Cl **104** *SC* **104.3.3.6** *P* **42** *L* **30** # 7

Dove, Daniel — Dove Networking Solut

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

The logic coming out of CLASS_EVAL will very likely exit immediately. !valid_class is probably true before tclass_timer_done is true, so this logic would immediately leave on that arc.

SuggestedRemedy

(tclass_timer_done * !valid_class) + power_not_available is probably a better logic set.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **104** *SC* **104.3.3.6** *P* **42** *L* **33** # 8

Dove, Daniel — Dove Networking Solut

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

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.

Proposed Response *Response Status* **W**

PROPOSED 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** # 9

Dove, Daniel — Dove Networking Solut

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

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

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **104** *SC* **104.3.3.6** *P* **42** *L* **48** # 10

Dove, Daniel — Dove Networking Solut

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

In the OVERLOAD state, "stop ted_timer" is not appropriate. It looks like it was supposed to be deprecated when you renamed to tod_timer and added the OVERLOAD_DELAY state.

SuggestedRemedy

Remove "stop ted_timer" from OVERLOAD state unless your objective is to clear the tod_timer_done conditions. If so, correct the name of the timer.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **104** *SC* **104.3.3.6** *P* **42** *L* **48** # 11

Dove, Daniel — Dove Networking Solut

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

Minor Nit: Coming out of OVERLOAD is a UCT, but I would argue that you will not come out of this state if overload_detected is true.

SuggestedRemedy

Therefore, suggest that you replace UCT with !overload_detected.

Proposed Response *Response Status* **W**

PROPOSED REJECT.

Once the OVERLOAD state has been entered, power is removed from the PI, and the only way to re-apply power is to follow the existing arcs. That is the intent, hence the UCT.

Cl **104** *SC* **104.3.6.1** *P* **44** *L* **29** # 14

Gardner, Andrew — Linear Technology Cor

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

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.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **30** *SC* **30.14.1.1.5** *P* **24** *L* **33** # 22

Gardner, Andrew Linear Technology Cor

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

there is no ERROR state. Should be OVERLOAD state.

SuggestedRemedy

See comment

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Search and replace on "ERROR state" and replace with "OVERLOAD state".

Cl **45** *SC* **45.2.7a.2.9** *P* **31** *L* **23** # 36

Gardner, Andrew Linear Technology Cor

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

There is no TEST_MODE or TEST_ERROR state defined in the PSE SD (figure 104-4 as referenced)

SuggestedRemedy

need to rewrite the paragraph to agree with the states, as the table was modified to agree with them (table for reference below):

1 0 0 = Overload
0 1 1 = Detecting
0 1 0 = Delivering power
0 0 1 = Sleeping
0 0 0 = Disabled

Delete references to "TEST_MODE" and "TEST_ERROR" in 45.2.7a.2.9.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Editorial license granted to make changes as needed.

Cl **45** *SC* **45.2.7a.2.9** *P* **31** *L* **25** # 37

Gardner, Andrew Linear Technology Cor

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

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

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **104** *SC* **104.4.6.2** *P* **52** *L* **19** # 40

Gardner, Andrew Linear Technology Cor

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

There is no Twakeup_pd in table 104-6

SuggestedRemedy

Add Twakeup_pd to table 104-6 with a min of 0.2ms

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

See comment 54.

Cl **104** *SC* **104.4.6.1** *P* **52** *L* **4** # 51

Gardner, Andrew Linear Technology Cor

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

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 Von(min) and greater than or equal to Voff min as defined in Table 104-6'.

SuggestedRemedy

See comment

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **104** *SC* **104.4.6.2** *P* **52** *L* **19** # 54
Gardner, Andrew Linear Technology Cor

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

Twakeup_PD' is not defined in table 104-6

SuggestedRemedy

Add Twakeup_pd to table 104-6 with a min of 0.2ms

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

See comment 40.

Cl **104** *SC* **104.4.7** *P* **53** *L* **10** # 56
Gardner, Andrew Linear Technology Cor

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

TMFVDO_PD is not defined.

SuggestedRemedy

Change parameter for item 8 in Table 104-6 to "PD Maintain Full Voltage signature duration" and change "TMFVDO_PD" to "TMFVDO min" and add reference to table 104-3 item 13 in subclause 104.4.7.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **104** *SC* **Table 104-1** *P* **35** *L* **34** # 60
Gardner, Andrew Linear Technology Cor

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

Class 0 VPSE(min) is less than VON(min) in Table 104-6

SuggestedRemedy

Add a new row to Table 104-1 that describes VPSE(min) with no load or increase VON(min) for this class

Proposed Response *Response Status* **W**

TFTD.

See comment 93.

Cl **104** *SC* **104.4.4** *P* **49** *L* **42** # 63
Gardner, Andrew Linear Technology Cor

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

A PD shall present a valid detection signature when Vpd drops below Vsig_enable unless it is asleep' should be 'A PD shall present a valid detection signature when Vpd drops below Vsig_enable.'

SuggestedRemedy

See comment

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

OBE 125.

Cl **104** *SC* **104.4.4** *P* **50** *L* **5** # 68
Gardner, Andrew Linear Technology Cor

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

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

SuggestedRemedy

See comment

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **104** *SC* **104.4.4** *P* **50** *L* **18** # 69
Gardner, Andrew Linear Technology Cor

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

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

SuggestedRemedy

See comment

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **104** *SC* **104.4.6.1** *P* **52** *L* **6** # 72
Gardner, Andrew Linear Technology Cor

Comment Type **TR** *Comment Status* **D**
Change Vport_PSE to just Vpse for consistency.

SuggestedRemedy
See comment

Proposed Response *Response Status* **W**
PROPOSED ACCEPT.

Cl **104** *SC* **104.4.6.2** *P* **52** *L* **17** # 73
Gardner, Andrew Linear Technology Cor

Comment Type **TR** *Comment Status* **D**
Change 'Isleep' to 'Isleep_PD'

SuggestedRemedy
See comment

Proposed Response *Response Status* **W**
PROPOSED ACCEPT.

OBE by 104.

Cl **104** *SC* **104.4.6.3** *P* **52** *L* **24** # 75
Gardner, Andrew Linear Technology Cor

Comment Type **T** *Comment Status* **D**
Consider replacing 'noise' with 'transient' in this subclause.

SuggestedRemedy
Replace 104.4.6.3 with

104.4.6.3 PD ripple and transients
The specifications for ripple and transients in Table 104–6 apply to the voltage at the PD PI generated by the PD circuitry. The ripple and transient specifications shall be met for all operating voltages in the range of VPort_PD, and over the range of input power of the device.
The PD shall operate correctly in the presence of ripple and transient voltages generated by the PSE that appears at the PD PI. These levels are specified in Table 104–3. Ripple and transient limits are provided to preserve data integrity.

Proposed Response *Response Status* **W**
PROPOSED ACCEPT.

See comment 106.

Cl **104** *SC* **104.4.6.3** *P* **52** *L* **26** # 76
Gardner, Andrew Linear Technology Cor

Comment Type **TR** *Comment Status* **D**
Replace 'input power of the device' with just 'Ppd'.

SuggestedRemedy
See comment

Proposed Response *Response Status* **W**
PROPOSED ACCEPT.

Cl **104** *SC* **104.4.6.4** *P* **52** *L* **35** # 77
Gardner, Andrew Linear Technology Cor

Comment Type **TR** *Comment Status* **D**
Replace 'Pclass_PD' with just 'Ppd'.

SuggestedRemedy
See comment

Proposed Response *Response Status* **W**
PROPOSED ACCEPT.

Cl **104** *SC* **104.4.6.5** *P* **52** *L* **44** # 78
Gardner, Andrew Linear Technology Cor

Comment Type **TR** *Comment Status* **D**
Remove all instances of 'port_' from the subscripts used by Equation 104-1.

SuggestedRemedy
See comment

Proposed Response *Response Status* **W**
PROPOSED ACCEPT.

Cl **104** *SC* **104.5.1** *P* **52** *L* **18** # 79
Gardner, Andrew Linear Technology Cor

Comment Type **TR** *Comment Status* **D**
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* **W**
PROPOSED ACCEPT.

Cl **104** *SC* **104.7.4** *P* **62** *L* **1** # 90

Chabot, Craig UNH-IOL

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

The changes from D1.3 to D1.4 have consequently necessitated changes to the PICS (some shalls have either been added, removed, or altered). I have drafted a new, corrected version of the PICS tables.

SuggestedRemedy

See chabot_3bu_1_1115

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **104** *SC* **Table 104-1** *P* **32** *L* **21** # 91

Gardner, Andrew Linear Technology

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

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* **W**

Discuss in room. See comments 60 and 93.

Cl **104** *SC* **104.2** *P* **35** *L* **38** # 93

Abramson, David Texas Instruments

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

This comment applies to Table 104-1.
The VPD min voltages for the 12V unregulated class conflict with the signature enable/disable voltages in Table 104-4. If the PSE is only required to put out 5.6V, the PD may never reach the signature disable threshold (5.75V max). In addition, the if the enable threshold is between 3.6V and 5.75V (for example 4.5V), it may be tripped by a VPD min of 4.4V

SuggestedRemedy

The disable treshold needs to be lowered to 5.6V. I don't see any downside to this right now, but everything is interconnected…It would make the threshold between Vsig_disable and Vbad_hi only +/- 4%, but I don't believe there is anything wrong with disabling the signature below Vbad_hi.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Discuss in room.

Possibly OBEd by comment 91.

Cl **104** *SC* **104.3.4.1** *P* **41** *L* **38** # 96

Abramson, David Texas Instruments

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

This comment applies to Table 104-2.
Why is there an additional information column if we don't have anything in it.

SuggestedRemedy

Either delete the column, or add appropriate information.

Proposed Response *Response Status* **W**

Discuss in room.

Table is partially populated with references on the second page. Propose references for items 1-5.

Cl **104** *SC* **104.3.4.1** *P* **41** *L* **42** # 97

Abramson, David Texas Instruments

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

This comment applies to Table 104-2.
What is the purpose of the short circuit current in the detection state. The PSE must source a current less than 16mA in this state to be a valid probe current. In addition, the PD needs to be able to sink enough current during SCCP and allowing the PSE to source 30mA seems like a bad idea.

SuggestedRemedy

Remove item 2 from table. Add text that 16mA is the most the PSE is allowed to source while in the detection state.

Proposed Response *Response Status* **W**

Discuss in room. Larger short circuit limit allows for resistive pull-up.

Cl **104** *SC* **104.3.6** *P* **44** *L* **13** # 99

Abramson, David Texas Instruments

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

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).

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Discuss in room.

2mA MFVS min may be too close Iwakeup max of 1.85mA. Is 3mA OK?

Cl **104** *SC* **104.4.4** *P* **50** *L* **6** # 100

Abramson, David Texas Instruments

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

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 22mA.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Discuss in room.

This limit does need to be increaseds since the probe current was increased.

Cl **104** *SC* **104.6.3.4** *P* **57** *L* **50** # 101

Abramson, David Texas Instruments

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

This comment applies to Table 104-7.
The minimum sink current needs to be updated as the maximum probe current is now 16mA

SuggestedRemedy

Change minimum Sink Current from 10mA to 18mA to include the 16mA sourcing current and some margin.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Discuss in room. See comment 100.

Cl **104** *SC* **104.6.3.4** *P* **57** *L* **50** # 102

Abramson, David Texas Instruments

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

This comment applies to Table 104-7.
"Vport < 0.8V" in the additional information column for "Sink Current" does not seem right. How can the Sink Current have a minimum when the PI voltage is 0? There will be no current drawn then.

SuggestedRemedy

Should the "<" be a ">"? I think that is what was meant…

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

This parameter may need to be replaced with a VOL specification instead.

Cl **104** *SC* **104.4.6** *P* **51** *L* **49** # 104

Abramson, David Texas Instruments

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

This comment applies to Table 104-6.
Item 11 (sleep current) is never referenced in the specification text. It is defintely not it 104.4.7 which the additional information column points the reader to.
Isleep is referenced in 104.4.6.2. I believe that should be Isleep_pd

SuggestedRemedy

Change "ISleep" to "ISleep_PD" in section 104.4.6.2 and change reference in table 104-6 to this section.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

See comment 73.

Cl **104** *SC* **104.4.6** *P* **50** *L* **44** # 106

Abramson, David Texas Instruments

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

This comment applies to Items 1 and 2 ot Table 104-6.
The section referenced in the additional information column (104.4.6.3) do not mention dI/dt or dV/dt requirements at all.

SuggestedRemedy

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

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

See comment 75.

Cl **104** *SC* **104.3.6** *P* **43** *L* **15** # 109

Abramson, David Texas Instruments

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

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.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

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

Cl **104** *SC* **104.3.4.2** *P* **42** *L* **19** # 110

Abramson, David Texas Instruments

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

"A PSE shall accpet as a valid PD signature a link segment with a constant voltage in the range of Vgood_PSE for at least…"
Does the PSE really have to check if the voltage is absolutely constant? Don't we really mean the the voltage has to be in the range of Vgood_PSE for a certain amount of time?

SuggestedRemedy

remove the word "constant". Remove all similar uses of the word "constant".

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Will delete 'constant' in 104.3.4.2. TFTD other occurences.

Cl **104** *SC* **104.3.3.6** *P* **40** *L* **16** # 112

Abramson, David Texas Instruments

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

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

SuggestedRemedy

Add "start Tdet" to the DETECTION state.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

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* **21** # 113

Abramson, David Texas Instruments

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

This comment applies to figure 104-4, DETECTION state.
The tdet_timer_done exit arc should go straight to idle. There is no reason for the 0.5s error delay in this case.

SuggestedRemedy

have exit arc go straight to IDLE (may need to add proper assignments back to the IDLE state). Change text in 104.3.4 so that the restart delay is not needed.

Proposed Response *Response Status* **W**

TFTD.

Restart delay for this arc was retained so aPoDLPSEInvalidSignatureCounter max update rate was 2Hz. This allows counter to be potentially implemented outside of PSE, i.e. PSE is only required to provide invalid signature status bit.

Cl **104** *SC* **104.3.3.6** *P* **40** *L* **37** # 115

Abramson, David Texas Instruments

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

This comment applies to Figure 104-4.
I believe the wrong timer is turned off inside POWER_ON.

SuggestedRemedy

Change "stop toff timer" to "stop tinrush timer"

Proposed Response *Response Status* **W**

PROPOSED REJECT.

Stop toff_timer is correct since it is resetting the toff timer in preparation for the exit arc into the SETTLE_SLEEP state.

Cl **104** *SC* **104.3.3.6** *P* **40** *L* **48** # 116

Abramson, David Texas Instruments

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

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.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Remove superfluous pi_sleeping and pi_powered assignments in SETTLE_SLEEP.

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

Cl **104** *SC* **104.3.3.6** *P* **40** *L* **28** # 117

Abramson, David Texas Instruments

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

This comment applies to Figure 104-4.
!power_not_available needs to be anded with valid_class for the transition from classification_eval to power_up. Otherwise a valid class with power_not_available would branch in both directions at once.

SuggestedRemedy

change transition from "valid_class" to !power_not_available * valid_class.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

See comment 7.

Cl **104** *SC* **104.3.3.3** *P* **37** *L* **51** # 119

Abramson, David Texas Instruments

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

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.

Proposed Response *Response Status* **W**

PROPOSED REJECT.

PI_POWERED<=TRUE first occurs in POWER_UP state.

The definition of power_applied 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.

These conventions were inherited from PoE.

Cl **104** *SC* **104.3.3.6** *P* **40** *L* **24** # 120

Abramson, David Texas Instruments

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

This comment applies to Figure 104-4.
Since pi_detecting is not set to false during classification, the separate detection state machine must be running during classification. The PSE detection output specs must still apply during classification, but the signature state machine doesn't need to run.

SuggestedRemedy

Fix the stand alone detection state diagram (Figure 104-5) so that it does not run in classification.

Proposed Response *Response Status* **W**

TFTD.

What's currently in the state machine isn't broken (see below). We could add a pi_classifying variable to further clarify if needed.

The pi_detecting = TRUE condition causes the PSE to apply a voltage limited detection current at the PI which is needed for classification. Since the signature was valid before entering classificaiton, the fact that the tdet_timer will expire during classification because the detection state machine is running doesn't matter.

Cl **104** *SC* **104.3.6.2.1** *P* **45** *L* **4** # 123

Abramson, David Texas Instruments

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

"Measurements of Iport during a short circuit condition shall be made 1ms after the initial transient to allow for settling."
This sentence allows unlimited current flow for 1ms. How can PDs be designed to handle the I^2*t if they don't know the I?

SuggestedRemedy

A template/equation/something is needed to allow PD designers to understand the transients.

Proposed Response *Response Status* **W**

TFTD.

104.5.2 Fault tolerance

"The PSE PI shall withstand without damage the application of short circuits between the wires within the cable for an indefinite period of time."

PD faults are out of scope. A designer should design a PD to withstand an internal fault.

Cl **104** *SC* **104.4.4** *P* **49** *L* **42** # 125

Abramson, David Texas Instruments

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

"A PD shall present a valid detection signature when VPD drops below Vsig_enable unless it is asleep."
What is "asleep"? How do we test that?

SuggestedRemedy

Define "asleep" in terms of the state diagram or other defined terms in the standard. OR remove "unless it is asleep".

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Delete "unless it is asleep" in referenced text.

See comment 63.

Cl **104** *SC* **104.4.3.3** *P* **47** *L* **22** # 126

Abramson, David Texas Instruments

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

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.

Proposed Response *Response Status* **W**

PROPOSED 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** # 127

Abramson, David Texas Instruments

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

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."

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Use the active voice instead:

"the xxx signature is applied to the PD PI." and "the xxx signature is not applied to the PD PI."

Cl **104** *SC* **104.4.3.6** *P* **49** *L* **26** # 128

Abramson, David Texas Instruments

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

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.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

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

Example: The PD has gone offline due to a thermal overload and needs to cool off.

Cl **104** *SC* **104.4.6.1** *P* **52** *L* **20** # 129

Abramson, David Texas Instruments

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

We should avoid using numbers in the text, but rather create parameters to reference. VPI has a direct range in the text (3.1 to 3.5V).

SuggestedRemedy

Either create a parameter fo rthis voltage range, or reference the PSE sleep voltage (but its not quite the same due to cable drop).

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Change 104.4.6.2 text as follows:

"A PD that requires … when Vsleep_PD min < Vpd <Vsleep max as specified in Tables 104-4 and 104–6."

See comments 55, 68 regarding usage of Vpd.