Cl **79** *SC* **79.3.7.4** *P* **222** *L* **20** # 20069

Ran, Adee Intel

Comment Type **TR** *Comment Status* **A** *LLDP*

Does "should" here mean it is only a recommendation? Is it OK to have more than one?

Also applies to 79.3.2.7, although it is in the base document.

SuggestedRemedy

Change to "shall" unless there is no problem with having more than one.

Response *Response Status* **U**

ACCEPT IN PRINCIPLE.

No change to the draft.

Having more than one is allowed but may lead to ambiguous situations therefore, it is discouraged.

Cl **33A** *SC* **33A.3** *P* **233** *L* **16** # 20071

Ran, Adee Intel

Comment Type **TR** *Comment Status* **R** *Annex*

Seems like a normative requirement in an informative annex. Also in other subclauses of 33A.

SuggestedRemedy

Make this annex normative?

Response *Response Status* **U**

REJECT.

These are cabling requirements and this annex was written in a way to not include normative requirements (no shalls).

Cl **33** *SC* **33.3.8** *P* **154** *L* **42** # 21078

Darshan, Yair Microsemi

Comment Type **TR** *Comment Status* **R** *Pres: Darshan18*

This comment is marked "Iinrush_mess".
The changes made to D2.1 Table 33-31 item 6 IInrush_PD and item IInrush_PD-2P for "PD Type" column are incorrect compared to the baselines approved on this topic at:
(a)May 2016, http://www.ieee802.org/3/bt/public/may16/darshan_01_0516_Rev006.pdf
(b)March 2016, http://www.ieee802.org/3/bt/public/mar16/darshan_09_0316R6.pdf

The changes in D2.1 for item 7 were made as a response to comment #522 and #523 in D2.0:
Comment #522 from David Stover was marked as editorial and should have been technical although it was justified but not addressed properly and was OBE by comment #523 from Lennart.
Comment #523 marked as ER, but actually was technical and didn't supply explanation to the requested change and the remedy was to adopt Lennart's "remedy file" for comment #523: http://www.ieee802.org/3/bt/public/sep16/yseboodt_09_0916_commentsd2p0.pdf without supplying any clear rationale.
The changes in D2.1 for item 6 were made as a response to comment #523 in D2.0:

Checking the drafts against the above baselines show that the above baselines started to be implemented on May 2016 due to March 2016 baseline http://www.ieee802.org/3/bt/public/may16/darshan_01_0516_Rev006.pdf:
D1.7 item 6 was implemented correctly. Item 7 was not.
D1.8 item 6 was implemented correctly. Item 7 was not.
D2.0 is identical to D1.8
D2.1 both items 6 and 7 are not according to the approved baselines above due to comment #523 from D2.0.

So first thing is to update D2.1 based on the last approved baseline from March 2016, http://www.ieee802.org/3/bt/public/mar16/darshan_09_0316R6.pdf as approved with the updates made by comments up to D1.8.

Based on my discussion with Lennart he thought that there is editorial error (one row didn't have a value for the PD Type) but he didn't check the baseline so one error led to more errors and it turned to be a major technical change in D2.1.
A later argument made by Lennart of why he proposed this change was "that this is the "assigned class" so A Type 4 SS PD will request Class 7 or 8, but if it gets power demoted to Class 6, it is still a Type 4 PD." This argument is technically incorrect (any how it can't be editorial change anymore).
Here is the problem.
A Type 4 SS PD connected to Type 4 PSE will _request_ Class 7 or 8, but if it gets power demoted to Class 6, it is still a Type 4 PD and hence still need Inrush values of class 7-8 AND NOT inrush values of class 6 because PD can't change its input capacitance and inrush circuitry as function of class..it can't work..
What if A Type 4 SS PD connected to Type 2 PSE?
In this case regardless of the PD inrush needs, The PSE can supply only 0.4A to 0.45A. So the PD may or may not work due to Iinrush and also due to not sufficient power so it is

not important if it is the assigned class or the advertised class.
As a result, we need to restore the types that we have in the approved base line from May 2016 with the approved comments up to D1.8.
In addition in order to prevent confusion, we may need to consider changing the title of item 6:
From:
" Input inrush current as function of the assigned Class, when the PD is limiting the current during the inrush period per 33.3.8.3."
To:
"Input inrush current when the PD is limiting the current during the inrush period per 33.3.8.3."
The same issues with Item 7 Iinrush-2P.
This will prevent the confusion that the assigned class affect PD Iinrush requirements.
The main problems that I see resulting from the changes in D2.1 in Table 33-31 items 6 and 7 are:
1.First implement the approved baseline from May 2016. We can start the discussion from this point again.
2. PD can't change its Iinrush, Inrush-2P requirements as a function of its assigned class. PD Iinrush and Inrush-2P are designed per the advertised class. PD can't switch Input capacitors and Inrush circuitry.
3. One undesired outcome from the changes in D2.1 that says that Type 7,8 PDs can have assigned class 0-6 is that it opens the door to Type 4 PDs that are only permitted to be class 7 and 8, to be designed for lower classes than class 7 and work only at lower classes. It doesn't mean that PD can't work with reduced power mode when there is no class 7-8 available power but this feature has nothing to do with the assigned class feature that is not relevant to Iinrush function.

SuggestedRemedy

Adopt darshan_18_1116.pdf.

Response *Response Status* **U**

REJECT.

Inrush by requested class results in unwanted motorboating.

Cl **33** *SC* **33.3.8** *P* **154** *L* **42** # 21079

Darshan, Yair Microsemi

Comment Type **TR** *Comment Status* **R** *Pres: Darshan18*

(Resubmitting comment #522 from David Stover so we can address it properly.)
(I am not resubmitting #523 from Lennart due to the fact that the comment and remedy was based on the assumption that it is editorial and as a result was not discussed at all and rationale was not supplied for the change. We can address it by my comment marked "Iinrush_mess")
Table 33-31 item 6 IInrush_PD class 0-6: The PD Type is "ALL" but it need to be "1,2,3" since Class 6 is only valid in Type 3 PD and not Type 4.

SuggestedRemedy

Table 33-31 item 6 IInrush_PD class 0-6:
1. Change "PD Type" from "ALL" to "1,2,3".
2. Group to discuss if Iinrush and Iinrush-2P need to be a function of the assigned class or not. There are issues with this concept. See darshan_18_1116.pdf.

Response *Response Status* **U**

REJECT.

See 78. Inrush by requested class results in unwanted motorboating.

Cl **33** *SC* **33.2.8** *P* **114** *L* **16** # 21080

Darshan, Yair Microsemi

Comment Type **TR** *Comment Status* **R** *Pres: Darshan18*

Table 33-19, item 6, "Total output current of both pairsets of the same polarity in the POWER_UP state as function of assigned Class".

The "assigned class" is irrelevant here due to the fact that the PD advertised class contain the information of the PD capability to consume Iinrush and not the assigned class.
Example 1:
PSE Type 4 that detect single-signature class 8 need to supply the Inrush current that suitable to class 8 due to the fact that if the assigned class in this case will be e.g. 6, it doesn't change the PD inrush circuitry (including its capacitance)and it remains class 8 for Inrush matters.
Example 2:
A Type 4 SS PD connected to Type 2 PSE.
In this case regardless of the PD inrush needs, The PSE can supply only 0.4A to 0.45A.
So the PD may or may not work due to Iinrush and also due to not sufficient power so it is not important if it is the assigned class or the advertised class.

SuggestedRemedy

1. Change to:
"Total output current of both pairsets of the same polarity in the POWER_UP state".
OR
2. Group to find good technical arguments why to keep it as it is and review case by case i.e. for each PSE class and Type.

Response *Response Status* **U**

REJECT.

See 78. Inrush by requested class results in unwanted motorboating.

Cl **33** *SC* **33.2.8** *P* **114** *L* **30** # 21081

Darshan, Yair Microsemi

Comment Type **TR** *Comment Status* **R** *Pres: Darshan18*

Table 33-19, item 7, "Output current per pairset in the POWER_UP state as function of the assigned Class".
The "assigned class" is irrelevant here due to the fact that the PD advertised class contain the information of the PD capability to consume Iinrush-2P and not the assigned class.
Example 1:
PSE Type 4 that detect single-signature class 8 need to supply the Inrush current that suitable to class 8 due to the fact that if the assigned class in this case will be e.g. 6, it doesn't change the PD inrush circuitry (including its capacitance)and it remains class 8 for Inrush matters.
Example 2:
A Type 4 SS PD connected to Type 2 PSE.
In this case regardless of the PD inrush needs, The PSE can supply only 0.4A to 0.45A.
So the PD may or may not work due to Iinrush and also due to not sufficient power so it is not important if it is the assigned class or the advertised class.

SuggestedRemedy

1. Change to:
"Output current per pairset in the POWER_UP state."
OR
2. Group to find good technical arguments why to keep it as it is and review case by case i.e. for each PSE class and Type.

Response *Response Status* **U**

REJECT.

See 78. Inrush by requested class results in unwanted motorboating.

Cl **33** *SC* **33** *P* *L* # 23112

Darshan, Yair Mirosemi

Comment Type **TR** *Comment Status* **R** *Maintenance*

Clause 33, Figure 33-14 in IEEE802.3-2012: the upper and lower bound templates for Type 1 and Type 2 at POWER_ON state. Short circuit conditions can not start below the lower bound template and below ILIM_min up to TLIM. Currently the area between Ipeak to ILIM is marked short circuit. This is incorrect. Short circuit region starts at the lowerbound template. Up to TLIM_min, it starts at ILIM_min and above it. It is legacy error. See IEEE802.3-2012: "33.2.7.7 Output current-at short circuit condition.
A PSE may remove power from the PI if the PI current meets or exceeds the "PSE lowerbound template" in Figure 33-14. Power shall be removed from the PI of a PSE before the PI current exceeds the "PSE upperbound template" in Figure 33-14." This is clear definition for where is the short circuit region.

SuggestedRemedy

This is legacy error. We could file maintenance request or just fix it as follows: Remove the marking "short circuit" and the brown color from the current position.

Response *Response Status* **W**

REJECT.

This is not in our draft.

If you want to file a maintenance request, please do so.

Cl **30** *SC* **30.12.3.1.17** *P* **50** *L* **52** # 23123

Darshan, Yair Mirosemi

Comment Type **ER** *Comment Status* **A** *Editorial*

D2.3 DONE The text "A GET attribute that returns the PD requested power value that was used by the remote system to compute the power value that is has currently allocated to the PD" has typo. The "..that is has.." need to be "..that has.."

SuggestedRemedy

Change to: "A GET attribute that returns the PD requested power value that was used by the remote system to compute the power value that has currently allocated to the PD"

Response *Response Status* **W**

ACCEPT.

Cl **145** *SC* **145.3.6** *P* **177** *L* **7** # 23124

Darshan, Yair Mirosemi

Comment Type **TR** *Comment Status* **A** *PD Class*

In the text "After a successful DLL classification, the assigned Class changes depending on the value of PDMaxPowerValue
variable, as defined in Table 145-22.", missing PDMaxPowerValue_mode(M).

SuggestedRemedy

Change text to: After a successful DLL classification, the assigned Class changes depending on the value of PDMaxPowerValue variable for single signature PD and PDMaxPowerValue_mode(X) variable, as defined in Table 145-22"

Response *Response Status* **W**

ACCEPT IN PRINCIPLE.

Change text to: After a successful DLL classification, the assigned Class changes depending on the value of PDMaxPowerValue for single-signature PDs and PDMaxPowerValue_mode(X) for dual-signature PDs, as defined in Table 145-22"

Cl **145** *SC* **145.3.3.14** *P* **174** *L* **2** # 23135

Darshan, Yair Mirosemi

Comment Type **TR** *Comment Status* **A** *PD SD*

In OFFLINE state, remove the arrow and label BEGIN.

SuggestedRemedy

1. Remove BEGIN from the relevant states.
2. If not resolved for this meeting, add to TODO list.

Response *Response Status* **W**

ACCEPT IN PRINCIPLE.

Remove BEGIN from the relevant states.

Cl **145** *SC* **145.2.5.4** *P* **105** *L* **17** # 23149

Darshan, Yair Mirosemi

Comment Type **TR** *Comment Status* **A** *PSE SD*

option_class_probe variable description says "This variable indicates if the PSE should determine the requested Class of the PD when pse_avail_pwr is less than 3." and the point for this feature was in case of available power of class 3 or lower to use the do_class_probe function. It should be "pse_avail_pwr is less than3 or equal to 3"

SuggestedRemedy

Change from "pse_avail_pwr is less than 3. To "pse_avail_pwr is less than 3 or equal to 3."

Response *Response Status* **W**

ACCEPT IN PRINCIPLE.

Change from "pse_avail_pwr is less than 3. To "pse_avail_pwr is less than 4."

Cl **145** *SC* **145.2.8.11** *P* **157** *L* **26** # 23154

Darshan, Yair Mirosemi

Comment Type **TR** *Comment Status* **A** *PSE Power*

In the text "PClass-2P is the class power defined in 145.2.7 and Equation (145-3), or PSE allocated power (as defined in 79.3.2.6) added to the channel power loss for a pairset. This parameter only applies to PSEs operating both
pairsets and connected to a dual-signature PD that advertised a different class signature on each pairset." is not accurate.
The part "This parameter only applies to PSEs operating both pairsets and connected to a dual-signature PD that advertised a different class signature on each pairset." is confusing:
a) This part is accurate "This parameter only applies to PSEs operating both pairsets and connected to a dual-signature PD"
b) This part "...that advertised a different class signature on each pairset." is incorrect. PClass-2P is applicable for all dual-signature use cases same class or different class per pairset.

SuggestedRemedy

Change from:
"PClass-2P is the class power defined in 145.2.7 and Equation (145-3), or PSE allocated power (as defined in 79.3.2.6) added to the channel power loss for a pairset. This parameter only applies to PSEs operating both pairsets and connected to a dual-signature PD that advertised a different class signature on each pairset."
To:
"PClass-2P is the class power defined in 145.2.7 and Equation (145-3), or PSE allocated power (as defined in 79.3.2.6) added to the channel power loss for a pairset. This parameter only applies to PSEs operating both pairsets and connected to a dual-signature PD."

Response *Response Status* **W**

ACCEPT IN PRINCIPLE.

OBE by 372

###

Comment 372 has the following response:
ACCEPT IN PRINCIPLE.

- Move paragraph 3 to 145.2.7 (editor to find proper place).
- Delete 145.2.8.11

Cl **145** *SC* **145.3.8.6** *P* **188** *L* **49** # 23159

Darshan, Yair Mirosemi

Comment Type **ER** *Comment Status* **A** *Editorial*

The text in page 188 lines 49-53 addressing Table 145-29 should be located before Table 145-29

SuggestedRemedy

Move Table 145-29 after lines 49-53 in page 188.

Response *Response Status* **W**

ACCEPT IN PRINCIPLE.

Editor to follow guidelines for Table placement.

Cl **145** *SC* **145.2.3** *P* **93** *L* **2** # 23272

Thompson, Geoff GraCaSI S.A.

Comment Type **ER** *Comment Status* **A** *Editorial*

The use of the terms "Switch/Hub" and "Powered End Station" are prejudicial and technically inaccurate. PoE can be used between any two DTEs as long as there is a PSE and a PD. For example, there are a number of applications where an upstream power feed might be very useful.

SuggestedRemedy

Replace labels with something more suitable. Powering DTE and "Powered DTE" would be a candidate.

Response *Response Status* **W**

ACCEPT IN PRINCIPLE.

Change "Switch/Hub" to "Powering Equipment" and "Powered End Station" to "Powered Equipment".

This comment resolves comment: 273

Cl **145** *SC* **145.2.3** *P* **93** *L* **2** # 23273

Thompson, Geoff GraCaSI S.A.

Comment Type **ER** *Comment Status* **A** *Editorial*

Same as above for subsequent figures.

SuggestedRemedy

Replace labels with something more suitable. Powering DTE and "Powered DTE" would be a candidate.

Response *Response Status* **W**

ACCEPT IN PRINCIPLE.

OBE by 272

###

Comment 272 has the following response:
ACCEPT IN PRINCIPLE.

Change "Switch/Hub" to "Powering Equipment" and "Powered End Station" to "Powered Equipment".

Cl **145** *SC* **145.2.8.3** *P* **159** *L* **24** # 24126

Picard, Jean Texas Instruments

Comment Type **TR** *Comment Status* **R** *Pres: Darshan15*

The following sentence does not make sense. In reality the PSE cannot really short the PI voltage, all it can do is temporarily turn off its port (it's only a low side switch after all, with a 0.1uF cap).

"The minimum PD input capacitance CPort min or CPort-2P min defined in Table 145-28, allows a PD to operate for input voltage transients which cause VPD to drop as low as 0 V, lasting less than 30 µs as specified in 145.3.8.6."

SuggestedRemedy

Use similar wording to the "at" standard, removing "which cause VPD to drop as low as 0 V".
The wording becomes this:

"The minimum PD input capacitance CPort min or CPort-2P min defined in Table 145-28, allows a PD to operate for input voltage transients lasting less than 30 µs as specified in 145.3.8.6"

Response *Response Status* **U**

REJECT.

Out of scope.

Cl **145** *SC* **145.3.8.6** *P* **198** *L* **24** # 24127

Picard, Jean — Texas Instruments

Comment Type **TR** *Comment Status* **R** *PD Power*

"A PD shall continue to operate without interruption in the presence of transients at the PSE PI as defined in 145.2.8.3."

This sentence does not make sense, since it refers to a transient to 0V at the PI. In reality the PSE cannot really short the PI voltage, all it can do is temporarily turn off its port (it's only a low side switch after all, with a 0.1uF cap).
Also, if the voltage at the PI goes down to 0V or not at PSE PI is purely dependent on the PD configuration (load current, type of input bridge, etc), and should not be part of the requirement.

SuggestedRemedy

Replace with:
"A PD shall continue to operate without interruption while there is loss of power at PSE PI for up to 30 µs"

Response *Response Status* **U**

REJECT.

Out of scope

Cl **145** *SC* **145.A.3** *P* **267** *L* **10** # 24189

Thompson, Geoff — GraCaSI S.A.

Comment Type **ER** *Comment Status* **R** *Pres: Darshan12*

Current text in P802.3bt/D2.4: This measurement illustration is has problems for the following reasons: 1) The device on the right in a circle is not defined and by the implication of having a different shape is not just a resistance load. 2) There is no PI defined in this diagram. (I gather that there is only one but I am not sure) 3) The right end of the "End to end pair-to-pair resistance" is not defined. Since it is not defined as the PD PI, I assume that it is buried in the PD (which one has to assume is a 3rd party device without test points as indicated in the diagram).

SuggestedRemedy

Proposed text for P802.3bt/D2.5: Just provide a diagram of a test network to be used as a load at the PSE PI and a table of values for the test sequence that needs to be stepped through to perform the test.

Response *Response Status* **U**

REJECT.

Out of scope.

Cl **145** *SC* **145.2.8.5.1** *P* **163** *L* **45** # 24198

Thompson, Geoff — GraCaSI S.A.

Comment Type **ER** *Comment Status* **R** *Pres: Darshan12*

Current text in P802.3bt/D2.4: ICon-2P-unb and Equation (145-15) are specified for total channel common mode pair resistance RChan-2P from 0.2 O to 12.5 O and worst case unbalance contribution by a PD. (I don't understand what "total channel common mode pair resistance" is in this context. What are the measurement end points for this "total channel" and what is the relevance to the specification at hand? We have no control of "total channel common mode pair resistance" other than by the independent specification of each of the 3 elements, PSE, Link Section and PD. Derivations of how we came to the values of each have no place in the specifications of each of the two separate devices.)

SuggestedRemedy

Proposed text for P802.3bt/D2.5: If we are to include these derivations they should be in an informative annex.

Response *Response Status* **U**

REJECT.

No remedy supplied

Cl **145** *SC* **145.2.8.5.1** *P* **164** *L* **3** # 24199

Thompson, Geoff — GraCaSI S.A.

Comment Type **ER** *Comment Status* **A** *Channel*

Current text in P802.3bt/D2.4: Channel

SuggestedRemedy

Proposed text for P802.3bt/D2.5: Link Section

Response *Response Status* **U**

ACCEPT IN PRINCIPLE.

REF 204

Cl **145** *SC* **145.2.8.5.1** *P* **164** *L* **10** # 24200

Thompson, Geoff GraCaSI S.A.

Comment Type **ER** *Comment Status* **R** *Pres: Darshan12*

Current text in P802.3bt/D2.4: The box on the far right in the figure is undefined. Is it a PD? Is it a PD minus some of its resistance? Is it a PD minus all of its resistence? Is it something else? A test device perhaps. Where is it defined?

SuggestedRemedy

Proposed text for P802.3bt/D2.5: ????

Response *Response Status* **U**

REJECT.

This is out of scope and no remedy is provided.

Yair's response to the comment explaining what the box is is shown in darshan_12_0517.

Cl **145** *SC* **145.2.8.5.1** *P* **164** *L* **17** # 24201

Thompson, Geoff GraCaSI S.A.

Comment Type **ER** *Comment Status* **R** *Pres: Darshan12*

Current text in P802.3bt/D2.4: "End-to-end pair-to-pair resistance" The "ends" as used in this evaluation are not defined, not defined as being accessible and under normal circumstances don't even come from the same vendor. Therefore I don't have a clue how to do this "evaluation"

SuggestedRemedy

Proposed text for P802.3bt/D2.5: ????

Response *Response Status* **U**

REJECT.

Out of scope and no remedy proposed.

Cl **145** *SC* **145.1.3** *P* **101** *L* **31** # 24203

Thompson, Geoff GraCaSI S.A.

Comment Type **ER** *Comment Status* **R** *Channel*

Current text in P802.3bt/D2.4: Channel pairset maximum DC loop resistance (RCh, O)

SuggestedRemedy

Proposed text for P802.3bt/D2.5: Link section pairset maximum DC loop resistance (RLS, O)

Response *Response Status* **U**

REJECT.

There is no technical reason to change the parameter name.