, these changes are not required to understand the FSM.
State: DETECTION, POWER_UP
Remove "pi sleeping <= FALSE
State: POWER_UP
Remove "pi_discharge_en <= FALSE"

SuggestedRemedy

Remove the following lines from the indicated states.
State: DETECTION, POWER_UP
Remove "pi_discharge_en <= FALSE"
State: POWER_UP
Remove "pi_sleeping <= FALSE"
State: SLEEP
Remove "pi_sleeping <= TRUE"

Response *Response Status* **C**

ACCEPT.

Remove the following lines from the indicated states.
State: DETECTION, POWER_UP
Remove "pi_discharge_en <= FALSE"
State: POWER_UP
Remove "pi_sleeping <= FALSE"
State: SLEEP
Remove "pi_sleeping <= TRUE"

Cl **01** *SC* **1.4.2** *P* **16** *L* **8** # 64

Chalupsky, David Intel Corp.

Comment Type **E** *Comment Status* **A** *OK*

missing space between PoDL and Unregulated

SuggestedRemedy

add space

Response *Response Status* **C**

ACCEPT. EZ.

See comment 79.

Cl **45** *SC* **45.2.7a.1** *P* **28** *L* **26** # 65

Chalupsky, David Intel Corp.

Comment Type **E** *Comment Status* **A** *OK*

missing period and space in "Table 45-211f The default"

SuggestedRemedy

add period and space after 45-211f

Response *Response Status* **C**

ACCEPT. EZ.

See 136.

Cl **45** *SC* **45.2.7a.1** *P* **28** *L* **28** # 66

Chalupsky, David Intel Corp.

Comment Type **E** *Comment Status* **A** *OK*

double period and end of sentence

SuggestedRemedy

delete one

Response *Response Status* **C**

ACCEPT. EZ.

See 137.

Cl **104** *SC* **104.1.3** *P* **34** *L* **45** # 67

Chalupsky, David — Intel Corp.

Comment Type **E** *Comment Status* **A** *OK*

the word "Ethernet" is not necessary to describe 100BASE-T1. it is not used for the other instances of PHY names in the paragraph.

SuggestedRemedy

delete the word Ethernet

Response *Response Status* **C**

ACCEPT. EZ.

Cl **00** *SC* **0** *P* *L* # 68

Chalupsky, David — Intel Corp.

Comment Type **E** *Comment Status* **A** *OK*

inconsistent header between front matter and main body of document. Through page 14 header says ammendment to 802.3-201X. Page 15 on says ammendment to 802.3-2012.

SuggestedRemedy

change header throughout to indicate draft is an amemndment to 802.3-2015. you may just need to get the latest Framemaker template

Response *Response Status* **C**

ACCEPT. EZ.

Cl **00** *SC* **0** *P* *L* # 69

Chalupsky, David — Intel Corp.

Comment Type **E** *Comment Status* **A** *OK*

copyright date in footer (through page 14) says 201x.

SuggestedRemedy

change copyright to 2015 or 2016 depending upon release date of next draft.

Response *Response Status* **C**

ACCEPT. EZ.

Cl **FM** *SC* **FM** *P* **1** *L* **26** # 70

Chalupsky, David — Intel Corp.

Comment Type **E** *Comment Status* **A** *OK*

cover page errors. First paragraph says 802.3-201X, and 'prepared for task force review'

SuggestedRemedy

change 802.3-201X to 802.3-2015. replace 'task force review' with 'working group ballot' update copyright date line 29.

Response *Response Status* **C**

ACCEPT. EZ. See comment 29.

Cl **104** *SC* **104.1.3** *P* **35** *L* **14** # 71

Darshan, Yair — Microsemi

Comment Type **TR** *Comment Status* **A** *OK*

We need to add text the prevents DC from PSE to PHY and prevents data line signal to be loaded by PSE

SuggestedRemedy

Add note below figure 104-3:
PSE interface elements that prevents loading the data signal by the PSE are not shown.
PHY elements that prevents DC to be delivered from the PSE to the PHY are not shown.

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.2** *P* **35** *L* **34** # 72

Darshan, Yair — Microsemi

Comment Type **TR** *Comment Status* **A** *OK*

Some of the terms in Table 104-1 are not defined.
-Vpse_oc
-IPI (need to be defined in Figure 104.3

SuggestedRemedy

Define Vpse_oc and IPI in notes below Table 104-1

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

See comment 273. Editor given license to add definitions.

Cl **104** *SC* **104.2** *P* **35** *L* **18** # 73

Darshan, Yair Microsemi

Comment Type **TR** *Comment Status* **A** *OK*

The DC loop resistance is defined for 12 V system but it is not defined for 24V and 48V

SuggestedRemedy

Define loop resistance for 24 and 48V systems.
or defined the quadratic equation that ties between PSE voltage, PD required power and loop resistance for better deing flexibility in additio to table 104-1.

The above requires some work that already done in previous meetings and now it is not shown in D2.0.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

See comment 236.

Reword 104.2 as follows:

"The DC loop resistance of the link segment shall be less than 6 ohms for 12 V unregulated system power classes. The DC loop resistance shall be less than 6.5 ohms for 12V regulated, 24V regulated and unregulated, and 48V regulated and unregulated system power classes."

Delete Annex 104A, move the equation from 104A to 104.2.

Cl **104** *SC* **104.3.6** *P* **43** *L* **41** # 74

Darshan, Yair Microsemi

Comment Type **TR** *Comment Status* **A** *OK*

Table 104-3: Tinrush is defined however Inrush is not defined.
10uF max is defined in the PD. Note sure it it is sufficient for higher power at higher PSE voltages e.g. 48V.
Iinrush_max is not defined. Does 300A at the 1st 1msec is OK?

SuggestedRemedy

Group to discuss the above concerns.
To add editor note:
Editor Notes:
To adress definitions of Inrush_max and profile of Iinrush max over time.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Add normative text to 104.3.6.2 as follows:

"Iinrush is the PSE output current during the POWER_UP state. During the POWER_UP state, PSE output shall not exceed ILIM max."

Cl **104** *SC* **104.3.5** *P* **42** *L* **41** # 75

DiBiaso, Eric TE Connectivity

Comment Type **E** *Comment Status* **A** *OK*

Add Space to offull

.... after detection and prior to application offull operating....

SuggestedRemedy

.... after detection and prior to application of full operating....

Response *Response Status* **C**

ACCEPT. EZ.

See comment 13.

Cl **104** *SC* **104.4.6.2** *P* **52** *L* **20** # 76

DiBiaso, Eric — TE Connectivity

Comment Type **E** *Comment Status* **A** *OK*

Unable to find Vsleep max in Table 104-4 or Table 104-6 as referenced in the following sentence:

A PD that requires detection and power-up shall draw current in the range of I_wakeup_PD for at least T_wakeup_PD when Vsleep_PD_min < Vpd < Vsleep_max as specified in Table 104-4 and Table 104-6, respectively.

SuggestedRemedy

Add Vsleep_max to table 104-6

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Add 3.45V to item 10 table 104-6.

See comment 350.

Cl **104** *SC* **104.5.3.1** *P* **53** *L* **48** # 77

DiBiaso, Eric — TE Connectivity

Comment Type **E** *Comment Status* **A** *OK*

Add plot to illustrate MDI return loss equation (104-2) for Type A PoDL system.

SuggestedRemedy

Add plot.

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.5.3.1** *P* **54** *L* **10** # 78

DiBiaso, Eric — TE Connectivity

Comment Type **E** *Comment Status* **A** *OK*

Add plot to illustrate MDI return loss equation (104-3) for Type B PoDL system.

SuggestedRemedy

Add Plot

Response *Response Status* **C**

ACCEPT. EZ.

Cl **01** *SC* **1.4.2** *P* **16** *L* **8** # 79

Donahue, Curtis — UNH-IOL

Comment Type **E** *Comment Status* **A** *OK*

"PoDLUnregualted" missing space.

SuggestedRemedy

Change "PoDLUnregulated" to "PoDL Unregulated".

Response *Response Status* **C**

ACCEPT. EZ.

Cl **30** *SC* **30.14.1.1.4** *P* **22** *L* **11** # 80

Donahue, Curtis — UNH-IOL

Comment Type **E** *Comment Status* **A** *OK*

"typeAB" is listed twice. The first instance should be "typeB". Also appears in 30.14.1.1.5 line 28.

SuggestedRemedy

On page 22 line 11 and line 28, change "typeAB" to "typeB".

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.3.3.6** *P* **40** *L* **20** # 81

Donahue, Curtis — UNH-IOL

Comment Type **E** *Comment Status* **A** *OK*

Exit conditions of CLASSIFICATION, CLASSIFICATION EVAL, and POWER UP states are all different but merge into a single input condition for RESTART state. Since the condition for each of these is different they cannot merge into a single state entry.

SuggestedRemedy

Draw 3 seperate entrance lines into the RESTART state.

Response *Response Status* **C**

ACCEPT.

Cl **104** *SC* **104.4.3.6** *P* **49** *L* **18** # 82
Donahue, Curtis UNH-IOL

Comment Type **E** *Comment Status* **A** *OK*

Exit conditions of MDI POWER1, PD SLEEP, and DO_CLASSIFICATION states are all different but merge into a single input condition for DO_DETECTION state. Since the condition for each of these is different they cannot merge into a single state entry.

SuggestedRemedy

Draw 3 seperate entrance lines into the RESTART state.

Response *Response Status* **C**

ACCEPT.

Cl **104** *SC* **104.5.2** *P* **53** *L* **26** # 83
Donahue, Curtis UNH-IOL

Comment Type **E** *Comment Status* **A** *OK*

"See clauses 96 and 97", should "96" and "97" be external references?

SuggestedRemedy

Make "96" and "97" green external references.

Response *Response Status* **C**

ACCEPT. EZ.

See comment 296.

Cl **104** *SC* **104.7.3** *P* **62** *L* **6** # 84
Donahue, Curtis UNH-IOL

Comment Type **E** *Comment Status* **A** *OK*

Major Capabilities table is empty.

SuggestedRemedy

Populate with appropriate capabilities.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

See comment 51 and 88.

Cl **104** *SC* **104.7.4.2** *P* **62** *L* **39** # 85
Donahue, Curtis UNH-IOL

Comment Type **E** *Comment Status* **A** *OK*

PSE5 and PSE6 are missing "Status" and "Support" values.

SuggestedRemedy

Populate with appropriate value.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

See chabot_3bu_1_0116.pdf page 11 lines 23-27 for remedy.

Cl **104** *SC* **104.7.4.2** *P* **63** *L* **26** # 86
Donahue, Curtis UNH-IOL

Comment Type **E** *Comment Status* **A** *OK*

PSE15 and PSE16 have a typo in SLEEEP_SETTLE.

SuggestedRemedy

Change "SLEEEP_SETTLE" to "SLEEP_SETTLE"

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.7.4.2** *P* **64** *L* **14** # 87
Donahue, Curtis UNH-IOL

Comment Type **E** *Comment Status* **A** *OK*

"PSE259" instead of "PSE29"

SuggestedRemedy

Change "PSE259" to "PSE29"

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.7.4.4** *P* **67** *L* **8** # 88

Donahue, Curtis UNH-IOL

Comment Type **E** *Comment Status* **A** *OK*

COMEL2 and COMEL3 are listed as "M" (mandatory) but really should be conditionally mandatory since the 100BASE-T1 PHY return loss requirement isn't mandatory for 1000BASE-T1 PHYs (and vice versa).

SuggestedRemedy

Change the "Status" field of COMEL2 and COMEL3 from "M" to "xxx:M" where xxx is the appropriate "Major capability" (still needs to be added to table in 104.7.3).

Also change the "Support" field from "Yes []" to "Yes [] N/A []"

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

TFTD. See comments 51 and 84.

Cl **104** *SC* **104.6** *P* **54** *L* **16** # 89

Donahue, Curtis UNH-IOL

Comment Type **T** *Comment Status* **A** *OK*

It is unclear whether SCCP is mandatory or optional.

104.1.2 states "Data may be transmitted and received between the PSE and PD prior to the application of power and subsequent to the removal of full operating voltage via the MDI using the Serial Communication Classification Protocol (SCCP) which is described in 104.6."

104.3.3.1 states "A PSE may communicate with the PD prior to the application of normal operating voltage using SCCP."

The key word being "may" in both subclauses. Does it mean that (a) a PSE and PD 'may' communicate with earch other?, (b) that when a PSE and PD communicate with each other it 'may' use SCCP to do so?, or (c) something else?

104.3.3.3 defines the variable "sccp_enable" which seems to indicate that SCCP can be not supported, meaning it is a non-mandatory feature.

SuggestedRemedy

Please make it clearer to the reader whether SCCP is mandatorally supported feature.

If SCCP is truely optional then 104.7.4.7 also needs to be updated to reflect that the "shalls" are not mandatory but conditionally mandatory.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Change "Classification is performed using SCCP. See 104.6." in 104.3.5 to "Classification is optional, and is performed using SCCP. Implementation of SCCP by a PSE is also optional."

Make SCCP optional in 104.7.3.

See comments 51, 84, and 88.

Cl **104A** *SC* **104A.1** *P* **71** *L* **16** # 90

Donahue, Curtis UNH-IOL

Comment Type **E** *Comment Status* **A** *OK*

"L" and "Ppde(max)" are not listed/defined in this paragraph while all other variables are.

SuggestedRemedy

Please add "L" and "Ppde(max)" definitions to this paragraph to help the reader.

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.3** *P* **36** *L* **1** # 91

Dove, Daniel — Dove Networking Solut

Comment Type **TR** *Comment Status* **D** *OK*

The term "Link Segment" is used extensively throughout the document. This term may create confusion relative to the term used for standardized cabling systems, for which a "link segment" is a portion of a standardized link. This does not appear to be referring to a portion of a standardized link necessarily.

SuggestedRemedy

I recommend the TF discuss and identify an appropriate term. Perhaps seek guidance from cabling manufacturers or automotive manufacturers.

Proposed Response *Response Status* **Z**

REJECT.

This comment was WITHDRAWN by the commenter.

TFTD.

Cl **104** *SC* **104.3** *P* **36** *L* **10** # 92

Dove, Daniel — Dove Networking Solut

Comment Type **TR** *Comment Status* **A** *OK*

The term "SCCP" appears here for the first time, yet it has never been defined.

SuggestedRemedy

I recommend adding it to the definitions page.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE. EZ.

Change "SCCP" to "serial communication classification protocol (SCCP)" and add definition for both serial communication classification protocol and SCCP in Clause 1

Editor granted license to add defintion for SCCP.

Cl **104** *SC* **104.3.3.3** *P* **37** *L* **9** # 93

Dove, Daniel — Dove Networking Solut

Comment Type **TR** *Comment Status* **A** *OK*

TLIM timer not identified in 104.4.3.4 nor is there a state diagram describing how TLIM Timer gets started or causes overload_detected <= TRUE

SuggestedRemedy

See attached image with description of how this should be done.

Response *Response Status* **C**

ACCEPT.

Cl **104** *SC* **104.3.3.3** *P* **37** *L* **15** # 94

Dove, Daniel — Dove Networking Solut

Comment Type **TR** *Comment Status* **A** *OK*

The wording is not how I would suggest it. "A valid MFVS is present" lacks clarity on what a valid MFVS means.

SuggestedRemedy

Remove "a valid", perhaps add "per 104.3.7.1"

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.3.3.3** *P* **37** *L* **23** # 95

Dove, Daniel — Dove Networking Solut

Comment Type **TR** *Comment Status* **A** *OK*

The variable is sccp_enabled but the description says whether or not it is "supported". Supporting something, and enabling it are two different things.

SuggestedRemedy

replace "supported" with "enabled".

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.3.3.6** *P* **40** *L* **26** # 96

Dove, Daniel — Dove Networking Solut

Comment Type **TR** *Comment Status* **A** *OK*

There is a potential race condition in CLASSIFICATION_EVAL. Going into that state, the timer is still running. So its possible that the timer could complete entering that state, and a conflict in the output direction would occur.

SuggestedRemedy

Image

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Adopt changes to PSE state diagram in CLASSIFICATION and CLASSIFICATION_EVAL state exit conditions as per "dove_01_802d3bu_2p0_comments.xlsx"

Make changes to 30.14.1.1.8 and 45.2.7a.2.4 to address this.

Cl **104** *SC* **104.3.3.6** *P* **40** *L* **26** # 97

Dove, Daniel — Dove Networking Solut

Comment Type **TR** *Comment Status* **D** *OK*

There is a potential conflict in the entry to OVERLOAD. The logic does not exclude the possibility that overload_detected occurs while pse_enable is false. If so, there would be a conflict on where to go. I realize this is unlikely, but its real.

SuggestedRemedy

I offer up a state diagram to address the fact that overload_detected is not defined exactly how it occurs. If that state diagram is adopted, then no need to add a logic term to the entry on this state. Otherwise, replace with overload_detected * pse_enable.

Proposed Response *Response Status* **Z**

REJECT.

This comment was WITHDRAWN by the commenter.

TFTD.

Cl **104** *SC* **104.3.3.6** *P* **41** *L* **1** # 98

Dove, Daniel — Dove Networking Solut

Comment Type **TR** *Comment Status* **A** *OK*

There is no state diagram for the overload_detected variable to show how it gets set and cleared.

SuggestedRemedy

I offer up a state diagram to address the fact that overload_detected is not defined exactly how it occurs. See attached image

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Change overload_detected definition to:

A variable indicating the PSE output current has been in a short circuit condition for a period of time defined by TLIM and using a sliding time window.

TRUE: The PSE has detected a short circuit condition (see 104.3.6.2.1).
FALSE: The PSE has not detected a short circuit condition.

Cl **104** *SC* **104.3.5** *P* **42** *L* **42** # 99

Dove, Daniel — Dove Networking Solut

Comment Type **ER** *Comment Status* **A** *OK*

A missing space creates an offull opportunity for a pun.

SuggestedRemedy

add a space between of and full.

Response *Response Status* **C**

ACCEPT. EZ.

See comment 13.

Cl **104** *SC* **104.3.6** *P* **43** *L* **50** # 100

Dove, Daniel — Dove Networking Solut

Comment Type **TR** *Comment Status* **D** *OK*

Tod has no maximum value. This could lead to a compliant implementation that you could never test to determine if it works. If it fails to respond to Tod, the mfgr could claim their Tod number is just very large.

SuggestedRemedy

Add a value for maximum Tod

Proposed Response *Response Status* **Z**

REJECT.

This comment was WITHDRAWN by the commenter.

TFTD.

Add Tod max as 0.75s * 1.22 = 0.915s?

Cl **104** *SC* **104.4.4.4** *P* **49** *L* **42** # 101

Dove, Daniel — Dove Networking Solut

Comment Type **ER** *Comment Status* **A** *OK*

The following language "When VPD rises through Vsig_disable," seems inexact. "rises through". Does the PD only remove signature when the voltage is rising through, or does it remain removed after that?

SuggestedRemedy

Clarify this language. I suggest perhaps using "Exceeds Vsig_disable min"

Response *Response Status* **C**

ACCEPT.

Cl **104** *SC* **104.4.6.1** *P* **52** *L* **3** # 102

Dove, Daniel — Dove Networking Solut

Comment Type **ER** *Comment Status* **A** *OK*

An errors and some lack of clarity are found in this sentence. "The PD shall turn on at a voltage in the range of VOn after a delay greater than tpower_dly as specified in Table 104-6. The PD shall turn off at a voltage greater than or equal to VOff."

SuggestedRemedy

Change to "The PD shall turn on when Vpd has remained in the range of VOn for a time greater than tpower_dly as specified in Table 104-6. The PD shall turn off at a voltage greater less than or equal to VOff."

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.4.6.1** *P* **52** *L* **4** # 103

Dove, Daniel — Dove Networking Solut

Comment Type **ER** *Comment Status* **A** *OK*

The terminology is a bit strange here. I know what it means, but think perhaps a better terminology is possible."when fed by VPort_PSE min to VPort_PSE max

SuggestedRemedy

replace with "when a voltage Vpd is applied within"

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.3.3.6** *P* **42** *L* **33** # 104

Dove, Daniel — Dove Networking Solut

Comment Type **T** *Comment Status* **R** *resubmit (late)*

This is a question: Currently we assign pi_powered<=TRUE in the POWER_UP state. Is there any issue with doing it here, vs the POWER_ON state where things are likely to be more stable?

SuggestedRemedy

Task force to discuss and resolve the question.

Response *Response Status* **C**

REJECT.

See comment 119.

Assigning TRUE to pi_powered during POWER_UP state is consistent with what is done in PoE.

Cl **104** *SC* **104.3.3.6** *P* **42** *L* **48** # 105

Dove, Daniel — Dove Networking Solut

Comment Type **E** *Comment Status* **A** *resubmit (late)*

VERY Minor Nit: The arc logic from RESTART and RESTART_DELAY statements are too close to the boxes, causing the "_" characters to be partially obscured.

SuggestedRemedy

Move the arc statements up a tiddly bit.

Response *Response Status* **C**

ACCEPT. EZ.

See comment 392.

Cl **104** *SC* **104.3.3.6** *P* **42** *L* **48** # 106

Dove, Daniel — Dove Networking Solut

Comment Type **TR** *Comment Status* **A** *resubmit (late)*

In SLEEP state, pi_sleeping<=TRUE and pi_powered<=FALSE assignments are redundant. The SETTLE_SLEEP state asserts these values and there is no other way into the SLEEP state, so they are redundant.

SuggestedRemedy

Remove those two value assignments

Response *Response Status* **C**

ACCEPT.

OBE comment 11.

Cl **104** *SC* **104.4.4** *P* **50** *L* **8** # 107

Gardner, Andrew — Linear Technology

Comment Type **TR** *Comment Status* **D** *OK*

There is insufficient margin between Isignature_limit max (20mA) and the maximum valid detection current (17mA) that the PD is required to support for Vgood - this may be limiting for the PD.

SuggestedRemedy

Make the range of current for Vgood the same as the valid range of PSE detection current (6mA to 16mA), and increase the Isignature_limit max from 20mA to 24mA.

Proposed Response *Response Status* **Z**

PROPOSED REJECT.

This comment was WITHDRAWN by the commenter.

Cl **104** *SC* **104.4.6.2** *P* **52** *L* **14** # 108

Gardner, Andrew — Linear Technology

Comment Type **TR** *Comment Status* **A** *OK*

PD input current not related to inrush is not constrained between Vsig_disable and Von.

SuggestedRemedy

Add the following baseline text to 104.4.6.2 and table 104-6: "During operation in the MDI_POWER1 state, a PD shall draw less than IPD_pwr1 max of current for a constant VPD." Add IPD_pwr1 line item to Table 104-6 with a max value of 5mA.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

During operation in the MDI_POWER1 state, a PD shall draw less than IPD_pwr1 max of current for a constant PD input voltage between Vsig_disable max and VON min.

TFTD.

Cl **104** *SC* **104.4.6.1** *P* **52** *L* **3** # 109

Gardner, Andrew — Linear Technology

Comment Type **TR** *Comment Status* **A** *OK*

At Cpd,max=10uF, a class 4 PSE may not be able to power up a class 4 PD before tpower_dly expires because of insufficient inrush current.

SuggestedRemedy

For class 4 PDs, reduce CPD max from 10uF to 5uF

Response *Response Status* **C**

ACCEPT.

TFTD. Assuming Iinrush=0.097A, CPD=10uF, VPSE=36V, and Vsig=4.05V yields an inrush time of 3.3ms which is longer than Tinrush min. So power-up for this class is not guaranteed.

Reducing CPD max to 5uF for this class reduces worst case inrush time to 1.65ms.

Cl **104** *SC* **104.5.3** *P* **53** *L* **32** # 110

Gardner, Andrew — Linear Technology

Comment Type **TR** *Comment Status* **A** *OK*

In order to be consistent with the PoDL 100BASE-T1 MDI return loss in subclause 104.5.3.1, the transmitter droop specification from clause 96.5.4.1 needs to be relaxed.

SuggestedRemedy

Add the following baseline text to a subclause of 104.5.3: "The test mode 1 output droop is illustrated in Figure 104-TBD. With the transmitter in test mode 1 and using the transmitter test fixture 1, the magnitude of both the positive and negative droop measured with respect to an initial peak value after the zero crossing and the value 500 ns after the initial peak, shall be less than 60%." Copy figure 96-23 into the new subclause.

Response *Response Status* **C**

ACCEPT.

See comment 394.

Cl **104** *SC* **104.3.4.1** *P* **41** *L* **36** # 111

Gardner, Andrew — Linear Technology

Comment Type **TR** *Comment Status* **A** *OK*

The detection criteria has the potential to allow capacitors greater than 1.2uF to pass detection in the absence of a valid detection signature. The criteria should be changed so that a simple capacitance of 10uF or less is assured to fail detection when a valid PD detection signature is not present.

SuggestedRemedy

Adjust the detection timing parameters as needed in order to ensure capacitances of 10uF or less cannot pass detection in the absence of a valid PD detection signature.

Response *Response Status* **C**

ACCEPT.

Increase Ivalid_min to 9mA
Increase Tsig_hold,min to 1ms

Cl **104** *SC* **104.3.6** *P* **43** *L* **35** # 112

Gardner, Andrew — Linear Technology

Comment Type **TR** *Comment Status* **A** *OK*

The +/-10% range for ILIM with respect to Iclass max is to narrow because of errors due to sense resistor value quantization error and tolerance.

SuggestedRemedy

Relax the range order to account for automotive +/-3% resistor tolerance and the limited number of discrete sense resistor values that are available. Presentation in Atlanta will summarize this.

Response *Response Status* **C**

ACCEPT.

Increase ILIM max from 1.2*IPI_Class(max) to 1.4*IPI_Class(max)

Cl **45** *SC* **45.2.7.a2** *P* **30** *L* **15** # 113

Gardner, Andrew — Linear Technology

Comment Type **T** *Comment Status* **A** *OK*

consider adding a PSE Status of "unknown" to match the available options in Section 30 (see P21, L32 for an example)

SuggestedRemedy

see comment

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.3.6** *P* **44** *L* **9** # 114

Gardner, Andrew — Linear Technology

Comment Type **T** *Comment Status* **A** *OK*

TMFVS min of 60ms may be limiting for low power applications

SuggestedRemedy

Consider changing TMFVS min to a smaller value that is consistent with max CPD and max cable resistance if possible.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Reduce PSE TMFVS min to 6ms which is consistent with bt short mps. TMFVS_PD should also be reduced but needs to allow overhead for IPSE rise time at max cable resistance and PSE output resistance and max PD capacitance. For example, assuming 10 ohms and 100uF yields a 90% rise time of 2.4ms.

Suggest TMFVS min of 6ms and TMFVS_PD min of 10ms to be safe.

Cl **104** *SC* **104.4.4** *P* **49** *L* **42** # 115

Gardner, Andrew — Linear Technology

Comment Type **T** *Comment Status* **D** *OK*

The words 'A PD shall present a valid detection signature when Vpd drops below Vsig_enable.' are confusing.

SuggestedRemedy

Suggest using 'A PD shall enable a valid detection signature subsequent to Vpd dropping below Vsig_enable.'

Proposed Response *Response Status* **Z**

PROPOSED REJECT.

This comment was WITHDRAWN by the commenter.

Cl **104** *SC* **104.4.4** *P* **49** *L* **43** # 116

Gardner, Andrew — Linear Technology

Comment Type **TR** *Comment Status* **D** *OK*

a PD shall removed the current draw of the detection signature.' is not quantified.

SuggestedRemedy

Add a limit to table 104-4 for Ipd when Vpd is greater than Vsig_disable and less than VON that can be tested for compliance (5mA max?)

Proposed Response *Response Status* **Z**

REJECT.

This comment was WITHDRAWN by the commenter.

TFTD.

Cl **104** *SC* **104.4.4** *P* **49** *L* **46** # 117

Gardner, Andrew — Linear Technology

Comment Type **T** *Comment Status* **A** *OK*

Add Vgood before 'per Table 104-4'.

SuggestedRemedy

see comment

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Change " The detection signature shall consist of a current limited, constant voltage per Table 104–4…" to " The detection signature shall consist of a current limited, voltage Vgood per Table 104–4…"

Cl **104** *SC* **104.6.3.2** *P* **56** *L* **16** # 118

Gardner, Andrew — Linear Technology

Comment Type **TR** *Comment Status* **A** *OK*

No description or requirement for tssw is given.

SuggestedRemedy

State that the slave shall sample the Vpd within the range of tssw during a write 1 or write 0 operation.

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.6.3.2** *P* **56** *L* **23** # 119

Gardner, Andrew — Linear Technology

Comment Type **T** *Comment Status* **A** *OK*

The words 'release and then' appear to be superfluous.

SuggestedRemedy

Delete 'release and then'

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.6.3.2** *P* **56** *L* **25** # 120

Gardner, Andrew Linear Technology

Comment Type **T** *Comment Status* **A** *OK*

The words 'hold and then' appear to be superfluous.

SuggestedRemedy

Delete 'hold and then'

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.6.3.4** *P* **57** *L* **40** # 121

Gardner, Andrew Linear Technology

Comment Type **TR** *Comment Status* **A** *OK*

Specifications for rise time and fall time are absent from Table 104-7.

SuggestedRemedy

Add specifications for fall time and rise time with maximums of 100us and 230us, respectively based on timing proof from presentation stewart_3bu_1_1015.pdf.

Response *Response Status* **C**

ACCEPT.

TFTD. See 255 and 61.

Cl **104** *SC* **104.6.4.3** *P* **59** *L* **1** # 122

Gardner, Andrew Linear Technology

Comment Type **TR** *Comment Status* **A** *OK*

Figure 104-12 should be 'Address and Read_Scratchpad function command flowchart'

SuggestedRemedy

see comment

Response *Response Status* **C**

ACCEPT. EZ.

Cl **00** *SC* **0** *P* **35** *L* **22** # 123

Gardner, Andrew Linear Technology

Comment Type **E** *Comment Status* **A** *OK*

Table 104-1 should be enclosed within its own subclause 'System class power requirements'

SuggestedRemedy

see comment

Response *Response Status* **C**

ACCEPT.

See comment 273.

Cl **00** *SC* **0** *P* **35** *L* **36** # 124

Gardner, Andrew Linear Technology

Comment Type **TR** *Comment Status* **A** *OK*

IPI (max) can be exceeded during inrush

SuggestedRemedy

Add a new footnote 3 that states that IPI(max) may be exceeded during inrush.

Response *Response Status* **C**

ACCEPT.

See comment 74.

Cl **104** *SC* **104.3.6** *P* **43** *L* **15** # 125

Gardner, Andrew Linear Technology

Comment Type **TR** *Comment Status* **A** *OK*

The max dV/dt of 22V/us for type A needs to be increased to allow more margin for the PSE's dV/dt limiter during t_inrush. This may mean compromising data integrity during power-up, but this typically a don't care.

SuggestedRemedy

Add line to table 104-3 for max type A dV/dt during inrush. Increase value to 40V/us or greater.

Response *Response Status* **C**

ACCEPT.

Cl **00** *SC* **0** *P* **40** *L* **3** # 126

Gardner, Andrew — Linear Technology

Comment Type **TR** *Comment Status* **A** *OK*

In some case, a type A PSE and PD will take longer than 5ms to power-up.

SuggestedRemedy

If max inrush dV/dt is increased, can the max t_detect, t_inrush, and t_pwr_delay values be reduced?

Response *Response Status* **C**

ACCEPT.

Max dV/dt needs to be increased for Type A PSEs in order for fast start-up to be feasible. The existing range of dV/dt required from a PSE is too narrow. Propose sacrificing 100BASE-T1 PHY data integrity during inrush by increasing max dV/dt during POWER-UP to 40V/ms in order to solve the problem.

Cl **00** *SC* **0** *P* **35** *L* **39** # 127

Gardner, Andrew — Linear Technology

Comment Type **TR** *Comment Status* **D** *OK*

The max CPD for class 4 needs to be reduced in order to guarantee that the PSE with max VOUT can inrush a PD with min VON before t_power_delay expires.

SuggestedRemedy

Reduce CPD max for class 4 from 10uF to 5uF.

Proposed Response *Response Status* **Z**

REJECT.

This comment was WITHDRAWN by the commenter.

TFTD. See gardner_3bu_x_01016.pdf for explanation of this change.

Cl **104** *SC* **104.4.4** *P* **50** *L* **8** # 128

Gardner, Andrew — Linear Technology

Comment Type **TR** *Comment Status* **A** *OK*

The spread between the max current a PD signature is required to accept for Vgood (17mA) and the max current a PD is allowed to sink (20mA) is too narrow.

SuggestedRemedy

Reduce the range of current that a PD is required to accept for Vgood from 7mA/17mA to 8mA/16mA and increase the max current a PD is allowed to sink from 20mA to 24mA.

Response *Response Status* **C**

ACCEPT.

OBE by 3.

Cl **30** *SC* **30.14.1.1.5** *P* **22** *L* **28** # 129

Gardner, Andrew — Linear Technology Cor

Comment Type **TR** *Comment Status* **A** *resubmit (late)*

"typeAB" should read "typeB"

SuggestedRemedy

See comment

Response *Response Status* **C**

ACCEPT. EZ.

See comment 262.

Cl **30** *SC* **30.14.1.1.5** *P* **22** *L* **33** # 130

Gardner, Andrew — Linear Technology Cor

Comment Type **ER** *Comment Status* **A** *resubmit (late)*

missing a space "...clause 104.4.1.This value..."

SuggestedRemedy

See comment

Response *Response Status* **C**

ACCEPT. EZ.

Cl **30** *SC* **30.14.1.1.5** *P* **24** *L* **13** # 131
Gardner, Andrew Linear Technology Cor

Comment Type **TR** *Comment Status* **D** *resubmit (late)*

there is no ERROR state. Should be OVERLOAD state.

SuggestedRemedy

See comment

Proposed Response *Response Status* **Z**

REJECT.

This comment was WITHDRAWN by the commenter.

Cl **30** *SC* **30.14.1.4** *P* **25** *L* **1** # 132
Gardner, Andrew Linear Technology Cor

Comment Type **TR** *Comment Status* **A** *resubmit (late)*

aPSECumulativeEnergy should read aPoDLPSECumulativeEnergy

SuggestedRemedy

See comment

Response *Response Status* **C**

ACCEPT. EZ.

Cl **30** *SC* **30.14.1.4** *P* **25** *L* **5** # 133
Gardner, Andrew Linear Technology Cor

Comment Type **ER** *Comment Status* **A** *resubmit (late)*

add punctuation to increment rate, ie 100,000 per second

SuggestedRemedy

See comment

Response *Response Status* **C**

ACCEPT. EZ.

Cl **45** *SC* **45.2** *P* **27** *L* **25** # 134
Gardner, Andrew Linear Technology Cor

Comment Type **TR** *Comment Status* **A** *resubmit (late)*

Bits b.5.15:11 are defined as Reserved w/ value always 0 and Bit m.5.12 is defined as Power Unit present. How can these definitions exist simultaneously?

SuggestedRemedy

Change Reserved row from b 5.15:11 to b 5.15:13

Response *Response Status* **C**

ACCEPT. EZ.

Cl **45** *SC* **45.2.7.a** *P* **28** *L* **19** # 135
Gardner, Andrew Linear Technology Cor

Comment Type **ER** *Comment Status* **A** *resubmit (late)*

missing a space "Status 2register"

SuggestedRemedy

See comment

Response *Response Status* **C**

ACCEPT. EZ.

Cl **45** *SC* **45.2.7.a1** *P* **28** *L* **26** # 136
Gardner, Andrew Linear Technology Cor

Comment Type **ER** *Comment Status* **A** *resubmit (late)*

missing a period "shown in Table 45-211f The default value"

SuggestedRemedy

See comment

Response *Response Status* **C**

ACCEPT. EZ.

Cl **45** *SC* **45.2.7.a1** *P* **28** *L* **28** # 137
Gardner, Andrew Linear Technology Cor

Comment Type **ER** *Comment Status* **A** *resubmit (late)*

found the extra period. remove second period @ end of sentence

SuggestedRemedy

See comment

Response *Response Status* **C**

ACCEPT. EZ.

Cl **45** SC **45.2.7a.1.2** P **29** L **7** # 138
Gardner, Andrew Linear Technology Cor

Comment Type **TR** *Comment Status* **A** *resubmit (late)*

mr_pse_enable is not defined in 104.3.3.3 (or anywhere)

SuggestedRemedy

Change PSE state machine variable 'pse_enable' to 'mr_pse_enable'.

Response *Response Status* **C**

ACCEPT. EZ.

Search and replace "pse_enable" with "mr_pse_enable".

Cl **45** SC **45.2.7a.2.1** P **30** L **27** # 139
Gardner, Andrew Linear Technology Cor

Comment Type **TR** *Comment Status* **D** *resubmit (late)*

there is no ERROR state in the PSE SD. Should be OVERLOAD state.

SuggestedRemedy

See comment

Proposed Response *Response Status* **Z**

REJECT.

This comment was WITHDRAWN by the commenter.

Cl **45** SC **45.2.7a.2.2** P **30** L **32** # 140
Gardner, Andrew Linear Technology Cor

Comment Type **TR** *Comment Status* **D** *resubmit (late)*

mr_valid_signature is not defined in 104.3.3.3 (or anywhere)

SuggestedRemedy

Change PSE state machine variable 'valid_signature' to 'mr_valid_signature'

Proposed Response *Response Status* **Z**

REJECT.

This comment was WITHDRAWN by the commenter.

Cl **45** SC **45.2.7a.2.5** P **30** L **52** # 141
Gardner, Andrew Linear Technology Cor

Comment Type **TR** *Comment Status* **D** *resubmit (late)*

there is no ERROR state in the PSE SD. Should be OVERLOAD state here.

SuggestedRemedy

See comment

Proposed Response *Response Status* **Z**

REJECT.

This comment was WITHDRAWN by the commenter.

Cl **45** SC **45.2.7a.2.8** P **31** L **15** # 142
Gardner, Andrew Linear Technology Cor

Comment Type **TR** *Comment Status* **A** *resubmit (late)*

PSE Status is (12.1.2:0), written incorrectly as (12.1.3:1)

SuggestedRemedy

See comment

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** SC **104.4.3.6** P **49** L **19** # 143
Gardner, Andrew Linear Technology Cor

Comment Type **ER** *Comment Status* **A** *resubmit (late)*

DO DETECTION' should be 'DO_DETECTION'

SuggestedRemedy

See comment

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.4.3.6** *P* **49** *L* **22** # 144
Gardner, Andrew Linear Technology Cor

Comment Type **ER** *Comment Status* **A** *resubmit (late)*

sccp_watchdog_tmr' should be 'sccp_watchdog_timer'

SuggestedRemedy

See comment

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.4.3.6** *P* **49** *L* **29** # 145
Gardner, Andrew Linear Technology Cor

Comment Type **ER** *Comment Status* **D** *resubmit (late)*

sccp_watchdog_tmr' should be 'sccp_watchdog_timer'

SuggestedRemedy

See comment

Proposed Response *Response Status* **Z**

REJECT.

This comment was WITHDRAWN by the commenter.

Duplicate comment to 144.

Cl **104** *SC* **104.4.4** *P* **49** *L* **46** # 146
Gardner, Andrew Linear Technology Cor

Comment Type **ER** *Comment Status* **A** *resubmit (late)*

Remove indent at beginning of line 46.

SuggestedRemedy

See comment

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.4.4** *P* **49** *L* **49** # 147
Gardner, Andrew Linear Technology Cor

Comment Type **TR** *Comment Status* **A** *resubmit (late)*

There are only two characteristics in table 104-5.

SuggestedRemedy

Delete 'at least' from sentence.

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.4.4** *P* **50** *L* **5** # 148
Gardner, Andrew Linear Technology Cor

Comment Type **TR** *Comment Status* **A** *resubmit (late)*

Vconnector' should just be 'Vpd' in Table 104-4

SuggestedRemedy

See comment

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.4.4** *P* **50** *L* **18** # 149
Gardner, Andrew Linear Technology Cor

Comment Type **TR** *Comment Status* **A** *resubmit (late)*

Iconnector' should just be 'Ipd' in Table 104-5

SuggestedRemedy

See comment

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.4.6** *P* **51** *L* **1** # 150
Gardner, Andrew Linear Technology Cor

Comment Type **ER** *Comment Status* **D** *resubmit (late)*

Table 104-6 title should have 'continued' at top of page 51

SuggestedRemedy

See comment

Proposed Response *Response Status* **Z**

REJECT.

This comment was WITHDRAWN by the commenter.

Cl **104** *SC* **104.4.6** *P* **51** *L* **51** # 151
Gardner, Andrew Linear Technology Cor

Comment Type **ER** *Comment Status* **A** *resubmit (late)*

See 104.4.6.2' is not linked

SuggestedRemedy

See comment

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.4.6** *P* **51** *L* **51** # 152
Gardner, Andrew Linear Technology Cor

Comment Type **ER** *Comment Status* **D** *resubmit (late)*

"See 104.4.6.2" is not linked

SuggestedRemedy

See comment

Proposed Response *Response Status* **Z**

REJECT.

This comment was WITHDRAWN by the commenter.

Duplicate to 151.

Cl **30** *SC* **30.14.1** *P* **20** *L* **50** # 153
Gardner, Andrew Linear Technology Cor

Comment Type **ER** *Comment Status* **A** *resubmit (late)*

Missing period at end of sentence.

SuggestedRemedy

See comment

Response *Response Status* **C**

ACCEPT. EZ.

Cl **30** *SC* **30.14.1.1.4** *P* **22** *L* **12** # 154
Gardner, Andrew Linear Technology Cor

Comment Type **TR** *Comment Status* **A** *resubmit (late)*

"typeAB" should read "typeB"

SuggestedRemedy

See comment

Response *Response Status* **C**

ACCEPT. EZ.

Cl **45** *SC* **45.2.7a.2.9** *P* **31** *L* **21** # 155
Gardner, Andrew Linear Technology Cor

Comment Type **TR** *Comment Status* **A** *resubmit (late)*

PSE Status is (12.1.2:0), written incorrectly as (12.1.3:1)

SuggestedRemedy

See comment

Response *Response Status* **C**

ACCEPT. EZ.

Cl **45** *SC* **45.2.7a.2.9** *P* **31** *L* **25** # 156
Gardner, Andrew Linear Technology Cor

Comment Type **TR** *Comment Status* **A** *resubmit (late)*

error_condition is not defined in 104.3.3.3 (or anywhere)

SuggestedRemedy

propose changing this reference from "error_condition" to "overload_detected" in the text and table 45-211g

Response *Response Status* **C**

ACCEPT. EZ.

Cl **45** *SC* **45.2.7a.3.1** *P* **32** *L* **4** # 157
Gardner, Andrew Linear Technology Cor

Comment Type **TR** *Comment Status* **A** *resubmit (late)*

PSE Status is (12.1.2:0), written incorrectly as (12.1.3:1)

SuggestedRemedy

See comment

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.3.5** *P* **42** *L* **41** # 158
Gardner, Andrew Linear Technology Cor

Comment Type **ER** *Comment Status* **D** *resubmit (late)*

Separate "offull" into "of" and "full"

SuggestedRemedy

See comment

Proposed Response *Response Status* **Z**

REJECT.

This comment was WITHDRAWN by the commenter.

Cl **104** *SC* **104.3.6** *P* **43** *L* **14** # 159
Gardner, Andrew Linear Technology Cor

Comment Type **TR** *Comment Status* **A** *resubmit (late)*

Item 3 references subclause 104.3.6.1 but there is nothing there relating to transients.

SuggestedRemedy

Reference 104.3.6.3 instead. Change noise to transients in 104.3.6.3.

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.3.6** *P* **43** *L* **38** # 160
Gardner, Andrew Linear Technology Cor

Comment Type **ER** *Comment Status* **A** *resubmit (late)*

Fix indent on item 6.

SuggestedRemedy

See comment

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.3.6.1** *P* **44** *L* **29** # 161
Gardner, Andrew Linear Technology Cor

Comment Type **T** *Comment Status* **A** *resubmit (late)*

Subclause 104.3.6.1 is referenced by item #1 in table 104-3 but there is nothing in 104.3.6.1 relating to VPSE(PON)

SuggestedRemedy

Add the following text to 104.3.6.1: "A PSE operating in the POWER_ON state shall apply a voltage in the range of PSE(PON) at the PI.

Response *Response Status* **C**

ACCEPT.

Cl **104** *SC* **104.4.3.1** *P* **46** *L* **44** # 162
Gardner, Andrew Linear Technology Cor

Comment Type **TR** *Comment Status* **A** *resubmit (late)*

tpwr_delay is not defined

SuggestedRemedy

change to tpowerdly

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.4.3.1** *P* **46** *L* **44** # 163
Gardner, Andrew Linear Technology Cor

Comment Type **ER** *Comment Status* **D** *resubmit (late)*

tpwr_delay' should be 'tpowerdly'

SuggestedRemedy

See comment

Proposed Response *Response Status* **Z**

REJECT.

This comment was WITHDRAWN by the commenter.

OBE 403.

Cl **104** *SC* **104.4.3.3** *P* **47** *L* **51** # 164
Gardner, Andrew Linear Technology Cor

Comment Type **ER** *Comment Status* **D** *resubmit (late)*

PPD should be Ppd

SuggestedRemedy

See comment

Proposed Response *Response Status* **Z**

REJECT.

This comment was WITHDRAWN by the commenter.

Cl **104** *SC* **104.4.6.1** *P* **52** *L* **4** # 165
Gardner, Andrew Linear Technology Cor

Comment Type **TR** *Comment Status* **D** *resubmit (late)*

"The PD shall turn off at a voltage greater than or equal to Voff' should be 'The PD shall turn off at a voltage less than the range of Von and greater than or equal to Voff min as defined in Table 104-6."

SuggestedRemedy

See comment

Proposed Response *Response Status* **Z**

REJECT.

This comment was WITHDRAWN by the commenter.

OBE by 356.

Cl **104** *SC* **104.4.6.1** *P* **52** *L* **6** # 166
Gardner, Andrew Linear Technology Cor

Comment Type **TR** *Comment Status* **A** *resubmit (late)*

Change Vport_PSE to just Vpse for consistency.

SuggestedRemedy

See comment

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.4.6.2** *P* **52** *L* **19** # 167
Gardner, Andrew Linear Technology Cor

Comment Type **ER** *Comment Status* **A** *resubmit (late)*

Twakeup_PD shouldn't wrap at the end of the line.

SuggestedRemedy

See comment

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.4.6.3** *P* **52** *L* **26** # 168
Gardner, Andrew Linear Technology Cor

Comment Type **TR** *Comment Status* **A** *resubmit (late)*

Replace 'input power of the device' with just 'Ppd'.

SuggestedRemedy

See comment

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.4.6.3** *P* **52** *L* **26** # 169
Gardner, Andrew Linear Technology Cor

Comment Type **E** *Comment Status* **D** *resubmit (late)*

Vport_PD' should be 'Vpd'

SuggestedRemedy

See comment

Proposed Response *Response Status* **Z**

REJECT.

This comment was WITHDRAWN by the commenter.

Cl **104** *SC* **104.4.6.4** *P* **52** *L* **35** # 170
Gardner, Andrew Linear Technology Cor

Comment Type **TR** *Comment Status* **D** *resubmit (late)*

Replace 'Pclass_PD' with just 'Ppd'.

SuggestedRemedy

See comment

Proposed Response *Response Status* **Z**

PROPOSED REJECT.

This comment was WITHDRAWN by the commenter.

Cl **104** *SC* **104.4.6.4** *P* **52** *L* **35** # 171
Gardner, Andrew Linear Technology Cor

Comment Type **TR** *Comment Status* **A** *resubmit (late)*

reference to Pclass_pd in table 104-1. There is no Pclass_pd but there is a Ppd. Are these the same?

SuggestedRemedy

Change text from Pclass_pd to Ppd.

Response *Response Status* **C**

ACCEPT. EZ.

Search and replace Pclass_pd with Ppd throughout.

Cl **104** *SC* **104.4.6.5** *P* **52** *L* **44** # 172
Gardner, Andrew Linear Technology Cor

Comment Type **TR** *Comment Status* **A** *resubmit (late)*

Remove all instances of 'port_' from the subscripts used by Equation 104-1.

SuggestedRemedy

See comment

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.5.1** *P* **52** *L* **18** # 173
Gardner, Andrew Linear Technology Cor

Comment Type **TR** *Comment Status* **D** *resubmit (late)*

A PD shall provide DC isolation.' is not quantified making a compliance test meaningless.

SuggestedRemedy

Propose "A PD shall ... all MDI leads of greater than 1 megaohm for voltages up to 60V".

Proposed Response *Response Status* **Z**

REJECT.

This comment was WITHDRAWN by the commenter.

OBE 344.

Cl **104** *SC* **104.6.3.2** *P* **56** *L* **18** # 174
Gardner, Andrew Linear Technology Cor

Comment Type **ER** *Comment Status* **A** *resubmit (late)*

Change 'slots' to 'slot' in this sentence.

SuggestedRemedy

See comment

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.6.3.4** *P* **57** *L* **47** # 175
Gardner, Andrew Linear Technology Cor

Comment Type **ER** *Comment Status* **A** *resubmit (late)*

Add 'voltage' to the parameter descriptions for items 2 and 3 in table 104-7.

SuggestedRemedy

See comment

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.6.3.4** *P* **58** *L* **9** # 176
Gardner, Andrew Linear Technology Cor

Comment Type **ER** *Comment Status* **A** *resubmit (late)*

Add 'time' to parameter descriptions for items 9-15

SuggestedRemedy

See comment

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **Table 104-1** *P* **32** *L* **21** # 177
Gardner, Andrew Linear Technology

Comment Type **T** *Comment Status* **D** *resubmit (late)*

The assumption that the reference channel resistance is 15m of 26 AWG is limiting for PoDL.

SuggestedRemedy

Consider changing the reference channel to 15m of 22 AWG.

Proposed Response *Response Status* **Z**

PROPOSED REJECT.

This comment was WITHDRAWN by the commenter.

Cl **FM** *SC* **FM** *P* **1** *L* **2** # 178
Hajduczenia, Marek Bright House Network

Comment Type **E** *Comment Status* **A** *OK*

P802.3bu is working on amendment to IEEE Std 802.3-2015.

SuggestedRemedy

Please make sure that all dated references to 802.3 are to "2015" and not to "201x" or "20xx"
There are multiple instances in Front Matter of the document and then at least one per page on the page header.

Response *Response Status* **C**

ACCEPT. EZ. See comment 29.

Cl **FM** *SC* **FM** *P* **3** *L* # 179
Hajduczenia, Marek Bright House Network

Comment Type **E** *Comment Status* **A** *OK*

Copyright on all pages references "201x"

SuggestedRemedy

Change copyright year from "201x" to "2015" on all pages in the draft. This will need to be changed to 2016 down the road, as dratf progresses through WG and Sponsor ballots

Response *Response Status* **C**

ACCEPT. EZ. See comment 69.

Cl **FM** *SC* **FM** *P* **7** *L* **3** # 180

Hajduczenia, Marek — Bright House Network

Comment Type **E** *Comment Status* **A** *OK*

"the IEEE P802.3xx working group ballot."

SuggestedRemedy

Change to "the IEEE P802.3bu working group ballot." - I believe the project designation should be well known by now

Response *Response Status* **C**

ACCEPT. EZ.

Cl **FM** *SC* **FM** *P* **9** *L* **32** # 181

Hajduczenia, Marek — Bright House Network

Comment Type **E** *Comment Status* **A** *OK*

The text of the frontmatter is outdated

SuggestedRemedy

Please use the latest text for the frontmatter, including the description of 802.3-2015

Response *Response Status* **C**

ACCEPT.

Editor copied latest frontmatter D1.4. Need to verify.

Cl **01** *SC* **1.3** *P* **15** *L* **48** # 182

Hajduczenia, Marek — Bright House Network

Comment Type **E** *Comment Status* **A** *OK*

No need for 1.3

SuggestedRemedy

Subclauses are added as needed. No need to keep 1.3 as placeholder - numbering will not change anyway.
Please remove 1.3

Response *Response Status* **C**

ACCEPT. EZ.

Cl **01** *SC* **1.4** *P* **16** *L* **1** # 183

Hajduczenia, Marek — Bright House Network

Comment Type **E** *Comment Status* **A** *OK*

Definitions in 1.4 should be assigned tentative numbers at this time - we have base 802.3-2015 to reference to and several projects already adding definitions to 1.4

SuggestedRemedy

Please assign proper numbers to individual definitions.

Response *Response Status* **C**

ACCEPT. EZ.

Cl **01** *SC* **1.4.5** *P* **16** *L* **19** # 184

Hajduczenia, Marek — Bright House Network

Comment Type **T** *Comment Status* **A** *OK*

Definition of "Type A+B PoDL System" is cumbersome to pronounce with the extra + in the middle: as "Type A plus B PoDL System"

SuggestedRemedy

Simplify the name to "Type AB PoDL System", which is what you really intend

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

OBE comment 371.

Cl **30** *SC* **30.2.2.1** *P* **17** *L* **21** # 185

Hajduczenia, Marek — Bright House Network

Comment Type **E** *Comment Status* **A** *OK*

Wrong markup changes to oPHYEntity

SuggestedRemedy

Current text reads: "managed object that contains the MAU, PAF, and PSE managed objects in a DTE."
Proposed text reads: "managed object that contains the MAU, PAF, PSE and PoDLPSE managed objects in a DTE"
Which means that there should be underlined comma after "PSE" to make sure there is serial comma in place, and also " and" shoudl be underlined to mark insertion

Response *Response Status* **C**

ACCEPT. EZ.

See 320.

Cl **30** *SC* **30.2.3** *P* **17** *L* **30** # 186

Hajduczenia, Marek — Bright House Network

Comment Type **E** *Comment Status* **A** *OK*

No editorial instructions for 30.2.3

SuggestedRemedy

Add editorial instruction: Change text in 30.2.3 as shown below"

Response *Response Status* **C**

ACCEPT. EZ.

Cl **30** *SC* **30.2.3** *P* **18** *L* **51** # 187

Hajduczenia, Marek — Bright House Network

Comment Type **TR** *Comment Status* **A** *OK*

Figure 30-3 is already being replaced by P802.3br - any changes in PoDL should either account for changes in P802.3br, or alternatively NOT replace, but simply markup changes needed to add oPoDLPSE - the second approach is preferred

SuggestedRemedy

Change "Replace Figure 30-3 with the following:" to Change Figure 30-3 by adding oPoDLPSE entity as shown in red below:"

Response *Response Status* **C**

ACCEPT. EZ.

Cl **30** *SC* **30.14** *P* **20** *L* **45** # 188

Hajduczenia, Marek — Bright House Network

Comment Type **E** *Comment Status* **A** *OK*

No editorial instructions for 30.14

SuggestedRemedy

Add editorial instruction: "Insert new subclause 30.14 as shown below:"

Response *Response Status* **C**

ACCEPT. EZ.

See 260.

Cl **30** *SC* **30.14.1** *P* **20** *L* **50** # 189

Hajduczenia, Marek — Bright House Network

Comment Type **E** *Comment Status* **A** *OK*

Missing "." at the end of line 50

SuggestedRemedy

Per comment

Response *Response Status* **C**

ACCEPT. EZ See 153.

Cl **30** *SC* **30.14.1.1.2** *P* **21** *L* **23** # 190

Hajduczenia, Marek — Bright House Network

Comment Type **T** *Comment Status* **A** *OK*

We usually avoid the use of "will" when describing the behaviors

SuggestedRemedy

Change all instances of "will" in the draft (excluding FM) to Simple Tense, e.g., "interface will act as it would if it had no" to "interface acts as it had no"

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Instances of "will" occur at the following locations in D2.0:

Clause 30
p 21, lines 24, 26, 30
p 22, lines 1, 18, 36
p 23, lines 9, 23, 39
p 24, lines 1, 15, 29

Clause 104
page 56, line 40

Cl **30** *SC* **30.14.1.1.3** *P* **21** *L* **47** # 191

Hajduczenia, Marek — Bright House Network

Comment Type **E** *Comment Status* **A** *OK*

Missing "see" in "(Figure 104-4)"

SuggestedRemedy

Change "(Figure 104-4)" to "(see Figure 104-4)"
Same issue on page 23, line 20; page 23, line 34; page 23, line 50, and several other locations in the draft (Clause 30 and 45)
There are also references to Figure 104-5 with the same issue

Response *Response Status* **C**

ACCEPT. EZ.

Cl **30** *SC* **30.14.1.1.3** *P* **22** *L* **2** # 192

Hajduczenia, Marek — Bright House Network

Comment Type **E** *Comment Status* **A** *OK*

Missing "." at the end of line 2, page 22

SuggestedRemedy

per comment
Same issue on page 22, line 37; page 23, line 10; page 23, line 24; page 23, line 40; page 24, line 2, and several other locations in Clause 30

Response *Response Status* **C**

ACCEPT. EZ.

Cl **30** *SC* **30.14.1.1.4** *P* **22** *L* **11** # 193

Hajduczenia, Marek — Bright House Network

Comment Type **TR** *Comment Status* **A** *OK*

Wrong designator

SuggestedRemedy

"typeAB" is repeated twice. Change the first instance of "typeAB" to "typeB"

Response *Response Status* **C**

ACCEPT. EZ.

See comment 372.

Cl **30** *SC* **30.14.1.1.4** *P* **22** *L* **15** # 194

Hajduczenia, Marek — Bright House Network

Comment Type **E** *Comment Status* **A** *OK*

We usually do not spell out the word "subclause"

SuggestedRemedy

Change "subclause 104.3.1" to "104.3.1"
Similar change on page 22, line 33

Response *Response Status* **C**

ACCEPT. EZ.

Cl **30** *SC* **30.14.1.1.10** *P* **24** *L* **8** # 195

Hajduczenia, Marek — Bright House Network

Comment Type **TR** *Comment Status* **A** *OK*

"This counter has a maximum increment rate of 1.3 counts per second." counters by definition are integer based, and it is not clear how 1.3 counts per second can be represented in this fashion. Perhaps a better way would be indicate that the maximum rate is 13 counts per 10 seconds, to avoid floating point numbers.

SuggestedRemedy

Change "This counter has a maximum increment rate of 1.3 counts per second." to "This counter has a maximum increment rate of 13 counts per 10 seconds."
Similarly, on page 24, line 22, change "This counter has a maximum increment rate of 3.3 counts per second." to "This counter has a maximum increment rate of 33 counts per 10 seconds."

Response *Response Status* **C**

ACCEPT. EZ.

Cl **30** *SC* **30.14.1.2** *P* **24** *L* **38** # 196

Hajduczenia, Marek — Bright House Network

Comment Type **E** *Comment Status* **A** *OK*

Wrong formatting for "BEHAVIOUR DEFINED AS:"

SuggestedRemedy

Align it with the other keywords in 30.14.1.2

Response *Response Status* **C**

ACCEPT. EZ.

Cl **30** *SC* **30.14.1.3** *P* **24** *L* **51** # 197

Hajduczenia, Marek — Bright House Network

Comment Type **E** *Comment Status* **A** *OK*

Wording improvement for "An integer value indicating the accuracy associated with aPoDLPSEActualPower in +/- milliwatts."
BY definition, integer value can be positive or negative, so +/- symbol is just not needed

SuggestedRemedy

Change to read: "An integer value indicating the accuracy associated with aPoDLPSEActualPower measurement, expressed in units of milliwatts."

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Should the description be changed to read " A signed integer…"? It's not clear to me if an integer value is signed or unsigned by default.

Cl **30** *SC* **30.14.1.4** *P* **25** *L* **9** # 198

Hajduczenia, Marek — Bright House Network

Comment Type **E** *Comment Status* **A** *OK*

Wording improvement for behavior description

SuggestedRemedy

Change to "A count of the cumulative energy supplied by the PoDL PSE, measured at the MDI, and expressed in units of millijoules."

Response *Response Status* **C**

ACCEPT. EZ.

Cl **30** *SC* **30.14.2.1** *P* **25** *L* **19** # 199

Hajduczenia, Marek — Bright House Network

Comment Type **E** *Comment Status* **A** *OK*

"Same as aPoDLPSEAdminState" - it is better to just copy the text in here as well

SuggestedRemedy

Copy definition of syntax states and replace "Same as aPoDLPSEAdminState"

Response *Response Status* **C**

ACCEPT. EZ.

Cl **30** *SC* **30.2.5** *P* **19** *L* **1** # 200

Hajduczenia, Marek — Bright House Network

Comment Type **ER** *Comment Status* **D** *OK*

Missing PICS

SuggestedRemedy

Added text for Clause 30 carries two new "shall" statements in 30.2.5 - these need new PICS

Proposed Response *Response Status* **Z**

REJECT.

This comment was WITHDRAWN by the commenter.

TFTD to discuss use of shall in this subclause.

Cl **45** *SC* **45.2** *P* **27** *L* **19** # 201

Hajduczenia, Marek — Bright House Network

Comment Type **E** *Comment Status* **A** *OK*

Extra "." at the end of the sentence

SuggestedRemedy

Remoev extra "."

Response *Response Status* **C**

ACCEPT. EZ.

Cl **45** *SC* **45.2.7a** *P* **28** *L* **18** # 202

Hajduczenia, Marek — Bright House Network

Comment Type **E** *Comment Status* **A** *OK*

Missing space in "Single-Pair PSE Status 2register"

SuggestedRemedy

Change to "Single-Pair PSE Status 2 register"

Response *Response Status* **C**

ACCEPT. EZ.

See 135.

Cl **45** SC **45.2.7a** P **28** L **21** # 203

Hajduczenia, Marek Bright House Network

Comment Type **E** *Comment Status* **A** *OK*

Unnecessary editorial instructions

SuggestedRemedy

Subclause 45.2.7a is already marked as being inserted in its entiritey - no need for separate instructions for subclauses
Same comment on page 29, line 10; page 31, line 30

Response *Response Status* **C**

ACCEPT. EZ.

See 326.

Cl **45** SC **45.2.7a.1** P **28** L **25** # 204

Hajduczenia, Marek Bright House Network

Comment Type **E** *Comment Status* **A** *OK*

Minor fixes.

SuggestedRemedy

missing "." after "is shown in Table 45-211f"
extra "." in line 28, page 28

Response *Response Status* **C**

ACCEPT. EZ.

See 136.

Cl **45** SC **45.2.7a.1** P **28** L **39** # 205

Hajduczenia, Marek Bright House Network

Comment Type **T** *Comment Status* **A** *OK*

It is not clear why two bits are assigned to PSE Enable and then only 1 bit is used effectively

SuggestedRemedy

Consider changing PSE Enable to a single bit 12.0.0 and renumbering remaining bits. Update text in subclauses 45.2.7a.1.1 and 45.2.7a.1.2, accordingly

Response *Response Status* **C**

ACCEPT.

Cl **45** SC **45.2.7a.2** P **30** L **5** # 206

Hajduczenia, Marek Bright House Network

Comment Type **E** *Comment Status* **A** *OK*

Missing space after "=" in PD Class bit definitions

SuggestedRemedy

Change "=Class code 9" to "= Class code 9" - just an example

Response *Response Status* **C**

ACCEPT. EZ.

Cl **45** SC **45.2.7a.2** P **30** L **21** # 207

Hajduczenia, Marek Bright House Network

Comment Type **E** *Comment Status* **A** *OK*

"LH = Latched High" should be "LH = Latching High"

SuggestedRemedy

Per comment
Same on page 31, line 48

Response *Response Status* **C**

ACCEPT. EZ.

Cl **45** SC **45.2.7a.2.5** P **30** L **51** # 208

Hajduczenia, Marek Bright House Network

Comment Type **E** *Comment Status* **A** *OK*

enters the state 'ERROR' - figure out how you want to mark up state names and use it consistently at least within the draft - for now, in Clause 30, state names are not marked in any special way. In Clause 45, they are surrounded by '' for markup

SuggestedRemedy

Remove all '' around state names in Clause 45

Response *Response Status* **C**

ACCEPT. EZ.

Cl **45** *SC* **45.2.7a.2.8** *P* **31** *L* **15** # 209

Hajduczenia, Marek Bright House Network

Comment Type **ER** *Comment Status* **A** *OK*

"The combinations '1010' thru '1111' for bits 12.1.6:3 have been reserved for future use." - as long as they are marked in the table, no need to list them as reserved explicitly in the text

SuggestedRemedy

Strike this text
The same change on page 31, line 28

Response *Response Status* **C**

ACCEPT. EZ.

Cl **45** *SC* **45.2.7a.2.8** *P* **31** *L* **15** # 210

Hajduczenia, Marek Bright House Network

Comment Type **E** *Comment Status* **A** *OK*

Misplaced "."

SuggestedRemedy

Change "bits are reporting "delivering power."" to "bits are reporting "delivering power"."
Similar issue on page 32, line 4

Response *Response Status* **C**

ACCEPT. EZ.

Cl **00** *SC* **0** *P* **30** *L* **0** # 211

Hajduczenia, Marek Bright House Network

Comment Type **E** *Comment Status* **A** *OK*

"Draft Amendment to IEEE Std 802.3-2012" - I think not

SuggestedRemedy

Update template to reference 2015 and not 2012 - this applies to all Clauses in the draft, not just Clause 45

Response *Response Status* **C**

ACCEPT. EZ.

Cl **45** *SC* **45** *P* **32** *L* **1** # 212

Hajduczenia, Marek Bright House Network

Comment Type **ER** *Comment Status* **A** *OK*

Missing PICS

SuggestedRemedy

Added text for Clause 45 carries a number of new "shall" and "should" statements - these need new PICS

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

PICs will be incorporated by 2.2.

TFTD. See comment 200.

Cl **104** *SC* **104.1.2** *P* **33** *L* **33** # 213

Hajduczenia, Marek Bright House Network

Comment Type **E** *Comment Status* **A** *OK*

Space missing in "IEEE802.3"

SuggestedRemedy

Per comemnt

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.1.2** *P* **34** *L* **1** # 214

Hajduczenia, Marek Bright House Network

Comment Type **ER** *Comment Status* **A** *OK*

Figure captions go UNDER the figure, and not above it

SuggestedRemedy

Please move all Figure captions below figures and use appropriate template for it.

Response *Response Status* **C**

ACCEPT. EZ.

See 45.

Cl **104** *SC* **104.2** *P* **35** *L* **18** # 215

Hajduczenia, Marek — Bright House Network

Comment Type **E** *Comment Status* **A** *OK*

Unnecessary ".0"

SuggestedRemedy

Change "6.0" to "6"
Also, need space before "Ohm" symbol
Similarly, Table 104-1 contains multiple numbers with ".0" or ".00" and no significant digits afterwards

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.2** *P* **35** *L* **26** # 216

Hajduczenia, Marek — Bright House Network

Comment Type **E** *Comment Status* **A** *OK*

In Table 104-1, make sure the words "unregulated" and "regulated" aare positioned in the same way, i.e., under the numeric voltage value - it will look more consistent in this way

SuggestedRemedy

Per comment

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.2** *P* **35** *L* **38** # 217

Hajduczenia, Marek — Bright House Network

Comment Type **T** *Comment Status* **A** *OK*

it is not clear why IPI(max) would be expressed in A, where most of the values are on hundreds of mA range

SuggestedRemedy

Change IPI(max) to mA values - these will be more meaningfull

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.3** *P* **36** *L* **1** # 218

Hajduczenia, Marek — Bright House Network

Comment Type **ER** *Comment Status* **A** *OK*

Incorrect formatting of the list

SuggestedRemedy

Please apply proper list style to lines 1 - 9

Response *Response Status* **C**

ACCEPT.

Use list paragraph type for this.

Cl **104** *SC* **104.3.3.3** *P* **38** *L* **8** # 219

Hajduczenia, Marek — Bright House Network

Comment Type **E** *Comment Status* **A** *OK*

Empty lines 8-9 and 18-19

SuggestedRemedy

Please remove extra empty lines

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.3.3.3** *P* **37** *L* **4** # 220

Hajduczenia, Marek — Bright House Network

Comment Type **ER** *Comment Status* **A** *OK*

tdet_timer_done definition is not needed - a definition of timer also includes definition of what happens when the timer expires: "All timers operate in the same fashion. A timer is reset and starts counting upon entering a state where "start
x_timer" is asserted. Time "x" after the timer has been started, "x_timer_done" is asserted and remains
asserted until the timer is reset. At all other times, "x_timer_not_done" is asserted."

SuggestedRemedy

Remove tdet_timer_done
Similarly, sccp_watchdog_tmr_done, tpowerdly_timer_done are not needed in 104.4.3.3

Response *Response Status* **C**

ACCEPT.

Cl **104** *SC* **104.3.3.4** *P* **38** *L* **46** # 221

Hajduczenia, Marek — Bright House Network

Comment Type **E** *Comment Status* **A** *OK*

It is not "state machine" but "state diagram"

SuggestedRemedy

Change all instances of "state machine" to "state diagram"

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.3.3.6** *P* **40** *L* **3** # 222

Hajduczenia, Marek — Bright House Network

Comment Type **TR** *Comment Status* **A** *OK*

There is no START indicator

SuggestedRemedy

Change "!pse_enable" to "START * !pse_enable"

Response *Response Status* **C**

ACCEPT.

Cl **104** *SC* **104.3.3.6** *P* **40** *L* **3** # 223

Hajduczenia, Marek — Bright House Network

Comment Type **TR** *Comment Status* **A** *OK*

Several issues with Figure 104-4 state diagram

SuggestedRemedy

1. transition from state RESTART to RESTART-DELAY, and from RESTART_DELAY to IDLE is from top of the state, which is not allowed. Transition branch should exit the state from the bottom.
2. transition from DETECTION to RESTART state and CLASSIFICATION_EVAL to RESTART are combined, but have different conditions. Separate them into wto independent lines
3. incorrect timer start in POWER_UP: is "start_tinrush_timer: and should be "start tinrush_timer"

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.3.3.6** *P* **41** *L* **3** # 224

Hajduczenia, Marek — Bright House Network

Comment Type **ER** *Comment Status* **A** *OK*

There is no reason for such a small text in Figure104-5

SuggestedRemedy

Change font size to match Figure 104-4

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.3.3.6** *P* **41** *L* **3** # 225

Hajduczenia, Marek — Bright House Network

Comment Type **ER** *Comment Status* **A** *OK*

Two state diagrams merged into a single figure

SuggestedRemedy

Separate Detection and MFVS state diagrams into separate figures - there is NO need to clump them together itno a single figure

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.4.3.6** *P* **49** *L* **3** # 226

Hajduczenia, Marek — Bright House Network

Comment Type **ER** *Comment Status* **A** *OK*

Multiple branches merged together even though they have different transition conditions

SuggestedRemedy

Separate transitions from state DO_CLASSIFICATION to DO DETECTION, from state MDI_POWER1 to DO_DETECTION, and from state PD_SLEEP to DO_DETECTION

Response *Response Status* **C**

ACCEPT.

Cl **104** *SC* **104.4.4** *P* **50** *L* **3** # 227
Hajduczenia, Marek Bright House Network

Comment Type **ER** *Comment Status* **A** *OK*

Empty fields in Table 104-4/5/6 - are they intended to be empty (in this case, either - or NA would be welcome) or just missing (in this case, provide the missing value)

SuggestedRemedy

Per comment

Response *Response Status* **C**

ACCEPT. EZ.

See comment 48.

Cl **104** *SC* **104.4.6.5** *P* **53** *L* **1** # 228
Hajduczenia, Marek Bright House Network

Comment Type **E** *Comment Status* **A** *OK*

Wrong style for NOTE

SuggestedRemedy

Please pply correct style for NOTE

Response *Response Status* **C**

ACCEPT. EZ.

See comment 293.

Cl **104** *SC* **104.5.3.1** *P* **54** *L* **2** # 229
Hajduczenia, Marek Bright House Network

Comment Type **E** *Comment Status* **A** *OK*

Missing spaces between numeric value and unit in "from 2MHz to 600MHz (with a 100? reference impedance)"

SuggestedRemedy

Please scrub the draft and make sure there is always a space between a numeric value and the unit
There are multiple instances within the draft

Response *Response Status* **C**

ACCEPT. EZ.

See comment 297.

Cl **104** *SC* **104.5.2** *P* **53** *L* **26** # 230
Hajduczenia, Marek Bright House Network

Comment Type **E** *Comment Status* **A** *OK*

Wrong format of external reference: "(See clauses 96 and 97"

SuggestedRemedy

Change to "(See Clause 96 and Clause 97)", make sure that "Clause 96" and "Clause 97" is marked as External tag

Response *Response Status* **C**

ACCEPT. EZ.

See comment 296.

Cl **104** *SC* **104.6.4.3.1** *P* **59** *L* **17** # 231
Hajduczenia, Marek Bright House Network

Comment Type **E** *Comment Status* **A** *OK*

Missing space before "[CCh]"

SuggestedRemedy

Per comment

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.6.4.3.1** *P* **59** *L* **16** # 232
Hajduczenia, Marek Bright House Network

Comment Type **ER** *Comment Status* **A** *OK*

Unclear value format: what is [CCh]"?

SuggestedRemedy

If these numbers are intended to be hexadecimal, please change to "[0xCC]" - there are multiple instances in the draft right now where such change would be needed.
Otherwise, define what "h" format is

Response *Response Status* **C**

ACCEPT. EZ.

See comment 381.

Cl **104** *SC* **104.6.4.4** *P* **59** *L* **35** # 233

Hajduczenia, Marek Bright House Network

Comment Type **TR** *Comment Status* **A** *OK*

is "1110b" any different than "1110"? Is there any specific reason why this value is marked as "b" versus values in "Class" field where no "b" is included for some reason?

SuggestedRemedy

Remove "b" markers in "Type" field in Table 104-8

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.7.4.7** *P* **68** *L* **19** # 234

Hajduczenia, Marek Bright House Network

Comment Type **E** *Comment Status* **A** *OK*

Please align column sizes so that PICS number is not broken into two lines

SuggestedRemedy

Per comment

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.7.4.1** *P* **62** *L* **15** # 235

Hajduczenia, Marek Bright House Network

Comment Type **ER** *Comment Status* **A** *OK*

PICS Table do not follow standard format, i.e., Item Feature Subclause Value/Comment Status Support

SuggestedRemedy

Please use the following column order: Item Feature Subclause Value/Comment Status Support

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104A** *SC* **104A** *P* **71** *L* **1** # 236

Hajduczenia, Marek Bright House Network

Comment Type **TR** *Comment Status* **A** *OK*

There is only one reference to Annex 104A in the draft right now (page 53, line 2) and as it is right now, Annex 104A does not contain promised: "design guidelines regarding stable operation"

SuggestedRemedy

As it is, the purpose of Annex 104A is not clear - it seems it is largely incomplete. Consider either filling in missing information to address "design guidelines regarding stable operation" or remove content from Annex 104A and merge it into the main draft

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Delete Annex 104A and move the equation per Yair's comment.

Cl **104A** *SC* **104A.1** *P* **71** *L* **14** # 237

Hajduczenia, Marek Bright House Network

Comment Type **E** *Comment Status* **A** *OK*

Missing Equation number

SuggestedRemedy

Per comment

Response *Response Status* **C**

ACCEPT. EZ.

See comment 53.

Cl **104** *SC* **104.3** *P* **35** *L* **52** # 238

Hidaka, Yasuo — Fujitsu Lab of America

Comment Type **E** *Comment Status* **A** *OK*

The paragraphs from P35 L52 until P36 L23 generates unnecessary bookmarks in the PDF file.

The type of paragraph might be wrong.

The same problems are found at the following locations: P27 L6, P27 L18, P28 L1, P28 L8, P28 L22, P29 L10, P31 L30, P36 L21, P41 L24, P42 L24, P42 L27, P42 L29, P46 L14, P49 L42, P49 L46, P49 L49, P49 L51, P52 L3, P52 L6, P52 L11, P52 L24, P52 L40, P52 L46, P52 L48, P52 L50, P52 L52, P58 L29, P58 L31, P58 L32, P58 L34, P58 L38.

SuggestedRemedy

Please avoid generating unnecessary bookmarks in the PDF file for these paragraphs.

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.3.6.3** *P* **45** *L* **18** # 239

Joseph, A — ????

Comment Type **TR** *Comment Status* **A** *OK*

"To meet EMI standard, lower values may be needed". An automotive ethernet PHY has to be compliant to the EMI specificaition. Stating a lower value may be needed is very vague.

Joseph Anthony

SuggestedRemedy

Adapt table 104-3 (item 4) to also include a second ripple / noise requirement that can also meet the EMI spec.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Values that meet EMI spec are implementation specific. Propose deleting " To meet EMI standards, lower values
may be needed."

Cl **104** *SC* **104.4.6.3** *P* **52** *L* **28** # 240

Joseph, A — ????

Comment Type **TR** *Comment Status* **R** *OK*

Same comment as above

SuggestedRemedy

Response *Response Status* **C**

REJECT.

Incomplete comment.

Cl **104** *SC* **104.5.3.1** *P* **53** *L* **eq 1** # 241

Joseph, A — ????

Comment Type **TR** *Comment Status* **R** *OK*

Change in return loss specificaiton will effect current BroadR-reach compliant 100Mbps PHY's. It should be left to the PHY vendor to determine if the PHY's can tolerate a higher return loss at < 2Mhz and not be forced by the specification. Impact of this would be different PHY's working with different inductor values. This choice should be left to the vendors.

SuggestedRemedy

Remove degradation in return loss from 1 to 2MHz. This comment is only for 100Base-T1

Response *Response Status* **U**

REJECT.

This relaxation of the RL was proposed by the PHY vendor for incorporation into Clause 104. See presentation pischl_3bu_1_0315.pdf for details.

Cl **FM** *SC* **FM** *P* **7** *L* **3** # 242

Law, David — Hewlett Packard Enter

Comment Type **E** *Comment Status* **A** *OK*

Suggest that '... at the beginning of the IEEE P802.3xx working group ballot.' Be changed to read '... at the beginning of the IEEE P802.3bu working group ballot.'.

SuggestedRemedy

See comment.

Response *Response Status* **C**

ACCEPT. EZ. See comment 180.

Cl **FM** *SC* **FM** *P* **1** *L* **26** # 243
Law, David Hewlett Packard Enter

Comment Type **E** *Comment Status* **A** *OK*

The frontmatter currently states that 'Draft D2.0 is prepared for task force review.'.

SuggestedRemedy

Please update the frontmatter in further to reflect the current state.

Response *Response Status* **C**

ACCEPT. EZ.

Cl **01** *SC* **1.4** *P* **16** *L* **3** # 244
Law, David Hewlett Packard Enter

Comment Type **E** *Comment Status* **A** *OK*

Please provide detailed editing instructions as has been done in other IEEE 802.3 drafts

SuggestedRemedy

Delete the text on line 3 that reads 'Insert the following new definitions into the list, in alphanumerical order:'.
Insert new text on line 3 that reads 'Insert the following definitions after 1.4.330 "Physical Signaling Sublayer (PLS)" as follows:'.
Change the text on line 5 that reads '1.4.1 PoDL Regulated PSE: A PSE ...' to read '1.4.330a PoDL Regulated PSE: A PSE ...'.
Change the text on line 8 that reads '1.4.2 PoDLUnregulated PSE: A PSE ...' to read '1.4.330b PoDLUnregulated PSE: A PSE ...'.
Insert new text on line 10 that reads 'Insert the following definitions after 1.4.418 "Type 2 PSE" as follows:'.
Change the text on line 11 that reads '1.4.3 Type A PoDL System: A system ...' to read '1.4.418a Type A PoDL System: A system ...'.
Change the text on line 15 that reads '1.4.4 Type B PoDL System ...' to read '1.4.418b Type B PoDL System ...'.
Change the text on line 19 that reads '1.4.5 Type A+B PoDL System ...' to read '1.4.418c Type A+B PoDL System ...'.

Response *Response Status* **C**

ACCEPT. EZ.

Cl **FM** *SC* **FM** *P* **9** *L* **29** # 245
Law, David Hewlett Packard Enter

Comment Type **E** *Comment Status* **A** *OK*

Suggest that 'At the date of IEEE Std 802.3xx-20xx publication ...' be changed to read 'At the date of IEEE Std 802.3bu-20xx publication ...'

SuggestedRemedy

See comment.

Response *Response Status* **C**

ACCEPT. EZ.

Cl **FM** *SC* **FM** *P* **9** *L* **3** # 246
Law, David Hewlett Packard Enter

Comment Type **E** *Comment Status* **A** *OK*

Suggest that '... is not part of IEEE P802.3xx, IEEE Draft Standard ...' be changed to read '... is not part of IEEE P802.3bu, IEEE Draft Standard ...'.

SuggestedRemedy

See comment.

Response *Response Status* **C**

ACCEPT. EZ. See comment 180.

Cl **01** *SC* **1.4** *P* **16** *L* **5** # 247
Law, David Hewlett Packard Enter

Comment Type **E** *Comment Status* **A** *OK*

Definitions are provided for 'PoDL Regulated PSE' and 'PoDLUnregulated PSE' (which I think should be 'PoDL Unregulated PSE') however I was able to find the use of either term in the text, not can I find any use of the terms 'regulated PSE', 'regulated power Power Sourcing Equipment', 'unregulated PSE', 'unregulated power Power Sourcing Equipment'.

SuggestedRemedy

Either use the terms or delete them from the definitions.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Use terms in the column headers of Table 104-1 "System class power requirements matrix for PSE, PI, and PD". Currently there is no "PSE" in the headers.

Cl **FM** *SC* **FM** *P* **7** *L* **16** # 248
Law, David Hewlett Packard Enter

Comment Type **E** *Comment Status* **A** *OK*

Please add voter list.

SuggestedRemedy

See comment.

Response *Response Status* **C**

ACCEPT. EZ.

Cl **FM** *SC* **FM** *P* **10** *L* **12** # 249
Law, David Hewlett Packard Enter

Comment Type **E** *Comment Status* **A** *OK*

Please add the project designation and complete the amendment descriptive text.

SuggestedRemedy

Suggest the text:

IEEE Std 802.3xx-201x

This amendment includes [complete]

---

be changed to read:

IEEE Std 802.3bu-201x

Amendment X-This amendment includes changes to IEEE Std 802.3-2015 to define a methodology for the provision of power via a single twisted pair to connected Data Terminal Equipment (DTE) with IEEE 802.3 interfaces.

Response *Response Status* **C**

ACCEPT. EZ. See comment 386.

Cl **104** *SC* **104.7.2.2** *P* **61** *L* **42** # 250
Law, David Hewlett Packard Enter

Comment Type **E** *Comment Status* **A** *OK*

Suggest that '... conform to IEEE Std 802.3xx-201x.)' be changed to read '... conform to IEEE Std 802.3xx-201x.)'.

SuggestedRemedy

See comment.

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.1.1** *P* **33** *L* **29** # 251
Marris, Arthur Cadence Design Syst

Comment Type **E** *Comment Status* **A** *OK*

Phrasing. This sentence does not read well. Delete "where appropriate" as it is redundant.

SuggestedRemedy

Delete "where appropriate"

Response *Response Status* **C**

ACCEPT. EZ.

Cl **45** *SC* **45.2.7a.1** *P* **28** *L* **26** # 252
Marris, Arthur Cadence Design Syst

Comment Type **E** *Comment Status* **A** *OK*

Punctuation

SuggestedRemedy

Change:
Table 45-211f The
To:
Table 45-211f. The

At end of paragraph delete extra period. Change:
".."
To:
"."

Response *Response Status* **C**

ACCEPT. EZ.

See 136.

Cl **45** SC **45.2.7a** P **28** L **12** # 253

Marris, Arthur — Cadence Design Syst

Comment Type **T** *Comment Status* **A** *OK*

Table 45-211e only lists PSE registers. Shouldn't there be some PD registers to advertise the class of the PD and maybe a PD control register to initiate a request for power?

SuggestedRemedy

Please explain why there are no PD registers.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Per 104.4, a PD may not require power from the PSE, and therefore requiring registers to control the PD is out of scope.

Example: "PD_enable" wouldn't function in the absence of power from the PSE if the PD had no other source of power.

Cl **104.5** SC **104.5.3.1** P **54** L **10** # 254

Moffitt, Bryan — Commscope

Comment Type **T** *Comment Status* **A** *OK*

Does this pre or supercede the 802.3bp MDI RL?

Also should be greater than instead of less than.

SuggestedRemedy

converge and fix

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Change less than or equal to greater than or equal in both 104-2 and 104-3.

Equation 104-3 to be deleted when 104-3 is adopted as new 97-29 by P802.3bp.

Equation 104-2 to be retained per motion adopted from pischl_3bu_1_0315.pdf

Cl **104.6** SC **104.6.3.4** P **57** L **40** # 255

Moffitt, Bryan — Commscope

Comment Type **T** *Comment Status* **A** *OK*

seems like Table 104-7 should specify some minimum risetimes to avoid alien transients (although I have no supporting data)

SuggestedRemedy

add minimum risetimes consistent with signalling needs

Response *Response Status* **C**

ACCEPT.

See 121 and 61.

Cl **01** SC **1.4.1** P **16** L **5** # 256

Ran, Adee — Intel Corporation

Comment Type **TR** *Comment Status* **A** *OK*

Here there are definitions for "PoDL Regulated PSE" and "PoDLUnregulated PSE" (with a missing space) but these terms are never used.

However, the term "PoDL PSE" is used many times but there is no definition for it.

Does "PoDL PSE" stand for either regulated or unregulated? It does not seem obvious.

Regulation requirements can be addressed in the relevant clauses.

SuggestedRemedy

Replace the definitions in 1.4.1 and 1.4.2 with a single definition for "PoDL PSE". Address regulation requirements in the relevant clauses when necessary.

Alternatively, add a definition for "PoDL PSE" and insert the missing space in 1.4.2.

Response *Response Status* **C**

ACCEPT. EZ.

A definition for "PoDL PSE" will be added, and the missing space in 1.4.2 will be added.

Cl **01** SC **1.4.3** P **16** L **12** # 257
Ran, Adee Intel Corporation

Comment Type **TR** *Comment Status* **A** *OK*

The second sentence of this definition seems to be directly implied from the first one. If that is the case, it is redundant and confusing.

Same issue with the definitions in 1.4.4 and 1.4.5.

SuggestedRemedy

Either delete the second senetence of each definition, or reword to clarify what it is supposed to add to the definition.

Response *Response Status* **C**

ACCEPT. EZ.

The second sentence will be deleted in 1.4.4 and 1.4.5.

Cl **30** SC **30.2.2.1** P **17** L **21** # 258
Ran, Adee Intel Corporation

Comment Type **E** *Comment Status* **A** *OK*

New text "and PoDLPSE" is not underlined.

SuggestedRemedy

Underline newly inserted text.

Response *Response Status* **C**

ACCEPT. EZ.

See 320.

Cl **30** SC **30.2.3** P **17** L **31** # 259
Ran, Adee Intel Corporation

Comment Type **E** *Comment Status* **A** *OK*

Missing editorial instruction.

SuggestedRemedy

Insert "Change the first paragraph as follows:"

Response *Response Status* **C**

ACCEPT. EZ.

Cl **30** SC **30.14** P **20** L **44** # 260
Ran, Adee Intel Corporation

Comment Type **E** *Comment Status* **A** *OK*

Missing editorial instruction.

SuggestedRemedy

Insert "Insert new subclause 30.14".

Response *Response Status* **C**

ACCEPT. EZ.

Cl **30** SC **30.14.1** P **20** L **50** # 261
Ran, Adee Intel Corporation

Comment Type **E** *Comment Status* **A** *OK*

Missing period after "actions"

SuggestedRemedy

Add a Period.

Response *Response Status* **C**

ACCEPT. EZ.

See 153.

Cl **30** SC **30.14.1.1.4** P **22** L **12** # 262
Ran, Adee Intel Corporation

Comment Type **TR** *Comment Status* **A** *OK*

"typaAB" apperas twice.

Also in 30.14.1.1.5.

SuggestedRemedy

Change the first occurrence to "typeB".

Response *Response Status* **C**

ACCEPT. EZ.

See comments 193 and 372.

Cl **30** *SC* **30.14.1.1.7** *P* **23** *L* **24** # 263

Ran, Adee Intel Corporation

Comment Type **T** *Comment Status* **A** *OK*

It seems odd that a counter is mapped to a bit, especially since the bit is latched-high so the counter can't even count the number of times the bit is set.

This occus several times in the new subclause and in existing subclauses of 30.9.

Should the attribute be a single bit instead of a counter?

If it is a counter, should it say instead something like "this counter increments on every event that would cause the invalid signature bit to be set"?

SuggestedRemedy

Consider changing the attribute or rewording here and in similar places.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Change "If a Clause 45 MDIO Interface to the PoDL PSE function is present, then this attribute will map to the invalid signature bit specified in 45.2.7a.2.3"

to

"If a Clause 45 MDIO Interface to the PoDL PSE function is present, then this attribute may be derived from the invalid signature bit specified in 45.2.7a.2.3"

Change all other instances of "will map to" to "may be derived from" in Clause 30.

All latched bits are clear on read, and the max update rate for the PSE status register is 2Hz. This should pose no difficulty for the counter implementor.

Cl **30** *SC* **30.14.1.2** *P* **24** *L* **42** # 264

Ran, Adee Intel Corporation

Comment Type **E** *Comment Status* **A** *OK*

"Sampling frequency and averaging is vendor-defined"

Should probably be "are".

Is this sentence needed at all? Anything that is not speficied is vendor-defined.

SuggestedRemedy

Change "is" to "are".

Consider deleting this sentence.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Change "is" to "are".

Cl **30** *SC* **30.14.2.1** *P* **26** *L* # 265

Ran, Adee Intel Corporation

Comment Type **E** *Comment Status* **A** *OK*

Blank page.

SuggestedRemedy

Remove page.

Response *Response Status* **C**

ACCEPT. EZ.

Cl **45** *SC* **45.2** *P* **27** *L* **19** # 266

Adee, Ran Intel Corporation

Comment Type **E** *Comment Status* **A** *OK*

Editorial instructions includes swapped words "reserved row m.5.15:2 for"

SuggestedRemedy

Change to "reserved for m.5.15:2"

Response *Response Status* **C**

ACCEPT. EZ.

Cl **45** *SC* **45.2.7a** *P* **28** *L* **25** # 267

Ran, Adee — Intel Corporation

Comment Type **E** *Comment Status* **A** *OK*

Missing period after "Table 45-211f" Superfluous period after "intervention" (end of this paragraph)..

SuggestedRemedy

Use one period in both cases.

Response *Response Status* **C**

ACCEPT. EZ.

Cl **45** *SC* **45.2.7a.1.1** *P* **28** *L* **47** # 268

Ran, Adee — Intel Corporation

Comment Type **TR** *Comment Status* **A** *OK*

The second sentence starting with "A PSE may disable" suggests an option for a PSE ("may equals is permitted to"). If the PSE disables something then it should be _indicated_ to management. But I assume this is not the intention.

Was this supposed to be "PSE power classification may be disabled"? If so, the second sentence could be deleted since it just repeats the first sentence.

In addition, the second paragraph uses "shall" which means it is a requirement, not an option. This is confusing.

SuggestedRemedy

If this function is mandatory, delete the second sentence (which includes "may").

If it is optional, change "shall be" to "is" twice.

Response *Response Status* **C**

ACCEPT. EZ.

Classification is optional. The wording will be changed from "shall be" to "is".

Cl **45** *SC* **45.2.7a.1.2** *P* **29** *L* **3** # 269

Ran, Adee — Intel Corporation

Comment Type **TR** *Comment Status* **A** *OK*

Wording suggests that "disabling by setting the bits" is a normative requirement, but the likely intent is that the effect of setting the bits is normative.

In addition, the value of me_pse_enable should probably be mapped to this register, instead of having a "shall" associated with it (I assume the variable is not observable).

SuggestedRemedy

Change to "when bits 12.0.1:0 are set to 00, the PSE function shall be disabled", and similarly for other values.

Consider mapping the variable to the register and deleting the second paragraph.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Change to "when bits 12.0.0 is set to 0, the PSE function shall be disabled", and similarly for other values.

See comment 205.

TFTD.

Cl **104** *SC* **104.1.1** *P* **33** *L* **28** # 270

Ran, Adee — Intel Corporation

Comment Type **TR** *Comment Status* **A** *OK*

"All implementations of PD and PSE systems shall be compatible at their respective Power Interfaces (PIs) when used in accordance with the restrictions of this clause where appropriate"

This is a very complex and vague statement, and it is normative ("shall", even though there is no PICS item for it). I do not understand who could commit to such a requirement ("all implementations"? As a vendor I can only make statements about my own implementation).

Implementations should be compliant to the standard - that goes without saying. _Compatibility_ (with other implementations? or with something else?) is a concern for the task force to guarantee, and is one of the critetia for standard development. We cannot require that from a specific implementation.

SuggestedRemedy

Either of the following:
1. Reword this paragraph to state that the points where compliance is required are the Power Interfaces; refer to figures 104-1, 104-2 and/or 104-3. (assuming this is what this subclause is trying to say)
2. Remove this subclause altogether (if the point of compliance is obvious).

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

TFTD rewording this subclause. See comment 304.

Change 104.1.1 to:

"Compliant implementations of PD and PSE systems are defined as compatible at their respective Power Interfaces (PIs)
when used in accordance with the restrictions of this clause where appropriate. Designers are free to implement
circuitry within the PD and PSE in an application-dependent manner provided that the respective PI specifications are satisfied."

Cl **104** *SC* **104.1.2** *P* **33** *L* **35** # 271

Ran, Adee — Intel Corporation

Comment Type **E** *Comment Status* **A** *OK*

"Single-Pair PoDL comprises an optional power entity when used..."

"comprises" means "is composed of", but I don't see how the rest of the sentence fits this meaning.

SuggestedRemedy

Change "Single-Pair PoDL comprises an optional power entity when used" to "Single-Pair PoDL is an optional power entity to be used"

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.1.2** *P* **34** *L* **4** # 272

Ran, Adee — Intel Corporation

Comment Type **E** *Comment Status* **A** *OK*

Fonts in figure 104-1 seem to be stretched out horizontally and lines are thicker than in figure 104-2.

SuggestedRemedy

Reformat figure 104-1 to fix font and line width.

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.2** *P* **35** *L* **18** # 273

Ran, Adee — Intel Corporation

Comment Type **TR** *Comment Status* **A** *OK*

Power classes, regulation, and several parameters are mentioned here without any definition. This makes reading the clause more difficult than it should be. I assume they are discussed in detail elsewhere.

SuggestedRemedy

Add some introduction and provide cross-references, or move this subclause to a later point in the draft where these term have already been defined.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Place Table 104-1 in its own subclause titled 'System class power requirements'. Editor given editorial license to add introductory material and appropriate cross references.

See comment 123.

Cl **104** *SC* **104.3** *P* **35** *L* **52** # 274

Ran, Adee Intel Corporation

Comment Type **T** *Comment Status* **A** *OK*

What is "end station equipment"?

SuggestedRemedy

Either define this term or replace it with another term.

Response *Response Status* **C**

ACCEPT. EZ.

Reword sentence as follows:

"The PSE provides the power to the PD."

Cl **104** *SC* **104.3.3.3** *P* **36** *L* **47** # 275

Ran, Adee Intel Corporation

Comment Type **E** *Comment Status* **R** *OK*

Variable definitions in this subclause, with the exception of "power_applied", have FALSE meaning as simply the logical inversion of the TRUE meaning. FALSE is naturally the logical negation of TRUE, and just negating the sentence adds no information, and makes the definitions harder to read (I keep asking myself "am I missing something"?)

Comment also applies to 104.4.3.3.

SuggestedRemedy

I would suggest rephrasing most definitions to state the data type, what the variable stands for, and finally describing what TRUE and FALSE (or any other value) mean, if this is not obvious. Compare to other subclauses that list variables (for example, 73.10.1, 82.2.19.2.2).

Response *Response Status* **C**

REJECT.

Please propose a full remedy for this or at least one full example.

Cl **104** *SC* **104.3.3.3** *P* **36** *L* **48** # 276

Ran, Adee Intel Corporation

Comment Type **TR** *Comment Status* **A** *OK*

do_classification_done definition uses past perfect to define a condition ("the PSE has concluded...") but does not state since when this condition is examined, or when the variable is cleared. I assume that something like "since the last reset" (or some other event) should apply here, otherwise the values can only change once.

Since this is a definition, it should be detailed and precise.

Comment also applies to definitions of external_wakeup, tdet_timer_done, overload_detected, pd_wakeup, power_applied, valid_class. Also applies to variables in 104.4.3.3.

SuggestedRemedy

State in each case since when the condition is checked, or what clears it.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Add "Following a valid detection sequence, the PSE..." to the definition of do_classification_done.

Editor given license to change remaining instances of past perfect tense.

Cl **104** *SC* **104.3.3.3** *P* **37** *L* **12** # 277

Ran, Adee Intel Corporation

Comment Type **T** *Comment Status* **A** *OK*

I_port is not a state diagram variable - no state diagram uses it. In addition, its definition isn't specific - does it have a data type, accuracy specification, etc.?

SuggestedRemedy

Remove this variable from the list.

Response *Response Status* **C**

ACCEPT. EZ.

Iport is just IPSE. Hence the definition is superfluous.

Cl **104** *SC* **104.3.3.3** *P* **37** *L* **36** # 278

Ran, Adee Intel Corporation

Comment Type **TR** *Comment Status* **A** *OK*

It is not clear if pi_detecting is an indication of a condition or is controlling some function (so that setting it causes the effect described).

Rephrasing (as suggested for all variables) is especially important in cases there the variable being set by a state diagram has some functional effect.

Also applies to pi_discharge_enable, pi_powered, pi_sleeping, perhaps others. Also in 104.4.3.3.

SuggestedRemedy

For each control variable, rephrase definition to state the effects of setting the value, e.g. "setting this variable to TRUE causes."

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Insert after pi_detecting and before TRUE "Controls the circuitry that forces a voltage limited detection current and senses the voltage at the PI."

Editor given license to change pi_discharge_enable, pi_powered, pi_sleeping, perhaps others 104.3.3.3 and 104.4.3.3.

Cl **104** *SC* **104.3.3.6** *P* **40** *L* **11** # 279

Ran, Adee Intel Corporation

Comment Type **E** *Comment Status* **A** *OK*

Variable pi_discharge_en is called pi_discharge_enable in 104.3.3.3.

SuggestedRemedy

Change either the diagram or the variable definition to match names.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Change variable name to "pi_discharge_en" in 104.3.3.3. Do a search and replace to catch all instances.

Cl **104** *SC* **104.3.3.6** *P* **40** *L* **40** # 280

Ran, Adee Intel Corporation

Comment Type **TR** *Comment Status* **A** *OK*

tmfvdo_timer_done is used here but the timer is not started anywhere in this diagram. I see that it is started in another diagram (Figure 104-5) but there its value is not checked. This is unusual and confusing.

SuggestedRemedy

Define a new variable that will be set in the MFVS diagram (figure 104-5) and read in the PSE state diagram (figure 104-4). Make the timers be started and read in the same diagram.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Editor granted license to modify MFVS state diagram to add new state MFVS_TIMEOUT which is entered from DETECT_MFVS when !mfvs_valid*tmfvdo_timer_done. New variable mfvs_timeout will be set in this state and read by the PSE state diagram.

Cl **104** *SC* **104.3.4** *P* **41** *L* **26** # 281

Ran, Adee Intel Corporation

Comment Type **E** *Comment Status* **A** *OK*

"Table 104-2" is not an active cross reference.

SuggestedRemedy

Add cross-reference.

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.3.4** *P* **41** *L* **27** # 282

Ran, Adee — Intel Corporation

Comment Type **TR** *Comment Status* **A** *OK*

It seems that the PSE is has a normative requirement (shall complete detection within a period) but then the text discusses what happens if it doesn't (shall wait at least a period). This takes the point out of the first "shall".

Also, the requirement to complete detection within a limited time does not directly limit the time for applying power; an implementation could complete detection on time but have a delay in transitions between states.

The "shall" statements here should apply to an observable behavior.

It may be better to require that if the PSE completes detection within T_det, and does not opt not to power the detected PD, then powering shall be started with T_det; otherwise, it shall wait at least T_restart before re-attempting detection.

SuggestedRemedy

Rephrase to clearly state the observable requirement - either as suggested in the comment, or otherwise.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Change:

"The PSE shall probe the PI in order to detect a valid PD signature. The PSE is connected to a PD through the PIs and a link segment.

The PSE shall complete detection of the PD signature within Tdet as specified in Table 104-2. If detection is unsuccessful, the PSE shall wait at least Trestart before re-attempting detection. A PSE may successfully detect a PD but then opt not to power the detected PD."

to:

"The PSE shall probe the PI as described in 104.3.4.1. The PSE is connected to a PD through the PIs and a link segment.

The PSE shall complete detection of a valid PD signature within Tdet as specified in Table 104-2. If a valid signature is not detected, the PSE shall wait at least Trestart before re-attempting detection."

Cl **104** *SC* **104.3.5** *P* **42** *L* **41** # 283

Ran, Adee — Intel Corporation

Comment Type **E** *Comment Status* **A** *OK*

Missing space in "offull"

SuggestedRemedy

Change to "of full"

Response *Response Status* **C**

ACCEPT. EZ.

See comment 13.

Cl **104** *SC* **104.3.6** *P* **42** *L* **50** # 284

Ran, Adee — Intel Corporation

Comment Type **TR** *Comment Status* **A** *OK*

Here "Under all conditions", but in table 104-5 the conditions are specific: current within a range and "PD exiting reset state". Are the current limits relevant for the PSE requirement? And does the requirement also hold with PSE is at reset?

SuggestedRemedy

Please clarify. Preferably point to a specific signature (e.g. V_bad_hi).

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Change page 42 line 51

"Under all conditions, a PSE shall present an invalid PD signature as specified in Table 104–5."

to

"Under all conditions, a PSE shall present an invalid PD signature with one of the attributes as specified in Table 104–5."

Cl **104** *SC* **104.3.6** *P* **43** *L* **10** # 285
Ran, Adee Intel Corporation

Comment Type **E** *Comment Status* **A** *OK*

Font size seems to be inconsistent wihin the table (parameter names, numbers "22", "200" and other cells). Also in other tables.

SuggestedRemedy

Fix all tables to use consistent font size.

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.3.6** *P* **43** *L* **38** # 286
Ran, Adee Intel Corporation

Comment Type **T** *Comment Status* **A** *OK*

Units in this table are very inconsistent - some values are in s, others in ms; also A and mA are used interchangably. This is confusing.

SuggestedRemedy

Fix to use consistent units, preferably across the clause.

Response *Response Status* **C**

ACCEPT. EZ.

Change all time and current units to ms and mA.

Cl **104** *SC* **104.3.6.2.1** *P* **45** *L* **4** # 287
Ran, Adee Intel Corporation

Comment Type **E** *Comment Status* **A** *OK*

missing space in "1ms"

SuggestedRemedy

change to "1 ms"

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.3.6.2.2** *P* **45** *L* **9** # 288
Ran, Adee Intel Corporation

Comment Type **TR** *Comment Status* **A** *OK*

What is the observable behavior required in the "shall" statements in this subclause?

What does "consider" cause in each case? Does the PSE have to respond in a certain way?

This "shall consider" appears in several places in the draft.

SuggestedRemedy

Rephrase so that normative requirements are made on explicitly observable behavior.

Do this across the draft.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Replace "A PSE operating in the SLEEP state shall consider a PD wakeup request valid if…" with "A PSE shall transition from the SLEEP state to the POWER_UP state when…".

Replace "A PSE operating in the SLEEP state shall consider a PD wakeup request invalid if..." with "A PSE operating in the SLEEP state shall remain in the SLEEP state if…"

Editor given license to replace other instances of "shall consider" with explicit normative requirement.

Cl **104** *SC* **104.3.6.5** *P* **45** *L* **32** # 289
Ran, Adee Intel Corporation

Comment Type **E** *Comment Status* **A** *OK*

"The specification . shall apply" is an unusual way of making a normative requirement.

SuggestedRemedy

Either:
1. Use the same wording as in 104.3.6.4: "The specification. applies to"
2. Change to "The discharge time from V_PSE in the POWER_ON state to V_Sleep shall be shorter than T_Off"

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.4.4** *P* **49** *L* **52** # 290

Ran, Adee — Intel Corporation

Comment Type **TR** *Comment Status* **A** *OK*

The signature of table 104-5 is definitely outside of the limits set out in table 104-4. so it seems that a PD that presents the signature of table 104-5 is non-compliant?

Is a PD allowed to have a non-valid detection signature? If not - what does the "shall" in line 50 stand for?

SuggestedRemedy

If non-valid signature is allowed under some conditions, please rephrase this sentence to clarify its meaning.

If it is not allowed, delete the last two paragraph (from "A non-valid PD" to "is assured to fail detection").

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Change "A PD that presents a signature outside of the limits set out in Table 104–4 is non-compliant, while a PD that
presents the signature of Table 104–5 is assured to fail detection."

to

"A PD that presents a signature within the limits set out in Table 104–4 is assured to pass detection, while a PD that presents the signature of Table 104–5 is assured to fail detection.

Cl **104** *SC* **104.4.6** *P* **50** *L* **52** # 291

Ran, Adee — Intel Corporation

Comment Type **T** *Comment Status* **R** *OK*

The ripple current seems to be specified as a function of frequency. If that's the case, shouldn't the units be A/Hz?

It is more usual to have formulas to describe limitations of this kind.

SuggestedRemedy

Change units, consider adding formulas in 104.4.6.3

Response *Response Status* **C**

REJECT.

OBE comment 399.

Cl **104** *SC* **104.4.6.5** *P* **52** *L* **40** # 292

Ran, Adee — Intel Corporation

Comment Type **TR** *Comment Status* **A** *OK*

Is there a normative requirement here? It seems to be just a definition.

SuggestedRemedy

Rephrase to state the definition (which is unconditional), and then the conditions and normative requirements if any.

Response *Response Status* **C**

ACCEPT. EZ.

See 405.

Cl **104** *SC* **104.4.6.5** *P* **53** *L* **1** # 293

Ran, Adee — Intel Corporation

Comment Type **E** *Comment Status* **A** *OK*

Inconsistent font size

SuggestedRemedy

Fix it.

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104A** *SC* **104A** *P* **71** *L* **6** # 294

Ran, Adee — Intel Corporation

Comment Type **E** *Comment Status* **R** *OK*

104.4.6.5 suggests that Annex 104A provides design guidelines. This annex is quite short and does not look like design guidelines.

SuggestedRemedy

Rename the annex "Design guidelines for PSE-PD DC loop stability".

Change the title of 104A.1 to "Recommendations for link segment resistance".

Separate the last sentence of 104A.1 (starting with "For optimum") to a new paragraph.

Response *Response Status* **C**

REJECT.

Annex 104A to be deleted. OBE by 73 and 236.

Cl **104A** SC **104A.1** P **71** L **13** # 295

Ran, Adee — Intel Corporation

Comment Type **TR** *Comment Status* **A** *OK*

Equation is not numbered. Also, it includes the terms P_PD(max) and L, which are not defined.

SuggestedRemedy

Add equation number and definitions of missing terms.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Replace P_PD with PPD and define L as length of link segment.

Comments 73 and 236 address equation numbering.

Cl **104** SC **104.5.2** P **53** L **26** # 296

Ran, Adee — Intel Corporation

Comment Type **ER** *Comment Status* **A** *OK*

Clauses 96 and 97 are not included in IEEE Std 802.3-2015 - they are part of amendments 802.3bw and 802.3bp that is not listed in the introduction.

The fault tolerance requirements for both clauses are in 96.8.3. It would be a good service to the reader to point to the specific subclause.

In addition, reference to subclauses that are not part of this draft should be in forest green.

SuggestedRemedy

Add a listing of amendments 802.3bp and 802.3bw in the introduction (assuming they are expected to be published earlier).

Change the "of the appropriate specifying clause. (See clauses 96 and 97)" to "in 96.8.3." with numbers in forest green.

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** SC **104.5.3.1** P **53** L **40** # 297

Ran, Adee — Intel Corporation

Comment Type **E** *Comment Status* **A** *OK*

Numbers and units should be separated by a non-breaking space. They are unseparated in several places in this subclause.

SuggestedRemedy

Add nbsp between values and units.

Response *Response Status* **C**

ACCEPT. EZ.

Cl **00** SC **104.4.4** P **50** L **5** # 298

Remein, Duane — Huawei Technologies

Comment Type **T** *Comment Status* **A** *OK*

Undefined terms
Iconnector

SuggestedRemedy

Add as note to Tables 104-4 & 104-5.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Change Iconnector to IPD.

Cl **00** *SC* **0** *P* **28** *L* **47** # 299

Remein, Duane — Huawei Technologies

Comment Type **T** *Comment Status* **A** *OK*

The logical connection between Bit 12.0.2 and Cl 104.6 seems to be missing.
If I go to Cl 104.6 the terms "power classification", "enable" and "disable" are not present in the sub-clause. I am left with a question then as to what this bit actually does and how it is used by Cl 104.6.
The only instance of "power classification" in Cl 104 is on pg 36 in 104.3 which seems a bit removed from 104.6.

SuggestedRemedy

Establish an obvious logical connection between Cl 45 and Cl 104.6.
For example you could define a variable in 104.6 that reflects bit 12.0.2 and then ref the variable name in the bit def in Cl 45.
Other clauses also provide a cross reference list between normative variables and Cl 45 register bit (ex see 82.3.1, 84.6, 85.6 and others).

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Change

"Bit 12.0.2 controls power classification as specified in 104.6. A PSE may disable power classification through bit 12.0.2."

to

"Bit 12.0.2 controls power classification. A PSE may disable power classification through bit 12.0.2 using the mr_sccp_enabled variable in 104.3.3.3."

search and replace sccp_enabled with mr_sccp_enabled.

Cl **00** *SC* **0** *P* **17** *L* **21** # 300

Remein, Duane — Huawei Technologies

Comment Type **ER** *Comment Status* **A** *OK*

Undefined TLAs - "PSE" & "PD"
While I'm sure all you poodles are breed to know the meaning of this term, the rest of us Ethernet dogs aren't.

SuggestedRemedy

Spell out 1st instance of use in each clause
<OR>
Add to Cl 1.5 Abbreviations

Response *Response Status* **C**

ACCEPT. EZ.

Cl **00** *SC* **0** *P* **30** *L* **26** # 301

Remein, Duane — Huawei Technologies

Comment Type **TR** *Comment Status* **A** *OK*

I don't see any state "ERROR" in figure 104-4

Same issue exists at line 52 and in Cl 30 pg 24 line 13

SuggestedRemedy

Point to a valid state in a state diagram.
<OR>
(Preferred) map this MDIO bit to a defined SD variable.

Response *Response Status* **C**

ACCEPT. EZ.

See 131. Map this MDIO bit to the OVERLOAD state.

Cl **01** *SC* **1.4** *P* **16** *L* **2** # 302

Remein, Duane — Huawei Technologies

Comment Type **ER** *Comment Status* **A** *OK*

L3 headers should identify where in the list the definition should go.
For example 1.4.1 PoDL Regulated PSE should be 1.4.330a per current template.
Editing instruction should ref. existing definition as in current template:
"Insert the following new definition after 1.4.x <name>:"

SuggestedRemedy

Update 1.4.x headers as per current template.

Add new/changed editing instructions per current template.

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.3.3.6** *P* **40** *L* **2** # 303

Remein, Duane — Huawei Technologies

Comment Type **ER** *Comment Status* **A** *OK*

Figure titles should appear at the bottom of the figure and not at the top as specified in the current template.

SuggestedRemedy

Scrub the draft for errant figure titles and align with paragraph tag and style per current template.

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.1.1** *P* **33** *L* **26** # 304

Remein, Duane — Huawei Technologies

Comment Type **TR** *Comment Status* **A** *OK*

104.1.1 Compatibility considerations
Your objectives state "Ensure compatibility with IEEE P802.3bp" yet in this para you don't mention any compatibility requirements with the P802.3bp PHY types.

SuggestedRemedy

Clear state that PHYs incorporating PoDL are compatible with all 100BASE-T1 and 1000BASE-T1 PHYs (including those that do not support PoDL).

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

"MDIs that incorporate compliant PoDL PIs are compatible with their respective physical layer standards. Such compatibility may require additional specifications found within this clause (ref:TBD)."

Editor given license to resolve TBD reference.

See comment 270.

New 104.1.1

Compliant implementations of PD and PSE systems are defined as compatible at their respective Power Interfaces (PIs) when used in accordance with the restrictions of this clause where appropriate. Designers are free to implement
circuitry within the PD and PSE in an application-dependent manner provided that the respective PI specifications are satisfied. MDIs that incorporate compliant PoDL PIs are compatible with their respective physical layer standards. Such compatibility may require additional specifications found within this clause.

Cl **104** *SC* **104.2** *P* **35** *L* **45** # 305

Remein, Duane — Huawei Technologies

Comment Type **ER** *Comment Status* **A** *OK*

Footnotes 1 & 2 do not appear to be attached to Table 104-1. (See IEEE Style Manual Cl 14.4 Notes and footnotes to tables & 802.3 template for guidance on normative/informative footnotes and proper styles).

SuggestedRemedy

Align with proper style. I believe these are normative and should be a & b as is typical of Cl 45 tables.

Response *Response Status* **C**

ACCEPT. See 47.

Cl **104** *SC* **104.4.3.3** *P* **47** *L* **6** # 306

Remein, Duane — Huawei Technologies

Comment Type **T** *Comment Status* **A** *OK*

enable_mdi_power never set to TRUE (set to FALSE in state RESET Figure 104-6-PD state diagram), If never set to TRUE is probably not needed and can be removed.

SuggestedRemedy

Change enable_mdi_power to enable_mdi_pwr (2x)

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.4.3.6** *P* **49** *L* **24** # 307

Remein, Duane — Huawei Technologies

Comment Type **E** *Comment Status* **A** *OK*

IEEE Style manual (Table 1 & Figure 1) recommends Times New Roman and Arial fonts in figures of at least 8 points with a 6 point minimum. Vpd>Vsig_disable looks marginal (maybe OK, check in FM).

SuggestedRemedy

Align with Style manual for all figures.

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.4.3.6** *P* **49** *L* **22** # 308

Remein, Duane — Huawei Technologies

Comment Type **T** *Comment Status* **A** *OK*

sccp_watchdog_tmr used in Figure 104-6-PD state diagram not formally defined.

Same issue with tpowerdly_tmr

However sccp_watchdog_timer & tpowerdly_timer are.

SuggestedRemedy

Change
sccp_watchdog_timer to sccp_watchdog_tmr (1x) and
tpowerdly_timer to tpowerdly_tmr (2x)

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.4.3.6** *P* **49** *L* # 309

Remein, Duane Huawei Technologies

Comment Type **TR** *Comment Status* **A** *OK*

The following SD variables are not formally defined.
Disconnect_PD
Vpd,

The following are not defined before use in a SD
Vsig_disable
Vsig_enable
VOn
VOff

SuggestedRemedy

Add definition or pointer to same in variables listing before the SD.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Editor given license to add definitions for VPD, Vsig_disable, Vsig_enable, Von, and Voff to SD definitions.

Capitalize disconnect_PD in definitiions to match SD.

Cl **104** *SC* **104.4.4** *P* **49** *L* **42** # 310

Remein, Duane Huawei Technologies

Comment Type **E** *Comment Status* **A** *OK*

Missing space in "Vsig_enable.When"

Stray comma in "Vsig_disable, a"

SuggestedRemedy

add space, remove comma.

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.4.4** *P* **50** *L* **5** # 311

Remein, Duane Huawei Technologies

Comment Type **E** *Comment Status* **A** *OK*

Table 104-4 Fgood row what is a "RESETstate" (hyphenated to two lines in pdf)?

SuggestedRemedy

Add missing space between RESET and state.

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.4.4** *P* **50** *L* **9** # 312

Remein, Duane Huawei Technologies

Comment Type **T** *Comment Status* **A** *OK*

The meaning of "rising" & "falling" under conditions in Table 104-4 escapes me. If Vconnector is at 4.0 V and stays there for an hour is Vsig_disable still not TRUE?

SuggestedRemedy

replace rising and falling with "less than" and "greater than" resp.

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.7.4.4** *P* **67** *L* **5** # 313

Remein, Duane Huawei Technologies

Comment Type **ER** *Comment Status* **A** *OK*

PIC Item crosses line "COMEL1"
Same issue in PSE Electrical, and SCCP tables.

SuggestedRemedy

Adjust the table column so the Item is on a single line.

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.4.6.5** *P* **53** *L* **1** # 314

Remein, Duane Huawei Technologies

Comment Type **E** *Comment Status* **A** *OK*

Note appear to be text paragraph tag

SuggestedRemedy

Change to paragraph tag Note per current template.

Response *Response Status* **C**

ACCEPT. EZ.

See comment 293.

Cl **104** *SC* **104.4.7** *P* **53** *L* **5** # 315

Remein, Duane Huawei Technologies

Comment Type **E** *Comment Status* **A** *OK*

"PD Maintain Full Voltage" should be "PD maintain full voltage"
Unless you mean the defined proper noun "Maintain Full Voltage Signal"

SuggestedRemedy

Change to lower case or add Signal.

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.5.3.1** *P* **53** *L* **49** # 316

Remein, Duane Huawei Technologies

Comment Type **E** *Comment Status* **A** *OK*

Impressive equation editing. Is it native FrameMaker?

SuggestedRemedy

Kudos to the Editors if it is.

Response *Response Status* **C**

ACCEPT. EZ.

Yes, it is.

To be honest, I lifted a similar equation from the bt draft and modified it since I couldn't do it from scratch myself.

Cl **104** *SC* **104.1.1** *P* **33** *L* **26** # 317

Remein, Duane Huawei Technologies

Comment Type **T** *Comment Status* **D** *OK*

More of a question than a comment but what happens if two PSEs are connected?
Where is this specified?

SuggestedRemedy

Might want to say something about the potential operating state (weather it is intentional or not it will happen).

Proposed Response *Response Status* **Z**

REJECT.

This comment was WITHDRAWN by the commenter.

See 104.3.6, page 42 line 50.

Cl **104** *SC* **104.6.4.3** *P* **59** *L* **1** # 318

Remein, Duane Huawei Technologies

Comment Type **ER** *Comment Status* **A** *OK*

IEEE Style manual (Table 1 & Figure 1) recommends Times New Roman and Arial fonts in figures of at least 8 points with a 6 point minimum.
CCh BRDCAST ADDR COMMAND
AAh SCRATCHPAD READ
Bus Master RX CLASS_TYPE_INFO
Bus Master RX CRC-8
All appear to be less than the minimum of 6 point.
Other text in figure appear marginal

SuggestedRemedy

Align Figure 104-12 with Style manual.

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.7.4.2** *P* **62** *L* **39** # 319
Remein, Duane Huawei Technologies

Comment Type **TR** *Comment Status* **A** *OK*

Missing status and support fields for PSE5 & PSE6

SuggestedRemedy

complete.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

See latest PICs presentation chabot_3bu_1_0116.pdf page 1 of 7.

TFTD.

Cl **30** *SC* **30.2.2.1** *P* **17** *L* **21** # 320
Remein, Duane Huawei Technologies

Comment Type **ER** *Comment Status* **A** *OK*

mark-up only shows deleted text and does not indicate added text "and PoDLPSE"

SuggestedRemedy

Show additions with proper (underline) mark-up.

Response *Response Status* **C**

ACCEPT. EZ.

Cl **30** *SC* **30.2.3** *P* **17** *L* **30** # 321
Remein, Duane Huawei Technologies

Comment Type **ER** *Comment Status* **A** *OK*

Missing Editing Instruction for para 30.2.3.
The same issues exists at:
30.14 pg 20 ln 45

SuggestedRemedy

Add appropriate instruction such as "Change the first paragraph of 30.2.3 as shown:" and "Insert sub-clause 30.14 as shown:"

Response *Response Status* **C**

ACCEPT. EZ.

See 186.

Cl **30** *SC* **30.2.5** *P* **20** *L* **1** # 322
Remein, Duane Huawei Technologies

Comment Type **ER** *Comment Status* **A** *OK*

Table without reference. It is customary to include at least on text referencing each table and figure.

SuggestedRemedy

Add text referencing new Table 30-8.

Response *Response Status* **C**

ACCEPT. EZ.

Cl **45** *SC* **45.2** *P* **27** *L* **5** # 323
Remein, Duane Huawei Technologies

Comment Type **TR** *Comment Status* **A** *OK*

Sorry but MDIO MMD 12 has already been claimed by EPoC.

SuggestedRemedy

Change Editing Instruction to:
"Insert row to add Power Unit Registers to Table 45-1 as changed by P802.3bn as shown (unchanged rows not shown):"
Change MMD 12 to 13 in text and Table 45-1.
Change new row to underlined text in Table 45-1
Change stricken 12 to stricken 13 in Table 45-1
In section 45.2.7a change all instances of "12." to "13."

Response *Response Status* **C**

ACCEPT. EZ.

Cl **45** *SC* **45.2** *P* **27** *L* **28** # 324
Remein, Duane Huawei Technologies

Comment Type **ER** *Comment Status* **A** *OK*

All added text in modified Cl 45 tables should be shown in underlined text.

SuggestedRemedy

Show added text (row m.5.12) in Table 45-2 as underlined

Response *Response Status* **C**

ACCEPT. EZ.

Cl **45** *SC* **45.2.7a** *P* **28** *L* **1** # 325

Remein, Duane Huawei Technologies

Comment Type **ER** *Comment Status* **A** *OK*

Clause 45.2.7a is already in use by EPoC.

SuggestedRemedy

Change headers to 45.2.1b
Change editing instruction to:
"Insert the following subclauses for Power Unit Registers immediately after 45.2.7a.6 (10GPASS-XR receive MER measurement registers) added by P802.3bn.

Coordinate numbering of Tables 45-211e through 45-211h with P802.3bn editors as well as P802.3bq and bz clause editors. P802.3bn has currently assigned Table 45-211g (but starts with 211a). P802.3bn will likely finish after bz/bq but before bu and we will both need to adjust table numbering.
Change Editors note to include: "... P802.3bq, bz, and bn ..."

Response *Response Status* **C**

ACCEPT.

Cl **45** *SC* **45.2.7a.1** *P* **28** *L* **21** # 326

Remein, Duane Huawei Technologies

Comment Type **E** *Comment Status* **A** *OK*

Extraneous editing instruction. "Insert the following subclauses to add Single-Pair PSE Control Register as shown:"
The instruction that inserts 45.2.7a (which of course will become 7b) can cover all sub-clauses.

SuggestedRemedy

strike here as pg29 ln 10 and pg 31 ln 30.

Response *Response Status* **C**

ACCEPT. EZ.

Cl **45** *SC* **45.2.7a.1** *P* **28** *L* **25** # 327

Remein, Duane Huawei Technologies

Comment Type **E** *Comment Status* **A** *OK*

Missing period "Table 45-211f The default"

SuggestedRemedy

Clearly delineate sentence with period. "Table 45-211f. The default"

Response *Response Status* **C**

ACCEPT. EZ.

Cl **45** *SC* **45.2.7a.2.1** *P* **30** *L* **26** # 328

Remein, Duane Huawei Technologies

Comment Type **T** *Comment Status* **A** *OK*

While this information about the power denied bit is interesting it leaves one with a question concerning the Power removed bit.
"The Power Denied bit shall be implemented with latching high behavior as defined in 45.2."

SuggestedRemedy

Change "Power Denied" to "Power Removed"

Response *Response Status* **C**

ACCEPT. EZ.

Cl **45** *SC* **45.2.7a.2.1** *P* **30** *L* **26** # 329

Remein, Duane Huawei Technologies

Comment Type **TR** *Comment Status* **A** *OK*

The use of the term shall here implies CL 45 is mandated. Clause 45 is optional in it's entirety and cannot be made mandatory.
"This bit shall be set to one when the PSE state diagram (Figure 104-4) enters the state 'ERROR.' The Power Denied bit shall be implemented with latching high behavior as defined in 45.2."
Given that you've not opened the PICS for Cl 45 I infer that you don't wish to include normative language here.

SuggestedRemedy

Change "shall be" to "is" in 12 places in 45.2.7a.2.x. For example the statements quoted above will read:
"This bit is set to one when the PSE state diagram (Figure 104-4) enters the state 'ERROR.' The Power Removed bit is implemented with latching high behavior as defined in 45.2."

Response *Response Status* **U**

ACCEPT IN PRINCIPLE.

PICs will be added for Clause 45 shalls. The interface is optional.

Cl **45** *SC* **45.2.7a.2.1** *P* **30** *L* **26** # 330

Remein, Duane Huawei Technologies

Comment Type **ER** *Comment Status* **A** *OK*

Dead link "(Figure 104-4)"

SuggestedRemedy

All xreferences should be live links. Scrub the clause for instances of dead links and make live. "Figure 104-4" and "Figure 104-5" seem to be prevalent cases.

Response *Response Status* **C**

ACCEPT. EZ.

Cl **45** *SC* **45.2.7a.2.2** *P* **30** *L* **32** # 331

Remein, Duane Huawei Technologies

Comment Type **TR** *Comment Status* **A** *OK*

This is the only instance of "mr_valid_signature" in the draft.

SuggestedRemedy

Please provide a cross reference to where this variable is defined.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

valid_signature exists in PSE SD and definitions and should correspond to mr_valid_signature in Clause 45. Editor to search and replace valid_signature with mr_valid_signature.

Cl **45** *SC* **45.2.7a.2.3** *P* **30** *L* **38** # 332

Remein, Duane Huawei Technologies

Comment Type **TR** *Comment Status* **A** *OK*

One naturally assumes that a MDIO bit set in a SD reflects some variable in the SD. In this case I see Fig 104-5 has valid_signature (which I would have thought corresponds to bit 12.1.14 but apparently does not) but is an inverted from of Valid_Signature, ... or maybe not.

SuggestedRemedy

Provide a clear reference to a SD variable for bit 12.1.13.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Revise detection SD to incorporate mr_invalid_signature which tdet_timer_done. 45.2.7a.2.3 will then point to mr_invalid_signature. PSE SD to be changed by adding DETECTION_EVAL state. Editor given license to make the change.

Cl **45** *SC* **45.2.7a.2.4** *P* **30** *L* **44** # 333

Remein, Duane Huawei Technologies

Comment Type **TR** *Comment Status* **A** *OK*

MDIO registers affected by SD's should clearly be tied to a variable in the SD and not set/reset by a state transition as in "shall be set to one when the PSE state diagram (Figure 104-4) transitions directly from the state CLASSIFICATION_EVAL to RESTART"

This issue exists for the following bit definitions; 12.1.15, 14, 13, 12, 11, 10 , 9:7, 6:3 and 2:0.

SuggestedRemedy

Provide a clear reference to a SD variable for bit 12.1.12. If one does not exist in the SD create it in the SD and xref here.

Response *Response Status* **U**

ACCEPT IN PRINCIPLE.

All the bit fields with their corresponding subclauses will be reviewed and editor given license to change as per the suggested remedy.

Cl **45** *SC* **45.2.7a.2.7** *P* **31** *L* **9** # 334

Remein, Duane Huawei Technologies

Comment Type **TR** *Comment Status* **A** *OK*

This definition lacks a clear mapping of this enumeration to the three PSE Types of Type A, Type B, and Type A+B. Are the bits shown in Table 45-211g 7, 8, & 9 or 9, 8 & 7? Except for Type A PSE this would make a difference.

Same issue exists for bit 12.1.6:3 and 12.1.2:0 and in Table 45-211h bits 12.2.2:0

SuggestedRemedy

In table 45-211g clearly indicate bits 7, 8, & 9 in the description field.

Response *Response Status* **C**

ACCEPT. EZ.

Add the following to 45.2.7a.2.7:

When read as '000', bits 12.1.9:7 indicate a Type A PSE, when read as '001' a Type B PSE is indicated, and when read as '010' a Type A+B is indicated.

Use similar text for PD class field and Table 45-211h bits 12.2.2:0.

Cl **45** SC **45.2.7a.3** P **31** L **35** # 335
Remein, Duane Huawei Technologies

Comment Type **E** *Comment Status* **A** *OK*

Cannot find "Table 45.2.7a.3.1h"

SuggestedRemedy

Change to "Table 45-211h"

Response *Response Status* **C**

ACCEPT. EZ.

Cl **FM** SC **FM** P **5** L **54** # 336
Remein, Duane Huawei Technologies

Comment Type **ER** *Comment Status* **A** *OK*

Copy write date should be 2016 for next draft.
Para Style for copy write statement is incorrect (should be centered)

SuggestedRemedy

Change to copyright_year variable to 2016 in each clause.
Align styles throughout the draft to current 802.3 template.

Response *Response Status* **C**

ACCEPT. EZ. See comment 69.

Cl **FM** SC **FM** P **3** L **1** # 337
Remein, Duane Huawei Technologies

Comment Type **ER** *Comment Status* **A** *OK*

"Draft Amendment to IEEE Std 802.3-201X" should be 2015

SuggestedRemedy

change to header "Draft Amendment to IEEE Std 802.3-2016" in all clauses.

Response *Response Status* **C**

ACCEPT. EZ. See comment 69.

Cl **FM** SC **FM** P **7** L **35** # 338
Remein, Duane Huawei Technologies

Comment Type **ER** *Comment Status* **A** *OK*

Missing WG voter list.

SuggestedRemedy

Add voter list as determined by WG Chair.

Response *Response Status* **C**

ACCEPT. EZ. See comment 248.

Cl **104** SC **104** P L # 339
Schicketanz, Dieter Reutlingen University

Comment Type **T** *Comment Status* **A** *OK*

general: The power circuity loads the signal lines. I could not find in any place of the document mentioning the necesary balance and acceptable load, The differential load should by higher than 100 ohm, The common mode load more than 75 Ohm.

SuggestedRemedy

In clause 104.5 load balancing is missing. The MDI specifications are rathe low. Will the CMC1 and L1 from page 8 do all the job? Then we need to specify it. Also a "floating" load is not very realistic. Or are we leaving the job to the implementors?

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Add note to item 5 of table 104-2 that PHY data integrity may be degraded during detection.

Cl **104** SC **104.2** P **36** L **7** # 340
Schindler, Fred Seen Simply

Comment Type **ER** *Comment Status* **A** *OK*

Existing text,
"To remove normal operating voltage when no longer requested or required, transitioning to the SLEEP state"
should be inproved.

SuggestedRemedy

Replace text with,
"To remove normal operating voltage when no longer required or when transitioning to the SLEEP state"

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.3.6.5** *P* **45** *L* **45** # 341

Schindler, Fred — Seen Simply

Comment Type **ER** *Comment Status* **A** *OK*

Existing text,
"A PSE may remove power from a PD that causes the PSE to source more than PClass."
should be improved.

SuggestedRemedy

Replace the text with,
"A PSE may remove power from the PI when more than PClass is sourced."

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.3.7.1** *P* **46** *L* **8** # 342

Schindler, Fred — Seen Simply

Comment Type **ER** *Comment Status* **A** *OK*

Existing sentence,
"Voltage shall be reduced to the range of VSleep at the PI when the MFVS has been absent for a duration greater than TMFVDO."
should be improved.

SuggestedRemedy

Replace with,
"The PSE-PI Voltage shall be reduced to the range of VSleep when the MFVS has been absent for a duration greater than TMFVDO."

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.4** *P* **46** *L* **15** # 343

Schindler, Fred — Seen Simply

Comment Type **ER** *Comment Status* **A** *OK*

The existing text,
"A device that is capable of becoming a PD may or may not have the ability to draw power from an alternate power source and, if doing so, may or may not require power from the PI."
is not clear.

SuggestedRemedy

The Task Force should discuss what the intent is and improve the sentence. My assumtions lead to this potential solution,

"A device that is capable of becoming a PD may have the ability to draw power from an alternate power source. A PD using an alternate power source may simultaneously require power from the PI."

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Submit a maintenance change for Clause 33 to keep text aligned.

Cl **104** *SC* **104.5** *P* **53** *L* **18** # 344

Schindler, Fred — Seen Simply

Comment Type **TR** *Comment Status* **A** *OK*

The existing requirement,
"A PD shall provide DC isolation between all accessible external conductors, including frame ground (if any), and all MDI leads." is not complete.

SuggestedRemedy

The Task Force should sort out the appropriate isolation resistance. I have provide a suggestion. replace the text with,
"A PD shall provide at least 100 k-ohms DC isolation between all accessible external conductors, including frame ground (if any), and all MDI leads, when measured using at least a 2V source voltage."

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

In order to prevent the formation of a ground loop, a PD shall provide at least 1 Mega-ohm DC isolation between all accessible external conductors, including frame ground (if any), and all MDI leads, when measured using at least a 5V source voltage.

See 173.

Cl **104** SC **104.3.3.3** P **38** L **7** # 345
Scruton, Peter University of New Ham

Comment Type **E** *Comment Status* **A** *OK*

missing period

SuggestedRemedy

add period

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** SC **104.3.5** P **42** L **42** # 346
Scruton, Peter University of New Ham

Comment Type **E** *Comment Status* **A** *OK*

typo: offull

SuggestedRemedy

of full

Response *Response Status* **C**

ACCEPT. EZ.

See comment 13.

Cl **104** SC **104.3.6.5** P **45** L **33** # 347
Scruton, Peter University of New Ham

Comment Type **E** *Comment Status* **A** *OK*

"In addition, it is recommended that the PI be discharged when the PSE in not enabled."

It looks like the final "in" of this sentence should be "is".

SuggestedRemedy

change to:
In addition, it is recommended that the PI be discharged when the PSE is not enabled.

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** SC **104.4.3.3** P **47** L **27** # 348
Scruton, Peter University of New Ham

Comment Type **E** *Comment Status* **A** *OK*

"TRUE: present the detection signature at the PI"
missing period

SuggestedRemedy

supply period

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** SC **104.4.3.3** P **47** L **35** # 349
Scruton, Peter University of New Ham

Comment Type **E** *Comment Status* **A** *OK*

"TRUE: apply the MFVS"
missing period

SuggestedRemedy

supply period

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** SC **104.4.6.2** P **52** L **19** # 350
Scruton, Peter University of New Ham

Comment Type **E** *Comment Status* **A** *OK*

"A PD that requires detection and power-up shall draw current in the range of IWakeup_PD for at least TWakeup_
PD when Vsleep_PD min < Vpd < Vsleep max as specified in Table 104-4 and Table 104-6, respectively."
I think the reference to 104-4 is intended to be a reference to Vsleep in 104-3.

SuggestedRemedy

change to:
A PD that requires detection and power-up shall draw current in the range of IWakeup_PD for at least TWakeup_
PD when Vsleep_PD min < Vpd < Vsleep max as specified in Table 104-3 and Table 104-6, respectively.

Response *Response Status* **C**

ACCEPT.

See comment 76.

Cl **104** *SC* **104.7.4.2** *P* **63** *L* **49** # 351
Scruton, Peter University of New Ham

Comment Type **E** *Comment Status* **A** *OK*

PSE22 references 104.3.6.2.1, but looks like it should reference 104.3.6.2.2.

SuggestedRemedy

change to 104.3.6.2.2

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.7.4.2** *P* **64** *L* **4** # 352
Scruton, Peter University of New Ham

Comment Type **E** *Comment Status* **A** *OK*

PSE24 appears to inadvertently reference 104.3.6.5 instead of 104.3.6.4
PSE25 appears to inadvertently reference 104.3.6.5 instead of 104.3.6.4
PSE26 appears to inadvertently reference 104.3.6.6 instead of 104.3.6.5

SuggestedRemedy

update references:
PSE24 to 104.3.6.4
PSE25 to 104.3.6.4
PSE26 to 104.3.6.5

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.7.4.7** *P* **69** *L* **4** # 353
Scruton, Peter University of New Ham

Comment Type **E** *Comment Status* **A** *OK*

SCCP22
Value/Comment: "Only after issuing an appropriate an appropriate address command"

extra "an appropriate"

SuggestedRemedy

Value/Comment: "Only after issuing an appropriate address command"

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.7.4.7** *P* **69** *L* **7** # 354
Scruton, Peter University of New Ham

Comment Type **E** *Comment Status* **A** *OK*

SCCP23:
reference is currently 104.6.4.3, but appears it may have moved to:
104.6.4.3.1

SuggestedRemedy

update reference to:
104.6.4.3.1

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.7.4.3** *P* **65** *L* **49** # 355
Scruton, Peter University of New Ham

Comment Type **E** *Comment Status* **A** *OK*

PD15
In Value/Comment:
"... Table 104-6for ..."
missing space

SuggestedRemedy

add space

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.4.6.1** *P* **52** *L* **4** # 356

Scruton, Peter University of New Ham

Comment Type **TR** *Comment Status* **A** *OK*

"The PD shall turn off at a voltage greater than or equal to VOff."
I think this is supposed to be less than or equal to.

SuggestedRemedy

change to:
The PD shall turn off at a voltage less than or equal to VOff.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Change "The PD shall turn on at a voltage in the range of VOn after a delay greater than tpower_dly as specified in
Table 104–6. The PD shall turn off at a voltage greater than or equal to VOff."

to

The PD shall remain off until the input voltage reaches a value in the range of Von, as specified in Table 104-6, after a delay greater than tpower_dly. Once the PD is turned on, the PD may remain on in the input voltage range less than Von_min but greater than Voff. When the input voltage is less than Voff min, as specified in Table 104-6, the PD shall be turned off.

Cl **104** *SC* **104.7.4.2** *P* **63** *L* **1** # 357

Scruton, Peter University of New Ham

Comment Type **ER** *Comment Status* **A** *OK*

PSE9 value/comment condition c not currently present in referring section (104.3.4.3).

SuggestedRemedy

remove condition c

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.7.4.3** *P* **65** *L* **41** # 358

Scruton, Peter University of New Ham

Comment Type **ER** *Comment Status* **A** *OK*

PD13
This appears to have been affected by an update to the draft.

Text in 104.4.6.2 currently states:
During operation in the DISCONNECT and PD_SLEEP states, the PD shall not draw current in excess of ISleep_PD as specified in Table 104-6.

SuggestedRemedy

Change to:
PD13
Feature: Input current while in DISCONNECT and PD_SLEEP states
Value/Comment: Drawn current not to exceed ISleep_PD as specified in Table 104-6.

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.7.4.3** *P* **66** *L* **13** # 359

Scruton, Peter University of New Ham

Comment Type **ER** *Comment Status* **A** *OK*

PD19
It appears that this is not in sync with the current draft.

The value/comment states:
"... no longer than TMFVDO_PD"

The reference in this draft 104.4.7 states:
"... no longer than TMFVDO min"

SuggestedRemedy

Change the value/comment to refer to TMFVDO min

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.7.4.7** *P* **68** *L* **29** # 360

Scruton, Peter — University of New Ham

Comment Type **ER** *Comment Status* **A** *OK*

SCCP13:
Value/Comment: "Initiate by pulling PI port voltage low and then pulling up the PI port voltage within tW0L"

104.6.3.3 states:
The master device shall initiate a read time slot by pulling its
PI port voltage low and then pulling-up the PI port voltage within tW1L.

SuggestedRemedy

update to tW1L

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.6.4.4** *P* **59** *L* **35** # 361

Scruton, Peter — University of New Ham

Comment Type **T** *Comment Status* **A** *OK*

Table 104-8-CLASS_TYPE_INFO Register Table

Missing Type A+B

SuggestedRemedy

Insert new mapping below Type B
WXYZb - Type A+B

where WXYZ equals one of the 14 reserved 4-bit values.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

1011 will be assigned Type C where Type C was Type A+B.

Cl **104** *SC* **104.3.3.6** *P* **40** *L* **21** # 362

Slavick, Jeff — Avago Technologies

Comment Type **TR** *Comment Status* **A** *OK*

In Figure 104-4 the exit from DETECTION has a potential conflict when both valid_signature and tdet_timer_done assert at the same time.

SuggestedRemedy

Add !tdet_time_done to the exit paths to CLASSIFICATION and POWER_UP

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.3.3.4** *P* **38** *L* **28** # 363

Slavick, Jeff — Avago Technologies

Comment Type **T** *Comment Status* **A** *OK*

The timers are listed and stated what their used for, but the durations are scattered around Clause 104 in several different tables.

SuggestedRemedy

Add a pointer reference for each timer to it's appropriate Table

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.3.3.6** *P* **40** *L* **27** # 364

Slavick, Jeff — Avago Technologies

Comment Type **TR** *Comment Status* **A** *OK*

In Figure 104-4 the exit from POWER_UP could have a conflict of exit condition if both tin_rush_timer and power_applied assert at the same time.

SuggestedRemedy

Add "* !power_applied" to the exit path from POWER_UP to RESTART

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.3.3.3** *P* **37** *L* **15** # 365

Slavick, Jeff — Avago Technologies

Comment Type **ER** *Comment Status* **A** *OK*

mfvs_valid uses the defintion in 104.3.7.1 which comes after it's use in state diagrams and variable defintions

SuggestedRemedy

Add pointer to 104.3.7 to the mfs_valid definition to link the condition of when it's TRUE/FALSE

Response *Response Status* **C**

ACCEPT.

Cl **104** *SC* **104.3.3.6** *P* **40** *L* **46** # 366

Slavick, Jeff — Avago Technologies

Comment Type **TR** *Comment Status* **A** *OK*

In Figure 104-4 the exit from SETTLE_SLEEP has a potential conflict if both vsleep_valid and toff_timer_done assert at the same time.

SuggestedRemedy

Add "*!toff_timer_done" to the exit from SETTLE_SLEEP to SLEEP

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.4.3.6** *P* **49** *L* **49** # 367

Slavick, Jeff — Avago Technologies

Comment Type **TR** *Comment Status* **A** *OK*

In Figure 104-6 the exit from DO_DETECTION has a potential conflict when a sccp_reset_pulse occurs when Vpd exceeds Vsig_disable

SuggestedRemedy

Add !sccp_reset_pulse to the exit from DO_DETECTION to MDI_POWER1

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.4.3.4** *P* **48** *L* **48** # 368

Slavick, Jeff — Avago Technologies

Comment Type **TR** *Comment Status* **A** *OK*

sccp_watchdog_timer is missing a duration

SuggestedRemedy

Add a timer duration of appropriate length

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Max time for valid classification sequence is ~131ms. Propose adding a spec for sccp_watchdog_timer max and min of 200ms and 150ms, respectively to Table 104-6.

Cl **104** *SC* **104.4.3.6** *P* **49** *L* **37** # 369

Slavick, Jeff — Avago Technologies

Comment Type **TR** *Comment Status* **A** *OK*

Exit from PD_SLEEP could have potential exit conflict when both wakeup and Vpd>Vsig_disable occur at the same time.

SuggestedRemedy

Add "* Vpd < Vsig_disable" to the transition from PD_SLEEP to DO_DETECTION

Response *Response Status* **C**

ACCEPT. EZ.

Cl **FM** *SC* **FM** *P* **7** *L* **13** # 370

Thompson, Geoff — GraCaSI S. A.

Comment Type **E** *Comment Status* **A** *OK*

Dove is missing as Phase II TF Chair

SuggestedRemedy

Demote Dwelley to Phase I TF Chair. Add Dove as Phase II TF Chair

Response *Response Status* **C**

ACCEPT. EZ.

Cl **1** *SC* **1.4.5** *P* **16** *L* **19** # 371

Thompson, Geoff — GraCaSI S. A.

Comment Type **ER** *Comment Status* **A** *OK*

The label "Type A+B PoDL System" is clumsy and sort of indicates lower status than Type A or Type B. I would hope that this type would be the designpoint of the future and that any future PHY work should be directed at the encompassing spec.

SuggestedRemedy

I strongly suggest that you relabel the "universal" PoDL system as "Type C PoDL System" in the hope that it will become the more widely known and enduring label. Also, change elsewhere throughout the draft as appropriate.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Editor given license to search and replace Type A+B with Type C. Create definition of Type C to be what's currently defined as Type A+B.

See comment 184.

Cl **30** *SC* **30.14.1.1.4** *P* **22** *L* **11** # 372

Thompson, Geoff GraCaSI S. A.

Comment Type **TR** *Comment Status* **A** *OK*

Typo/cut-paste error. Label for Type B PoDL PSE is incorrect

SuggestedRemedy

Change label from "Type AB" to "Type B"

Response *Response Status* **C**

ACCEPT. EZ.

See comment 193.

Cl **104** *SC* **104** *P* **33** *L* **1** # 373

Thompson, Geoff GraCaSI S. A.

Comment Type **E** *Comment Status* **A** *OK*

The clause title is not descriptive of the technology. The title as stated could describe power over a single pair for (e.g.) 100BASE-T.

SuggestedRemedy

Change the clause title to be: "Power over Single-Pair Data Lines (PoDL)

Response *Response Status* **C**

ACCEPT.

TFTD clause title change. Apply global search and replace for any change.

Check with David Law about the impact on the PAR doc.

Cl **104** *SC* **104.1** *P* **33** *L* **12** # 374

Thompson, Geoff GraCaSI S. A.

Comment Type **ER** *Comment Status* **A** *OK*

We do not specify the power supply, only its characteristics (on the load side)

SuggestedRemedy

Change to read: "The characteristics of a power source to add power to the 100 ohm single balanced twisted-pair cabling system."

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.1** *P* **33** *L* **14** # 375

Thompson, Geoff GraCaSI S. A.

Comment Type **E** *Comment Status* **A** *OK*

Improve grammar

SuggestedRemedy

Change to read: "...required at each end of the link..."

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.1.2** *P* **33** *L* **36** # 376

Thompson, Geoff GraCaSI S. A.

Comment Type **ER** *Comment Status* **A** *OK*

Sentence 2 does not make it clear that the data being referenced is out-of-band to Ethernet data.

SuggestedRemedy

Change sentence to read: "Data which is out of band to normal Ethernet traffic may be transmitted and received between the PSE and PD prior..."

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.1.3** *P* **35** *L* **35** # 377

Thompson, Geoff GraCaSI S. A.

Comment Type **TR** *Comment Status* **A** *OK*

Diagram does not depict MDI/PI.

SuggestedRemedy

Add 2 instances of the MDI/PI to diagram 104-3.

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.3.5** *P* **42** *L* **41** # 378

Thompson, Geoff — GraCaSI S. A.

Comment Type **TR** *Comment Status* **A** *OK*

Space missing/typo

SuggestedRemedy

Change "offull" to read "awful" (whoops, no I mean "of full")

Response *Response Status* **C**

ACCEPT. EZ.

This is an editorial comment!

Cl **30** *SC* **30.14.1.1.5** *P* **22** *L* **28** # 379

Thompson, Geoff — GraCaSI S. A.

Comment Type **TR** *Comment Status* **A** *OK*

Typo/cut-paste error. Label for Type B PoDL PSE is incorrect

SuggestedRemedy

Change label from "Type AB" to "Type B"

Response *Response Status* **C**

ACCEPT. EZ.

See comment 262.

Cl **104** *SC* **104.3.6** *P* **43** *L* **35** # 380

Trowbridge, Steve — Alcatel-Lucent

Comment Type **E** *Comment Status* **A** *OK*

Rows where the "Type" field is left blank (rows 5-20 of Table 104-3 and rows 4a-13 of Table 104-6) presumably apply to both Type A and B

SuggestedRemedy

Change the blank cells in these rows to "A or B" or "A, B". Could merge groups of cells vertically to not make this too repetitions

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Editor given license to review blank cells and insert values as appropriate.

See comment comment 371.

Cl **104** *SC* **104.6.4.3** *P* **59** *L* **12** # 381

Trowbridge, Steve — Alcatel-Lucent

Comment Type **E** *Comment Status* **A** *OK*

I am guessing "CCh" and "AAh" are intended to represent hexadecimal numbers. If so, clause 1.2.5 indicates the format should be 0xCC and 0xAA.

SuggestedRemedy

Change to 0xCC and 0xAA in Figure 104-12 and headings of 104.6.4.3.1 and 104.6.4.4

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.6.4.4** *P* **59** *L* **36** # 382

Trowbridge, Steve — Alcatel-Lucent

Comment Type **E** *Comment Status* **A** *OK*

The "b" suffix on binary numbers doesn't appear elsewhere in the standard, or even lower in the same table where the 8-bit values are represented

SuggestedRemedy

Change 1110b to 1110 and 1101b to 1101 for Type A and Type B in the first row of Table 104-8

Response *Response Status* **C**

ACCEPT. EZ.

Cl **FM** *SC* **FM** *P* **9** *L* **4** # 383

Zimmerman, George — CME Consulting/LTC

Comment Type **E** *Comment Status* **A** *OK*

"Amendment title (SHALL match PAR)" needs to be filled in with the amendment title in the PAR

SuggestedRemedy

See comment - replace text with amendment title from the PAR

Response *Response Status* **C**

ACCEPT. EZ.

Cl **FM** *SC* **FM** *P* **9** *L* **29** # 384
Zimmerman, George CME Consulting/LTC

Comment Type **E** *Comment Status* **A** *OK*

IEEE Std. 802.3xx-20xx should be the amendment 802.3bu

SuggestedRemedy

See comment, replace here and globally

Response *Response Status* **C**

ACCEPT. EZ.

Cl **FM** *SC* **FM** *P* **9** *L* **31** # 385
Zimmerman, George CME Consulting/LTC

Comment Type **E** *Comment Status* **A** *OK*

IEEE Std 802.3-201X should be IEEE Std. 802.3-2015

SuggestedRemedy

Replace 802.3-201X with 802.3-2015

Response *Response Status* **C**

ACCEPT. EZ.

Cl **FM** *SC* **FM** *P* **10** *L* **13** # 386
Zimmerman, George CME Consulting/LTC

Comment Type **ER** *Comment Status* **A** *OK*

This amendment includes [complete] needs to be completed with a description of the new clauses added

SuggestedRemedy

fill in as: This amendment includes new clause 104 and annex 104A defininig single pair power over data lines power sources and powered devices, as well as amendments to Clauses 1, 30, and 45 to support the definition and management of these single pair power systems.

Response *Response Status* **C**

ACCEPT. EZ.

Cl **30** *SC* **30.14.1.1.3** *P* **21** *L* **51** # 387
Zimmerman, George CME Consulting/LTC

Comment Type **T** *Comment Status* **A** *OK*

Clause 30 definition of "searching" status is inconsistent with Clause 45 definition. Clause 30 defines searching as everything other than the defined states - could include states OVERLOAD or OVERLOAD_DELAY (errors) Clause 45 defines searching as DETECTION, which isn't sufficient either.

SuggestedRemedy

Make clause 30 and 45 definitions consistent. Recommend adopting clause 45 definition (DETECTION) into clause 30, and absorbing the other states into "unknown" - change line 38 to be "unknown initializing, error, or true state unknown", change line 51 to read "searching" indiicates the PoDL PSE State diagram is in either the DETECTION, CLASSIFICATION, CLASSIFICATION_EVAL, or POWER_UP states.

Response *Response Status* **C**

ACCEPT. EZ.

Cl **45** *SC* **45.2.7a** *P* **28** *L* **4** # 388
Zimmerman, George CME Consulting/LTC

Comment Type **E** *Comment Status* **A** *OK*

IEEE 802.3bq and bz insert tables have been renumbered - the last one they insert is 45-211b.

SuggestedRemedy

Change editor's note and track tables from 802.3bq (don't worry about bz since PoDL is ahead of bz). Change table numbering to begin at 45-211c and renumber tables 45-211e through 45-211h

Response *Response Status* **C**

ACCEPT.

Cl **104** *SC* **104.1** *P* **33** *L* **14** # 389
Zimmerman, George CME Consulting/LTC

Comment Type **TR** *Comment Status* **A** *OK*

Clause 104 does not define an MDI as is stated here. It only defines the return loss of the MDI.

SuggestedRemedy

Change (c) to read: "Certain electrical paramters of the medium dependent interface which may be different from that specified in the PHY clause when power is simultaneously transmitted with data."

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.3** *P* **36** *L* **13** # 390

Zimmerman, George CME Consulting/LTC

Comment Type **E** *Comment Status* **A** *OK*

A PSE is specified by its behavior observed at the PI, not via the PI.

SuggestedRemedy

change "via" to "at"

Response *Response Status* **C**

ACCEPT. EZ.

Cl **45** *SC* **45.2.7a.2.9** *P* **31** *L* **22** # 391

Zimmerman, George CME Consulting/LTC

Comment Type **T** *Comment Status* **A** *OK*

searching is more than just the DETECTION state.

SuggestedRemedy

Change "in the state DETECTION" to "in any of the following states: DETECTION, CLASSIFICATION, CLASSIFICATION_EVAL, or POWER_UP"

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.3.3.6** *P* **40** *L* **11** # 392

Zimmerman, George CME Consulting/LTC

Comment Type **E** *Comment Status* **A** *OK*

pi_powered, and many other bottom lines in Figure 104-4 are too close to the bottom of the state diagram boxes to easily discern the underscores.

SuggestedRemedy

Extend boxes of IDLE, DETECTION, CLASSIFICATION, RESTART, POWER_UP, POWER_ON, OVERLOAD, SETTLE_SLEEP and OVERLOAD_DELAY slightly further down so that underscores can be easily read

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.3.3.4** *P* **38** *L* **29** # 393

Zimmerman, George CME Consulting/LTC

Comment Type **E** *Comment Status* **A** *OK*

A reference to either the duration of the timers or where the value of the timer is defined would help the reader.

SuggestedRemedy

Add See (104.x.y.z) cross references to each timer's definition.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Editor given license to add cross references to each timer's defintions.

See comment 275 and 368.

Cl **104** *SC* **104.5.3** *P* **53** *L* **32** # 394

Zimmerman, George CME Consulting/LTC

Comment Type **TR** *Comment Status* **A** *OK*

This section only defines the MDI return loss. It doesn't define any other electrical characteristics of the MDI nor does it describe test fixtures for PHYs. The header section can be eliminated.

SuggestedRemedy

Delete 104.5.3 (lines 32 to 37), and promote 104.5.3.1 to 104.5.3.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

See comment 110 which proposes adding a a test fixture and transmitter droop spec for 100BASE-T1 to 104.5.3.

Cl **104** *SC* **104.3.4.1** *P* **41** *L* **33** # 395

Zimmerman, George CME Consulting/LTC

Comment Type **T** *Comment Status* **A** *OK*

"All detection currents at the PI shall be . with a valid PD detection signature" - appears that the requirement somehow puts a requirement on the signature as well - I believe what is meant is that the requirement is to apply WHEN a valid PD detection signature is connected. (leaving the question of whether there is a limit on currents when something other than a valid PD signature is connected? - or is it meant that the current is always in range of Ivalid?)

SuggestedRemedy

replace "with" with "when" (see comment, as intended meaning is unclear and perhaps problematic).

Response *Response Status* **C**

ACCEPT. EZ.

Yes - the detection current shall be in the range of Ivalid *when* a valid PD detection signature is connected.

Cl **104** *SC* **104.3.4.3** *P* **42** *L* **25** # 396

Zimmerman, George CME Consulting/LTC

Comment Type **T** *Comment Status* **A** *OK*

Confusing & possibly contractory: "when those link segments exhibit any of the following characteristics with a probe current, as specified in Table 104-2 and Table 104-5" - language appears that the the tables refer to the specification so the current, Ivalid (104-2) and Iconnector (104-5). Iconnector is not defined elsewhere in the document. If I assume Iconnector is the current at the connector, it would be the same refernce as Ivalid and the specification of Table 104-5 is then a superset of Table 104-2 Ivalid, which makes the reference to Table 104-2 unnecessary.

SuggestedRemedy

Delete reference to Table 104-2, and define Iconnector as the current at the PD connector in 104.4.4

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Shouldn't the reference to Table 104-2 be retained and the reference to Table 104-5 be deleted instead?

Change Iconnector to IPD in Table 104-5.

Cl **104** *SC* **104.3.4.3** *P* **42** *L* **32** # 397

Zimmerman, George CME Consulting/LTC

Comment Type **E** *Comment Status* **A** *OK*

The wording reads like the criteria for whether the PSE should accept or reject is in Table 104-2, where I believe what is meant is that the voltages are specified in that table.

SuggestedRemedy

Change "Vbad_hi_PSE min as specified in Table 104-2." to read "Vbad_hi_PSE min. The values of these voltages are specified in Table 104-2."

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.3.5** *P* **42** *L* **41** # 398

Zimmerman, George CME Consulting/LTC

Comment Type **E** *Comment Status* **A** *OK*

missing space "offull"

SuggestedRemedy

replace "offull" with "of full"

Response *Response Status* **C**

ACCEPT. EZ.

See comment 13.

Cl **104** *SC* **104.3.6** *P* **43** *L* **19** # 399

Zimmerman, George CME Consulting/LTC

Comment Type **TR** *Comment Status* **R** *OK*

Power feeding ripple and noise are defined as a function of frequency, but the units are specified as Vp-p, and no bandwidth for the measurmeent is defined. Need to specify what filter bandwidth this Vpp is over. Same applies to item 3 in Table 104-6.

SuggestedRemedy

Change units to Vp-p/Hz. (sorry - don't know how many Hz were meant).

Response *Response Status* **U**

REJECT.

We need to specify a measurement bandwidth for ripple. What is it? Commentor did not accept rejection in order to keep this open for the next meeting cycle so it can be addressed with a proposal from the editor and or members of the group.

TFTD.

Cl **104** *SC* **104.3.6.2.1** *P* **45** *L* **2** # 400
Zimmerman, George CME Consulting/LTC

Comment Type **T** *Comment Status* **A** *OK*

"power removal from the PI shall begin within TLIM." - within TLIM of what event? Initiation of the current limit? Detection of it?

SuggestedRemedy

insert, after TLIM, "of the initiation of current limiting."

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.3.6.3** *P* **45** *L* **18** # 401
Zimmerman, George CME Consulting/LTC

Comment Type **E** *Comment Status* **A** *OK*

"The limits specified" - which limits? It doesn't look like this applies to all of them (for example the short circuit limits). Is it just the Tripple and noise limits in (4)?

SuggestedRemedy

change "The limits specified in Table 104-3" to "The ripple and noise limits specifed in Table 104-3, item (4),"

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.4.4** *P* **49** *L* **53** # 402
Zimmerman, George CME Consulting/LTC

Comment Type **T** *Comment Status* **A** *OK*

"a PD that presents the signature of Table 104-5 is assured to fail detection" - reads as meeting all the characteristics - this contradiicts the statement on line 50, that a non-valid signature has "at least one of the characteristics".

SuggestedRemedy

Change "presents the signature of Table 104-5", to "presents at least one of the signature characteristics of Table 104-5".

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

There are only two non-overlapping characteristics in Table 104-5. Propose changing text to "presents one of the signature characteristics of Table 104-5".

Cl **104** *SC* **104.4.6** *P* **51** *L* **42** # 403
Zimmerman, George CME Consulting/LTC

Comment Type **E** *Comment Status* **A** *OK*

Why is t power_dly (item 7, Table 104-6) lower-case "t" - all others seem to be upper case.

SuggestedRemedy

change tpower_dly to Tpower_dly

Response *Response Status* **C**

ACCEPT.

Editor to search and replace for all instances.

See comment 163.

Cl **104** *SC* **104.4.6.3** *P* **52** *L* **29** # 404
Zimmerman, George CME Consulting/LTC

Comment Type **TR** *Comment Status* **A** *OK*

"PD shall operate correctly" isn't well specified for something that is a requirement, especially when the parameter concerned is explicitly "to preserve data integrity" - does "operate correctly" put a requirement on the PHYs?

SuggestedRemedy

Clarify - replace "a PD shall operate correctly" with "a PD shall meet the electrical requirements of Table 104-6" (or equivalent statement if something else is met. (I think something else is meant, but can't discern what - sorry!)

Response *Response Status* **C**

ACCEPT.

Cl **104** *SC* **104.4.6.5** *P* **52** *L* **41** # 405
Zimmerman, George CME Consulting/LTC

Comment Type **T** *Comment Status* **A** *OK*

"shall" should be "is" - this is a statement of fact, a definition of an equation, not a testable requirement on the device.

SuggestedRemedy

Change "shall" to "is"

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.4.6.5** *P* **53** *L* **1** # 406

Zimmerman, George CME Consulting/LTC

Comment Type **E** *Comment Status* **A** *OK*

Something funny is going on with the font size on line 1

SuggestedRemedy

Beat on frame and corrrect font sizes in the NOTE.

Response *Response Status* **C**

ACCEPT. EZ.

See comment 293.

Cl **01** *SC* **1.5** *P* **16** *L* **28** # 407

Zimmerman, George CME Consulting/LTC

Comment Type **E** *Comment Status* **A** *OK*

Add MFVS Maintain Full Voltage Signature to the abbreviations

SuggestedRemedy

See comment

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.4.7** *P* **53** *L* **7** # 408

Zimmerman, George CME Consulting/LTC

Comment Type **E** *Comment Status* **A** *OK*

Maintain Full Voltage Signature (MFVS) is defined (thankfully consistently) several times in clause 104. this is just once. Recommend jst using MFVS without the full spell out.

SuggestedRemedy

delete "Maintain Full Voltage Signature" and the parentheses around MFVS. Editor to scrub clause 104 and only spell out MFVS at the first instance.

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.5.3** *P* **53** *L* **42** # 409

Zimmerman, George CME Consulting/LTC

Comment Type **TR** *Comment Status* **A** *OK*

"and at all times when the PHY is transmitting data or control symbols" would exclude startup training. Also applies on P54 L3. Having the MDI return loss change during training could be disastrous. Since I'm not sure what the restriction is supposed to exclude (which would be the better fix), I suggest adding in the training times.

SuggestedRemedy

add, ", and during PHY training" after "symbols". (2 times).

Response *Response Status* **C**

ACCEPT. EZ.

Cl **104** *SC* **104.3.4.1** *P* **41** *L* **43** # 410

Gardner, Andrew Linear Technology

Comment Type **T** *Comment Status* **A** *late submit*

Isignature limit of 20mA is too close to Ivalid max and is potentially limiting for detection implementions.

SuggestedRemedy

Increase Isignature limit max from 20mA to 30mA.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Change table 104-2 item 2 max to 30mA.
Change table 104-7 item 4 min to 30mA.