Cl **33** *SC* **1.1** *P* **1** *L* **36** # 224

Diab, Wael — Broadcom

Comment Type **ER** *Comment Status* **D** *baseline*

These objectives do not include the ones from .3at.

SuggestedRemedy

Please add the 802.3at objectives

Proposed Response *Response Status* **W**

Cl **33** *SC* **2.3.1** *P* **10** *L* **6** # 6

LANDRY, MATTHEW — SILICON LABORATO

Comment Type **E** *Comment Status* **D** *baseline*

Final sentence in paragraph is too long and reads choppily.

SuggestedRemedy

Replace sentence with:

This ensures that a PSE performing detection using Alternative A will complete a successful detection cycle prior to a PSE using Alternative B that might also be present on the same link section and causing the invalid signature.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

See 179

Cl **33** *SC* **2.3.4** *P* **10** *L* **29** # 106

Darshan, Yair — Microsemi Corporation

Comment Type **TR** *Comment Status* **X** *baseline*

Draft0.9
During "Short Circuit" Condition i.e. when PSE and PD are no longer at their operating voltage range, there is no technical need to keep PSE port on for TLIM.
It creates many problems such:
1. Prevents meeting item 21 in table 33-5, Ted (Time delay between consecutive start ups.
2. Excessive heat.
See more details in MR #1167.

SuggestedRemedy

To allow the PSE to turn the port to OFF mode when Vport <> Normal operating range at any t<TLIM_MIN.
Remedy steps:
1) Add new variable option_vport_lim to 33.2.3.4. It will be an optional variable.

option_vport_lim
This variable is indicating If PSE port voltage is out of operating range during normal operating mode.
Values:
False: Vport is within the Vport normal operating range as defined by table 33-5.
True: Vport is not within the Vport normal operating range as defined by table 33-5.
3) Add the following text to 33.2.8.8 after item e. Items d and e are resereved for maintanance request 1162).
"f) During short circuit condition, for PI voltages below or above Vport normal operation range as specifiied in table 33-5 the PSE may turn to IDLE state at any time t < TLIM_MIN.
"

4) Change state diagram (figure 33-6) per the attached drawing.

Using this optional variable in the state diagram will fix the problem by changing the inputs to ERROR_DELAY_SHORT state
from: tlim_timer_done
to: Tlim_timer_done + !tlim_timer_done*option_vport_lim*power_applied)

Effect on legacy equipment: None since the variable is optional.

Proposed Response *Response Status* **O**

Cl **33** *SC* **2.5.1** *P* **16** *L* **31** # 202

Schindler, Fred — Cisco Systems

Comment Type **TR** *Comment Status* **X** *baseline*

The existing section on PD detection requires specific design requirements that are not necessary to ensure interoperability. Other detection methods have been disclosed: http://www.ieee802.org/3/poep_study/public/sep05/naegeli_1_0905.pdf
The IEEE specification should ensure requirements for interoperability are in place.

This comment may also affect text in section 33.3.3.

SuggestedRemedy

Reference the PD model shown in figure 33-10, and require that the PSE detect values of Rpd_d for all permissible values of Cpd_d as specified in table 33-2.

Remove the text requiring two values but continue to provide guidance for designs that use the two probe method.

Proposed Response *Response Status* **O**

Cl **33** *SC* **2.7.1** *P* **18** *L* **11** # 9

LANDRY, MATTHEW — SILICON LABORATO

Comment Type **T** *Comment Status* **X** *baseline*

Table 33-3 is a bit confusing and could be restructured to provide more informational content.

SuggestedRemedy

Replace Table 33-3 with attached table.

P802d3at_D0p9_table_33d3.fm
P802d3at_D0p9_table_33d3.pdf

Proposed Response *Response Status* **W**

see 163, 244

Cl **33** *SC* **2.9** *P* **29** *L* **26** # 148

Law, David — 3Com

Comment Type **T** *Comment Status* **X** *baseline*

The text states that '.. and the mechanism for obtaining that additional information, is beyond the scope of this standard ..'. I do not believe that is true anymore due to the link layer classification protocol.

SuggestedRemedy

Reword to acknoledge link layer classification.

Proposed Response *Response Status* **O**

Cl **33** *SC* **2.9** *P* **29** *L* **26** # 16

LANDRY, MATTHEW — SILICON LABORATO

Comment Type **TR** *Comment Status* **X** *baseline*

It unclear to me why using historical power consumption information should not be a valid means of managing power allocation. The sentence starts by saying it is out of scope, but then goes on to start placing restrictions on what is allowed. Furthermore, how would one even test compliance to this normative exclusion?

SuggestedRemedy

Strike the phrase:

"with the exception that the allocation of power shall not be based solely on the historical data of the power consumption of the attached PD."

Proposed Response *Response Status* **W**

is this Thompson text? I don't remember the origin.

Cl **33** *SC* **3.4.1** *P* **38** *L* **39** # 234

Diab, Wael — Broadcom

Comment Type **ER** *Comment Status* **D** *baseline*

Is the intention of the note here to be cannot or shall not? There is nothing preventing someone from building a PD that is not compatile with the draft, hence cannot is not accurate.

SuggestedRemedy

Suggest changing cannot to shall not

Proposed Response *Response Status* **O**

Will be resolved by 38

Cl **33** *SC* **3.4.2** *P* **39** *L* **15** # 235

Diab, Wael — Broadcom

Comment Type **ER** *Comment Status* **D** *baseline*

The following sentence adds no value as the prior states the required, which is that these are externally observable parameters

SuggestedRemedy

Delete

"Equivalent implementations that present the same external behavior are allowed."

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

21.5 contains a pointer to 1.2 that contains language similar but more complete than this sentence.

Cl **33** *SC* **3.5.1** *P* **43** *L* **19** # 54

Patoka, Martin TI

Comment Type **ER** *Comment Status* **D** *baseline*

"The PD shall turn off at a voltage less than VPort minimum and greater than or equal to VOff."

"The specification for VPort in Table 33–12 is for the input voltage range after startup, and it includes loss in the cabling plant."

The terms "off" and "startup" are not defined.

SuggestedRemedy

after the first sentence add:

"Startup begins upon application of Vport per table 33-12 and concludes at the end of the inrush period per 33.3.5.3."

this relies on the additions to the inrush paragraph.
change the sentences to:

"The PD shall not draw more current than its Class current per table 33-11 at voltages less than Vport min."

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Heartburn with shall in second 'definition', "class signature current'

Cl **33** *SC* **3.5.2** *P* **43** *L* **25** # 144

Bennett, Ken Sifos Technologies, In

Comment Type **T** *Comment Status* **X** *baseline*

The measurements of Average Power, which include series resistors in the Annex 33C, are existing recommendations. The Annex states that other test circuits are possible, so long as compliance with Clause 33 are adequately demonstrated. Using the words "Shall be Measured" in Clause 33.3.5.2 changes this recommendation to a requirement for existing measurement techniques, which may already use adequately demonstrated alternatives.

SuggestedRemedy

Remove the two sentences containing the words "shall be measured".

Proposed Response *Response Status* **O**

Cl **33** *SC* **3.5.4** *P* **43** *L* **46** # 184

Schindler, Fred Cisco Systems

Comment Type **TR** *Comment Status* **X** *baseline*

The value of Iport_max created by the formula-using PD Pport_max-does not match the value provided in table 33-12. For example, class 0 PD power is 12.95 W maximum and 12.95W/44V = 294 mA, not the 400 mA shown in table 33-12, item 4.

SuggestedRemedy

The PD formula provides approximately the correct answers when the PSE Pport_max values are scaled by 400/350 for the system classified power.

Table 33-12 values should match values created by the formula-rounding appears to have been used.

Proposed Response *Response Status* **O**

Cl **33** *SC* **3.6** *P* **45** *L* **41** # 14

LANDRY, MATTHEW SILICON LABORATO

Comment Type **T** *Comment Status* **X** *baseline*

Items (c) and (d) do not provide any new information, and are really just repetition of items (a) and (b).

SuggestedRemedy

Strike items (c) and (d) and replace with the following statement:

A PD that does not maintain the MPS components a) and b) above may have its power removed within the limits of TMPDO as specified in Table 33-5.

Proposed Response *Response Status* **O**

Cl **33** *SC* **3.6.1** *P* **46** *L* **13** # 15

LANDRY, MATTHEW SILICON LABORATO

Comment Type **T** *Comment Status* **X** *baseline*

The itemized list is generally confusing. The whole point is that a PD with >180uF input capacitance may have difficulty meeting the DC MPS during a voltage transient.

SuggestedRemedy

Replace with a general CAUTION statement:

CAUTION--A PD with CPort > 180uF may not be able to meet the IPort specification in Table 33-13 during the maximum allowable port voltage droop (i.e. 57V to 44V in series with 20 ohms for a Type 1 PSE and 57V to 50V in series with 12.5 ohms for a Type 2 PSE). Such a PD should increase its IPort min or make other such provisions to ensure meeting the DC maintain power signature.

Proposed Response *Response Status* **O**

Cl **33** *SC* **4.4** *P* **49** *L* **1** # 193

Schindler, Fred Cisco Systems

Comment Type **TR** *Comment Status* **X** *baseline*

This specification is not consistent with its common mode noise measurement requirements. Clause 33 specifies a range of 1 MHz to 100 MHz for a PSE. Other clauses are for a MDI signal pairs and have no concept of measurement BW.

Testing during clause 33development ensured data integrity with the constraints imposed. Reducing the BW of existing clause common mode measurements should not reduce the compliance of legacy systems. Requiring PSE to meet other clauses below 1 MHz places an unnecessary cost burden on the system.

SuggestedRemedy

Modify other clauses or place a statement in clause 33 that allows the Ethernet MDI to use the clause 33 common mode requirements whether PoE power is present or not.

Proposed Response *Response Status* **O**

Cl **33** *SC* **4.7** *P* **51** *L* **44** # 81

Dove, Daniel ProCurve Networking

Comment Type **TR** *Comment Status* **X** *baseline*

75 ohms is not defined at any particular frequency.

SuggestedRemedy

Most ports that have such termination are AC coupled to maintain DC isolation, thus they will not be 75 ohms at DC. We need to spec this better.

Proposed Response *Response Status* **O**

Cl **33** *SC* **4.8** *P* **53** *L* **52** # 88

Darshan, Yair Microsemi Corporation

Comment Type **T** *Comment Status* **X** *baseline*

Draft D0.9

We need to clearly define that Midspan should provide signal continuity for 1G Midspan as well.

SuggestedRemedy

Change line 53 from"A Midspan PSE inserted into a channel shall provide continuity for the signal pairs."

To "A Midspan PSE inserted into a channel shall provide continuity for the signal pairs for 10/100 and 1000BT Midspan device".

Proposed Response *Response Status* **O**

Cl **33** *SC* **5.9** *P* **56** *L* **36** # 89

Darshan, Yair Microsemi Corporation

Comment Type **T** *Comment Status* **X** *baseline*

Draft D0.9

Update a) : If it for PDs only it should be from 36V to 57V.

SuggestedRemedy

Change a) from " Power classification and power level in terms of maximum current drain over the operating voltage
range, 44V to 57 V, applies for PD only"

To: "Power classification and power level in terms of maximum current drain over the operating voltage range, 36V to 57 V, applies for PD only"

Proposed Response *Response Status* **O**

Cl **33** *SC* **5.9** *P* **56** *L* **36** # 69

Patoka, Martin TI

Comment Type **T** *Comment Status* **X** *baseline*

"a) Power classification and power level in terms of maximum current drain over the operating voltage range, 44V to 57 V, applies for PD only"

"d) “PSE” or “PD” as appropriate"

Since we have new and incompatible PD/PSE combinations, labelling the PSE and PD type would be of value

SuggestedRemedy

"a) Power classification, type (e.g. 1 or 2) and power level in terms of maximum current drain over the operating voltage range, 44V to 57 V, applies for PD only"

"d) “PSE” or “PD” and type (e.g. 1 or 2) as appropriate"

Proposed Response *Response Status* **O**