*Cl* **104**    *SC* **104.1**        *P* **19**      *L* **6**    # 23
Law, David                HP Ltd

*Comment Type*  **T**     *Comment Status*  **A**
It doesn't seem correct that a 'Power Interface (PI)' is an 'optional entity' since it is an interface, not an entity, and it isn't an option on its own since a PSE or PI always has a PI, although in soem cases the PI may be not be physically instantiated.

*SuggestedRemedy*
Suggest that the first sentence of the first paragraph of subclause 104.1 Overview be changed to read 'This clause defines the functional and electrical characteristics of two optional power entities, a Powered Device (PD) and Power Sourcing Equipment (PSE), for use with supported Ethernet physical layers.'.

*Response*         *Response Status*  **C**
ACCEPT.

---

*Cl* **104**    *SC* **104.1.1**        *P* **19**      *L* **32**    # 45
Dove, Daniel             Dove Networking Solut

*Comment Type*  **TR**    *Comment Status*  **A**
Should there be a reference/citation to SELV?

*SuggestedRemedy*
Reference IEC 62282-5-1, ed. 2.0 (2012-09)?

*Response*         *Response Status*  **C**
ACCEPT IN PRINCIPLE.

Delete 104.1.1

---

*Cl* **104**    *SC* **104.1.1**        *P* **19**      *L* **38**    # 46
Dove, Daniel             Dove Networking Solut

*Comment Type*  **TR**    *Comment Status*  **A**
The term "largely unaffected" may draw concerns in WG ballot.

*SuggestedRemedy*
Can we state "will continue to meet BER and other performance requirements"?

*Response*         *Response Status*  **C**
ACCEPT IN PRINCIPLE.

OBE by comment 45.

---

*Cl* **104**    *SC* **104.1.4**        *P* **21**      *L* **4**    # 48
Dove, Daniel             Dove Networking Solut

*Comment Type*  **TR**    *Comment Status*  **A**
Inconsistent capitalization;

*SuggestedRemedy*
Search and Replace "single-pair" with "Single-Pair", also S&R "Single-pair"

*Response*         *Response Status*  **C**
ACCEPT IN PRINCIPLE.

Repeat of comment 47.

---

*Cl* **104**    *SC* **104.2**        *P* **21**      *L* **21**    # 132
Dove, Daniel             Dove Networking Solut

*Comment Type*  **TR**    *Comment Status*  **D**
I have a concern about putting Link Segment first as it calls for the various system classes to define critical parameters, but you have not defined the system classes yet.

*SuggestedRemedy*
Move it behind the system class info.

*Proposed Response*      *Response Status*  **Z**
REJECT.

This comment was WITHDRAWN by the commenter.

---

*Cl* **104**    *SC* **104.2**        *P* **21**      *L* **29**    # 43
Law, David                HP Ltd

*Comment Type*  **T**     *Comment Status*  **A**
It is not clear to me what the '(a)' and '(b)' in the third row of Table 104-1 is in reference to.

*SuggestedRemedy*
Please clarify.

*Response*         *Response Status*  **C**
ACCEPT IN PRINCIPLE.

Replace subclass row with 'Class Code' row and delete SCCP from row header.

See comment #112.

---

TYPE: TR/technical required  ER/editorial required  GR/general required  T/technical  E/editorial  G/general
COMMENT STATUS: D/dispatched  A/accepted  R/rejected    RESPONSE STATUS: O/open  W/written  C/closed  Z/withdrawn
SORT ORDER: Clause, Subclause, page, line

*Cl* **104**
*SC* **104.2**

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---

*Cl* **104**    *SC* **104.2**         *P* **21**    *L* **29**    # 112

Wienckowski, Natalie                General Motors

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

Table 104-1: Do the "(a)" and "(b)" refer to the "A" and "B" system types defined in 104.1.4?  If they do change "(a)" to "A" and "(b)" to "B" in the column headings.  If they do not, change "(a)" to "(i)" and "(b)" to "(ii)" or some other designation that cannot be confused with the types.

*SuggestedRemedy*

See options in Comment.

*Response*    *Response Status* **C**

ACCEPT IN PRINCIPLE.

OBE by comment #43.

---

*Cl* **104**    *SC* **104.3**         *P* **22**    *L* **15**    # 133

Dove, Daniel                Dove Networking Solut

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

"no longer required" does not prevent application of power/voltage to the PD

*SuggestedRemedy*

replace "no longer required" with "not to be applied".

*Response*    *Response Status* **C**

ACCEPT IN PRINCIPLE.

Delete sentence on line 10, and 'In addition' of next sentence.

---

*Cl* **104**    *SC* **104.3.1**         *P* **22**    *L* **16**    # 70

Gardner, Andrew                Linear Technology Cor

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

This subclause is redundant with 104.1.4

*SuggestedRemedy*

Delete 104.3.1

*Response*    *Response Status* **C**

ACCEPT IN PRINCIPLE.

Replace sublcause text with "For PoDL systems there are three types of PSEs, Type A, Type B, and Type A+B consistent with 104.1.4."

---

*Cl* **104**    *SC* **104.3.1**         *P* **22**    *L* **18**    # 39

Law, David                HP Ltd

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

Subclause 104.3.1 ' types' states that '... there are two types of PSEs: a type A PSE ... a type B PSE ... A type A+B ...'. Similarly subclause 104.4.1 'PD types' states that 'There are two types of PDs: a type A ... a type B PD ... A type A+B ...'. in both cases there seem to be three, A, B and A+B.

*SuggestedRemedy*

Reword as three types, or clarify that a PD or PSE can be both a Type A and a Type B.

*Response*    *Response Status* **C**

ACCEPT IN PRINCIPLE.

OBE by comment #84.

---

*Cl* **104**    *SC* **104.3.1**         *P* **27**    *L* **18**    # 42

Law, David                HP Ltd

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

Wouldn't a type A PSE that is compatible with a 100BASE-T1 PHY not also be compatible with a 1000BASE-T1 PHY, while a type B PSE would only be compatible with 1000BASE-T1 PHYs?

*SuggestedRemedy*

See comment.

*Response*    *Response Status* **C**

REJECT. No it is not.

---

*Cl* **104**    *SC* **104.3.3**         *P* **23**    *L* **12**    # 91

Gardner, Andrew                Linear Technology Cor

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

fault_detected variable definition needs to be expanded to support faults during sleep.

*SuggestedRemedy*

Add '...or if the PSE is in a current limiting mode for at least TCUT.'

*Response*    *Response Status* **C**

ACCEPT IN PRINCIPLE.

Adopt new text regarding faults during sleep on page 12 of gardner_3bu_1_1015.pdf.

---

TYPE: TR/technical required  ER/editorial required  GR/general required  T/technical  E/editorial  G/general
COMMENT STATUS: D/dispatched  A/accepted  R/rejected     RESPONSE STATUS: O/open  W/written  C/closed  Z/withdrawn
SORT ORDER: Clause, Subclause, page, line

*Cl* **104**
*SC* **104.3.3**

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*Cl* **104**　　*SC* **104.3.3**　　　　*P* **26**　　*L* **10**　　　# 92
Gardner, Andrew　　　　　　　　Linear Technology Cor

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

The potential exists for the PSE to source VSLEEP into a short indefinitely during the IDLE state.

*SuggestedRemedy*

Add fault_detected arc out of the PSE IDLE state.

*Response*　　　　　　*Response Status* **C**

ACCEPT IN PRINCIPLE.

Adopt page 7 from gardner_3bu_1_1015 with editorial license.

*Cl* **104**　　*SC* **104.3.3.3**　　*P* **23**　　*L* **1**　　　# 5
Chabot, Craig　　　　　　　　UNH-IOL

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

All variables should explicitly state the meaning of their possible values.
For example:
"option_detect_ted
This variable indicates if detection can be performed by the PSE during the ted_timer interval.
Values:FALSE:Do not perform detection during ted_timer interval.
TRUE:Perform detection during ted_timer interval."
-from page 631 of 802.3-2012 standard

*SuggestedRemedy*

Populate the meaning of values for variables in subclauses 104.3.3.3 and 104.4.3.3.

*Response*　　　　　　*Response Status* **C**

ACCEPT IN PRINCIPLE.

Adopt text from chabot_3bu_3_1015.pdf.

*Cl* **104**　　*SC* **104.3.3.3**　　*P* **23**　　*L* **12**　　# 15
Law, David　　　　　　　　　HP Ltd

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

The only fault defined for the variable 'fault_detected' is overload, and therefor the only condition that can result in the entry to the 'ERROR' state in the state diagram is an overload.

*SuggestedRemedy*

Suggest that either the variable 'fault_detected' be renamed 'overload' and the state 'ERROR' be renamed 'OVERLOAD' or addition conditions be added that result in 'fault_detected' being set 'true' such as a short circuit condition.

*Response*　　　　　　*Response Status* **C**

ACCEPT IN PRINCIPLE.

Change ERROR state to OVERLOAD state. FAULT_DETECTED becomes OVERLOAD_DETECTED.

See comment #91.

*Cl* **104**　　*SC* **104.3.3.3**　　*P* **23**　　*L* **24**　　# 135
Dove, Daniel　　　　　　　　Dove Networking Solut

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

This may be too general of a statement. There are other sources of fault that may not cause this specific signal, right?

*SuggestedRemedy*

I don't have a specific recommendation other than to ensure this text covers all cases, or is specificly accurate.

*Response*　　　　　　*Response Status* **C**

ACCEPT IN PRINCIPLE.

OBE by 15.

TYPE: TR/technical required  ER/editorial required  GR/general required  T/technical  E/editorial  G/general
COMMENT STATUS: D/dispatched  A/accepted  R/rejected　　RESPONSE STATUS: O/open  W/written  C/closed  Z/withdrawn
SORT ORDER: Clause, Subclause, page, line

*Cl* **104**
*SC* **104.3.3.3**

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*Cl* **104**    *SC* **104.3.3.3**    *P* **24**    *L* **43**    # 4
Chabot, Craig    UNH-IOL

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

"A Boolean variable indicating that the PD is requesting full power at the PI or an external wakeup request has been received by the PSE and that the PSE shall forward the request to the PD."
is confusing.  The Shall only seems to apply to the external wakeup request, and this sentence makes it difficult to write the PICS item.

*SuggestedRemedy*

Change:
"A Boolean variable indicating that the PD is requesting full power at the PI or an external wakeup request has been received by the PSE and that the PSE shall forward the request to the PD."
To:
"A Boolean variable indicating that the PD is requesting full power at the PI or an external wakeup request has been received by the PSE.  If an external wakeup request has been received by the PSE, it shall forward the request to the PD."

OR

Change:
"A Boolean variable indicating that the PD is requesting full power at the PI or an external wakeup request has been received by the PSE and that the PSE shall forward the request to the PD."
To:
""A Boolean variable indicating that the PD is requesting full power at the PI or an external wakeup request has been received by the PSE."
and move
"If an external wakeup request has been received by the PSE, it shall forward the request to the PD."
to the text for the external_wakeup variable.

*Response*    *Response Status*  **C**

ACCEPT IN PRINCIPLE.

OBE by comment #115.

*Cl* **104**    *SC* **104.3.3.3**    *P* **24**    *L* **45**    # 3
Chabot, Craig    UNH-IOL

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

The text refers to section 104.3.6.4.  This section does not appear to apply to any of the text describing the wakeup_detected variable.

*SuggestedRemedy*

Remove "See 104.3.6.4"
or
Reference appropriate section.

*Response*    *Response Status*  **C**

ACCEPT.

OBE by comment #115.

*Cl* **104**    *SC* **104.3.3.5**    *P* **25**    *L* **28**    # 40
Law, David    HP Ltd

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

The 'PD_information_byte' function points states it is a variable that contains the '... type and class of the PD.' And provides a pointer to Table 104-8 '... for a description of the content' however Table 104-8 then states for the 'Power class' see Table 104-1.

*SuggestedRemedy*

Suggest a direct pointer to Table 104-1 for 'Power class'.

*Response*    *Response Status*  **C**

ACCEPT IN PRINCIPLE.

Adopt text from  stewart_3bu_1_1015.pdf

*Cl* **104**    *SC* **104.3.3.5**    *P* **26**    *L* **1**    # 138
Dove, Daniel    Dove Networking Solut

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

There is no subclause identified for the state diagram itself. It shows up in the functions subclause.

*SuggestedRemedy*

Add a sublcause for the state diagram

*Response*    *Response Status*  **C**

ACCEPT.

Add Subclause 104.3.3.6 State Diagram. Do same for PD state diagram '104.4.3.5'.

TYPE: TR/technical required  ER/editorial required  GR/general required  T/technical  E/editorial  G/general
COMMENT STATUS: D/dispatched  A/accepted  R/rejected    RESPONSE STATUS: O/open  W/written  C/closed  Z/withdrawn
SORT ORDER: Clause, Subclause, page, line

*Cl* **104**
*SC* **104.3.3.5**

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*Cl* **104**    *SC* **104.3.3.5**    *P* **26**    *L* **1**    # 139
Dove, Daniel                                Dove Networking Solut

*Comment Type* **TR**    *Comment Status* **A**
Should Fault_Detected=FALSE be asserted here?

*SuggestedRemedy*
Add Fault_Detected=FALSE

*Response*    *Response Status* **C**
ACCEPT.

Use <= instead of =. Add Overload_detected <= FALSE in the IDLE state.

*Cl* **104**    *SC* **104.3.4.1**    *P* **28**    *L* **7**    # 100
Gardner, Andrew                          Linear Technology Cor

*Comment Type* **TR**    *Comment Status* **A**
The max value for Tdet is TBD.

*SuggestedRemedy*
See gardner_3bu_x_1015 presentation.

*Response*    *Response Status* **C**
ACCEPT IN PRINCIPLE.

Adopt value from gardner_3bu_2_1015.pdf page 6.

*Cl* **104**    *SC* **104.3.4.3**    *P* **28**    *L* **31**    # 89
Gardner, Andrew                          Linear Technology Cor

*Comment Type* **T**    *Comment Status* **A**
Cbad in Table 104-5 is TBD.

*SuggestedRemedy*
Is Cbad required to fail detection. The tdet_timer should suffice. Consider removing Cbad.

*Response*    *Response Status* **C**
ACCEPT.

Remove CBAD row from table 104-5.

*Cl* **104**    *SC* **104.3.6**    *P* **28**    *L* **13**    # 140
Dove, Daniel                                Dove Networking Solut

*Comment Type* **TR**    *Comment Status* **A**
TBD in table

*SuggestedRemedy*
All TBDs must be removed prior to D2.0. I don't have the replacement value, just wanted to identify this point. Search & Insert values for all TBDs.

*Response*    *Response Status* **C**
ACCEPT IN PRINCIPLE.

OBE by comment 100.

*Cl* **104**    *SC* **104.3.6**    *P* **29**    *L* **46**    # 116
Gardner, Andrew                          Linear Technology

*Comment Type* **TR**    *Comment Status* **A**
The range of Icut is too wide.

*SuggestedRemedy*
See gardner_3bu_x_1015.pdf

*Response*    *Response Status* **C**
ACCEPT IN PRINCIPLE.

See gardneer_3bu_1_1015.pdf deletes ICUT.

*Cl* **104**    *SC* **104.3.6.1**    *P* **30**    *L* **52**    # 141
Dove, Daniel                                Dove Networking Solut

*Comment Type* **TR**    *Comment Status* **A**
It seems that a time value should be identified here. It does not constrain how fast or slow this value shall decay.

*SuggestedRemedy*
Insert a time value or reference the appropriate time value

*Response*    *Response Status* **C**
ACCEPT IN PRINCIPLE.

A PSE operating in the SLEEP_SETTLE state shall discharge the PSE PI to the range of Vsleep within a time less than Toff max.

TYPE: TR/technical required  ER/editorial required  GR/general required  T/technical  E/editorial  G/general
COMMENT STATUS: D/dispatched  A/accepted  R/rejected    RESPONSE STATUS: O/open  W/written  C/closed  Z/withdrawn
SORT ORDER: Clause, Subclause, page, line

*Cl* **104**
*SC* **104.3.6.1**

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*Cl* **104**　　*SC* **104.3.6.1**　　　　　*P* **31**　　　*L* **6**　　　# 142
Dove, Daniel　　　　　　　　　Dove Networking Solut

*Comment Type*　**TR**　　*Comment Status*　**R**
It seems that a time value should be identified here. It does not constrain how fast or slow this value shall decay.

*SuggestedRemedy*
Insert a time value or reference the appropriate time value

*Response*　　　　　*Response Status*　**C**
REJECT.

See #141.

---

*Cl* **104**　　*SC* **104.3.6.1**　　　　　*P* **31**　　　*L* **25**　　　# 143
Dove, Daniel　　　　　　　　　Dove Networking Solut

*Comment Type*　**TR**　　*Comment Status*　**A**
"may remove" does not indicate any requirement. Is there a requirement? If so, a shall statement should apply.

*SuggestedRemedy*
If a "shall remove" requirement exists, please insert.

*Response*　　　　　*Response Status*　**C**
ACCEPT IN PRINCIPLE.

OBE by 116.

---

*Cl* **104**　　*SC* **104.3.6.4**　　　　　*P* **29**　　　*L* **52**　　　# 77
Gardner, Andrew　　　　　　　Linear Technology Cor

*Comment Type*　**TR**　　*Comment Status*　**A**
Subclause 104.3.6.4 is referenced by Ilim in Table 104-3 but there is not baseline text regarding Ilim.

*SuggestedRemedy*
See gardner_3bu_x_1015 presentation.

*Response*　　　　　*Response Status*　**C**
ACCEPT IN PRINCIPLE. See presentation.

Adopt text from page 12 & 14 of gardner_3bu_1b_1015.pdf.

---

*Cl* **104**　　*SC* **104.3.6.5**　　　　　*P* **31**　　　*L* **21**　　　# 93
Gardner, Andrew　　　　　　　Linear Technology Cor

*Comment Type*　**TR**　　*Comment Status*　**A**
The tinrush timer and tpon timer seem to be redundant.

*SuggestedRemedy*
See gardner_3bu_x_1015 presentation.

*Response*　　　　　*Response Status*　**C**
ACCEPT IN PRINCIPLE.

Adopt text from pages 5 & 14 of gardner_3bu_1_1015.pdf.

---

*Cl* **104**　　*SC* **104.3.6.6**　　　　　*P* **31**　　　*L* **23**　　　# 114
Gardner, Andrew　　　　　　　Linear Technology

*Comment Type*　**TR**　　*Comment Status*　**A**
Tinrush and Tpon appear to be overlapping timers. In the PSE state machine, Tpon is used to limit the power-up timer, but subclause 104.3.6.6 refers to Tinrush instead.

*SuggestedRemedy*
Rename Tpon Tinrush in the state machine, and delete the Tpon timer definition.

*Response*　　　　　*Response Status*　**C**
ACCEPT IN PRINCIPLE.

Adopt state diagramn from page 7 of gardner_3bu_1_1015.pdf.

---

*Cl* **104**　　*SC* **104.3.6.8**　　　　　*P* **31**　　　*L* **47**　　　# 75
Gardner, Andrew　　　　　　　Linear Technology Cor

*Comment Type*　**ER**　　*Comment Status*　**A**
See comment regarding relevence of 104A.1

*SuggestedRemedy*
If 104A.1 is removed, delete this subclause.

*Response*　　　　　*Response Status*　**C**
ACCEPT.

Delete the annex.

See comment #67.

---

TYPE: TR/technical required  ER/editorial required  GR/general required  T/technical  E/editorial  G/general
COMMENT STATUS: D/dispatched  A/accepted  R/rejected　　RESPONSE STATUS: O/open  W/written  C/closed  Z/withdrawn
SORT ORDER: Clause, Subclause, page, line

*Cl* **104**
*SC* **104.3.6.8**

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*Cl* **104**     *SC* **104.4.1**              *P* **32**        *L* **23**        # 83

Gardner, Andrew                          Linear Technology Cor

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

This subclause is redundant with 104.1.4

*SuggestedRemedy*

Delete 104.4.1

*Response*                  *Response Status*   **C**

ACCEPT IN PRINCIPLE.

OBE by 70.

---

*Cl* **104**     *SC* **104.4.3**              *P* **34**        *L* **36**        # 87

Gardner, Andrew                          Linear Technology Cor

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

The function 'do_sccp' is not defined.

*SuggestedRemedy*

Add defnition for 'do_sccp.'

*Response*                  *Response Status*   **C**

ACCEPT IN PRINCIPLE.

Adopt text from presentation stewart_3bu_1_1015.pdf regarding SCCP.

---

*Cl* **104**     *SC* **104.4.3.1**            *P* **26**        *L* **27**        # 104

Matola, Larry                            Delphi

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

clause and page may be wrong due to comment against draft 1.2 will be out of office
during 1.3 voting period
requirement for PoDL poer to be isolated from chassis (isolated to data lines) may be
problematic if adding Ethernet to existing design.  Typical Auto design standards allow DC
groud to chassis (most times encourage local grounding for EMC reasons)

*SuggestedRemedy*

suggest putting DC isolation as prt of optional or reference design at PD or PSE (whichever
is more cost effective) so potential circuitry does not have to be redesigned or revalidated.
If isolation was added PSE or PD ethernet circuit existing module circuitry would not need
to be revised.

*Response*                  *Response Status*   **C**

REJECT.

Discussed with commentor via email. Satisfied with rejection.

See comment #11.

---

*Cl* **104**     *SC* **104.4.3.3**            *P* **33**        *L* **6**         # 85

Gardner, Andrew                          Linear Technology Cor

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

The variable 'disconnect' could be confused with the 'DISCONNECT' state

*SuggestedRemedy*

Rename the variable as disconnect_PD?

*Response*                  *Response Status*   **C**

ACCEPT.

---

*Cl* **104**     *SC* **104.4.4**              *P* **35**        *L* **20**        # 64

Gardner, Andrew                          Linear Technology Cor

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

Table 104-4 Isignature limit, should be 'Vconnector<Vsig_disable max'

*SuggestedRemedy*

See comment.

*Response*                  *Response Status*   **C**

ACCEPT.

---

TYPE: TR/technical required  ER/editorial required  GR/general required  T/technical  E/editorial  G/general
COMMENT STATUS: D/dispatched  A/accepted  R/rejected     RESPONSE STATUS: O/open  W/written  C/closed  Z/withdrawn
SORT ORDER: Clause, Subclause, page, line

*Cl* **104**
*SC* **104.4.4**

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*Cl* **104**　　*SC* **104.4.4**　　　　　　*P* **35**　　　*L* **36**　　　# 88

Gardner, Andrew　　　　　　　　　Linear Technology Cor

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

Cbad in Table 104-5 is TBD.

*SuggestedRemedy*

Is Cbad required to fail detection. The tdet_timer should suffice. Consider removing Cbad.

*Response*　　　　　　*Response Status* **C**

ACCEPT IN PRINCIPLE. OBE by #89.

---

*Cl* **104**　　*SC* **104.4.6**　　　　　　*P* **36**　　　*L* **50**　　　# 101

Gardner, Andrew　　　　　　　　　Linear Technology Cor

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

Cin,detect is TBD.

*SuggestedRemedy*

See gardner_3bu_x_1015 presentation.

*Response*　　　　　　*Response Status* **C**

ACCEPT.

Accept text in gardner_3bu_2_1015.pdf on page 6.

---

*Cl* **104**　　*SC* **104.4.6**　　　　　　*P* **36**　　　*L* **53**　　　# 102

Gardner, Andrew　　　　　　　　　Linear Technology Cor

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

tpwr_dly is TBD

*SuggestedRemedy*

See gardner_3bu_x_1015 presentation.

*Response*　　　　　　*Response Status* **C**

ACCEPT.

Accept text in gardner_3bu_2_1015.pdf on page 6.

---

*Cl* **104**　　*SC* **104.4.6.2**　　　　　*P* **37**　　　*L* **25**　　　# 66

Gardner, Andrew　　　　　　　　　Linear Technology Cor

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

Max PD input current during inrush should be specified here.

*SuggestedRemedy*

See gardner_3bu_x_1015 presentation.

*Response*　　　　　　*Response Status* **C**

ACCEPT IN PRINCIPLE.

See gardner_3bu_2_1015.pdf page 6.

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*Cl* **104**　　*SC* **104.4.6.2**　　　　　*P* **37**　　　*L* **31**　　　# 65

Gardner, Andrew　　　　　　　　　Linear Technology Cor

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

3.1V<VPI(PD)<3.5 should be in Table 104-6

*SuggestedRemedy*

See comment.

*Proposed Response*　　　　*Response Status* **Z**

REJECT.

This comment was WITHDRAWN by the commenter.

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*Cl* **104**　　*SC* **104.4.6.5**　　　　　*P* **38**　　　*L* **14**　　　# 69

Gardner, Andrew　　　　　　　　　Linear Technology Cor

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

See comment regarding relevence of 104A.1

*SuggestedRemedy*

See comment.

*Response*　　　　　　*Response Status* **C**

ACCEPT IN PRINCIPLE. OBE #67.

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TYPE: TR/technical required  ER/editorial required  GR/general required  T/technical  E/editorial  G/general
COMMENT STATUS: D/dispatched  A/accepted  R/rejected　　RESPONSE STATUS: O/open  W/written  C/closed  Z/withdrawn
SORT ORDER: Clause, Subclause, page, line

*Cl* **104**
*SC* **104.4.6.5**

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*Cl* **104**    *SC* **104.5**                    *P* **38**          *L* **35**          # 12
Law, David                          HP Ltd

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

To ensure application of PoDL power is a broad set of applications suggest that isolation requirements be placed on both PSEs as well as PDs.

*SuggestedRemedy*

Change the text 'A PD shall ...' to read 'PDs and PSEs shall ...' and the text '... to a PD through ...' to read '... to a PD or PSE through ...'.

*Response*                    *Response Status*    **C**

REJECT.

See http://www.ieee802.org/3/bu/public/jan15/gardner_3bu_3_0115.pdf for discussion.

*Cl* **104**    *SC* **104.5**                    *P* **38**          *L* **35**          # 11
Law, David                          HP Ltd

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

Subclause 10.2.2 'Shall, should, may, and can' of the '2014 IEEE-SA Standards Style Manual' reads 'Note that the use of the word must is deprecated and shall not be used when stating mandatory requirements; must is used only to describe unavoidable situations.'. As the text is currently written it doesn't seem to describe an unavoidable situation, therefore suggest it be re-written to do so.

*SuggestedRemedy*

Suggest the text '... the MDI leads must provide isolation between all accessible external conductors, including frame ground (if any), and the non-MDI connector.' be changed to read '... the MDI leads must provide isolation between all accessible external conductors, including frame ground (if any), and the non-MDI connector, so as not to negate the DC isolation provided by the PD.

*Response*                    *Response Status*    **C**

ACCEPT.

*Cl* **104**    *SC* **104.5.1**                    *P* **38**          *L* **35**          # 94
Gardner, Andrew                          Linear Technology Cor

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

Need to resolve use of must in this subclause.

*SuggestedRemedy*

Define a level of DC isolation (Volts and ohms?) and use 'shall.'

*Proposed Response*                    *Response Status*    **W**

PROPOSED ACCEPT IN PRINCIPLE.

OBE by comment #11.

*Cl* **104**    *SC* **104.5.3**                    *P* **38**          *L* **38**          # 95
Gardner, Andrew                          Linear Technology Cor

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

Need to add DC isolated PHY transmitter test fixtures to Clause 104.

*SuggestedRemedy*

See comment.

*Response*                    *Response Status*    **C**

ACCEPT.

Add subclause 104.5.3.2 stating that "Test fixtures for PHY transmitters may need to incorporate DC blocking components in order compatible with Clause 104."

TYPE: TR/technical required  ER/editorial required  GR/general required  T/technical  E/editorial  G/general
COMMENT STATUS: D/dispatched  A/accepted  R/rejected     RESPONSE STATUS: O/open  W/written  C/closed  Z/withdrawn
SORT ORDER: Clause, Subclause, page, line

*Cl* **104**
*SC* **104.5.3**

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*Cl* **104**    *SC* **104.6**         *P* **39**      *L* **33**      # `10`

Law, David                          HP Ltd

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

The text seems to currently use PSE and master, and PD and slave, interchangeably. Suggest that the text be written in the terms of a PSE and a PD, and what their requirements are during the SCCP exchange.

See also comment that SCCP is being used of a point to point link.

*SuggestedRemedy*

[1] Suggest the first paragraph of subclause 104.6 be changed to read 'The PSE acts as a master during the SCCP exchange, controlling the PD that acts as the slave device.'.

[2] Suggest that the third sentence of the second paragraph of subclause 104.6 be changed to read 'The PD can derive power from the PSE's pull-up current during the SCCP exchange.'.

[3] Suggest that the title of subclause 104.6.1 'SCCP master' be changed to read 'PSE SCCP requirements'.

[4] Suggest that the text 'The master device shall source a pull-up current in ...' in subclause 104.6.1 be changed to read 'During the SCCP exchange the PSE shall source a pull-up current in ...'.

[5] Suggest that the sentence '104-7 illustrates the master device block diagram.' in subclause 104.6.1 be changed to read '104-7 illustrates the PSE SCCP block diagram.'.

[6] Suggest the title of Figure 104-7 'SCCP master block diagram' be changed to read 'PSE SCCP block diagram'.

[7] Suggest the title of subclause 104.6.2 'SCCP slave' be changed to read 'PD SCCP requirements'.

[8] Suggest the text ' Slave devices that derive their power from the master's pull-up current should utilize a charge reservoir ...' in the first sentence of subclause 104.6.2 be changed to read 'PDs that derive their power from the PSE's pull-up current during the SCCP exchange should utilize a charge reservoir ...'.

[9] Suggest the title of Figure 104-8 'SCCP slave block diagram' be changed to read 'PD SCCP block diagram'.

[10] In subclause 104.6.3 'SCCP signaling' and 104.6.4 'Serial communication classification protocols' replace all instances of 'master' with 'PSE' and 'slave' with 'PD'.

*Response*               *Response Status*  **C**

ACCEPT.

Accept remedy #1.


*Cl* **104**    *SC* **104.6**         *P* **39**      *L* **33**      # `13`

Law, David                          HP Ltd

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

Since the SCCP is used on a point to point link, I don't see the need to support multiple salve devices and, as far as I can see, the PSE can only accept  a single information byte with a PD class since it isn't capable of process multiple PD class responses from a PD.

Further, the inclusion an address in the SCCP message seems unnecessary on a point to point link, and would require a registration process to be defined to allocate these 48 bit addresses, assuming that each address is to be unique. I would note that at the moment the response to item 6.1.b. on the approved IEEE P802.3bu PAR, 'Is the Sponsor aware of possible registration activity related to this project?', is 'No'.

Finally, the exchange of this data to communicate a 8-bit information byte from the PD seems to take in the region of 7.5ms of the 25ms I understand that PoDL has been allocated from the overall maximum 100ms start up time.

*SuggestedRemedy*

Suggest that SCCP be changed to be based on a master (PSE) communicating with a single slave device (PD) which will remove the need for an address in the exchange and speed up the start up process.

*Response*               *Response Status*  **C**

ACCEPT IN PRINCIPLE.

By accepting text from stewart_3bu_1_1015.pdf multidrop is gone.

TYPE: TR/technical required  ER/editorial required  GR/general required  T/technical  E/editorial  G/general
COMMENT STATUS: D/dispatched  A/accepted  R/rejected     RESPONSE STATUS: O/open  W/written  C/closed  Z/withdrawn
SORT ORDER: Clause, Subclause, page, line

*Cl* **104**
*SC* **104.6**

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*Cl* **104**    *SC* **104.6**                *P* **39**        *L* **36**        # 2

Carlson, Steven                          HSD

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

IEEE 802.3 defines point to point links with a single station at each end of the link. This subclause indicates that a "multi-drop" mode is present for multiple PDs within a PI. This is not compatible with the IEEE 802.3 architecture.

As this is a Task Force review, this will be a general comment on 104.6 SCCP.
1. What is the rational for multi-drop mode?
2. Diagrams and explaination read like an IC data sheet, e.g. implied implementation, not an interoperability specification
3. Use of 64-bit addressing seems wildly unecessary and inefficient
4. Requirement for 64-bit address requires RAC action
5. PAR Section 6.1b should be a "Yes". It is currently a "No"
6. PD is burdened with a complex Layer 1 signature and classification mechanism
7. SCCP seems to be envisioned as a full communications scheme if the PSE is not powering the link. This is beyond the scope of the PAR.

*SuggestedRemedy*

Eliminate addressing scheme, which also eliminates the need for RAC action
Eliminate multi-drop mode
Redo figures and text to meet IEEE style
If SCCP is desired as a full communcations scheme when the PSE is not powering the link segment, change PAR to reflect this.

*Proposed Response*        *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

OBE by 13.

*Cl* **104**    *SC* **104.6.1**              *P* **42**        *L* **44**        # 146

Dove, Daniel                          Dove Networking Solut

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

and ROM… is this essential? It could be PROM, RAM, etc. I think that all falls under the term LOGIC, so would delete this.

*SuggestedRemedy*

Delete words "and ROM"

*Response*            *Response Status* **C**

ACCEPT IN PRINCIPLE.

Remove 'ROM' from 104.6.

Duplicate comment with #145.

*Cl* **104**    *SC* **104.6.1**              *P* **42**        *L* **44**        # 145

Dove, Daniel                          Dove Networking Solut

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

and ROM… is this essential? It could be PROM, RAM, etc. I think that all falls under the term LOGIC, so would delete this.

*SuggestedRemedy*

Delete words "and ROM"

*Response*            *Response Status* **C**

REJECT.

Duplicate with 146.

*Cl* **104**    *SC* **104.6.3.4**            *P* **43**        *L* **1**         # 98

Gardner, Andrew                       Linear Technology Cor

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

The timing parameters as defined for SCCP are not consistent with the detection current and PSE output and PD input capacitances.

*SuggestedRemedy*

re-work timing to be consistent with PoDL system paramters or remove SCCP from the standard.

*Response*            *Response Status* **C**

ACCEPT IN PRINCIPLE.

Adopt timing parameters and text in  stewart_3bu_1_1015.pdf.

TYPE: TR/technical required  ER/editorial required  GR/general required  T/technical  E/editorial  G/general
COMMENT STATUS: D/dispatched  A/accepted  R/rejected     RESPONSE STATUS: O/open  W/written  C/closed  Z/withdrawn
SORT ORDER: Clause, Subclause, page, line

*Cl* **104**
*SC* **104.6.3.4**

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*Cl* **104**　　*SC* **104.6.4.4**　　　　　　*P* **47**　　　*L* **13**　　　　# 99

Gardner, Andrew　　　　　　　　　Linear Technology Cor

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

SCCP function commands are TBD.

*SuggestedRemedy*

Add a function commands that allow the PSE to readback PD status and perform mutual identification.

*Response*　　　　　　*Response Status*　**C**

ACCEPT IN PRINCIPLE.

Adopt text from stewart_1_3bu_1015.pdf.

*Cl* **104**　　*SC* **104.7.4**　　　　　　　*P* **51**　　　*L* **12**　　　　# 8

Chabot, Craig　　　　　　　　　　UNH-IOL

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

The many changes from D1.2 to D1.3 have consequently necessitated changes to the PICS. I have drafted a new, corrected version of the PICS tables.

*SuggestedRemedy*

See chabot_3bu_1_1015

*Response*　　　　　　*Response Status*　**C**

ACCEPT.

Adopt chabot_3bu_2_1015.pdf

*Cl* **104.3**　　*SC* **table 104-3**　　　　*P* **23**　　　*L* **16**　　　　# 103

Matola, Larry　　　　　　　　　　Delphi

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

clause may be wrong as I am commenting early (draft 1.2) due to vacation unable to wait for draft 1.3
sleep voltage left on from PSE to bias PD typically in Autoomotive applications hot plug is not doen with live voltage. Open circuit voltage can also lead to service accidents (stray screwdriver) and potential galvanic corrosion (unprotected open connector exposed to moisture)

*SuggestedRemedy*

suggest adding timer to turn off sleep bias if relativly low resistance is detected as falult mode (short circuit up to some small resistance TBD) to help prevent condition listed

*Response*　　　　　　*Response Status*　**C**

ACCEPT IN PRINCIPLE.

Adopt text and state diagram from gardner_1b_3bu_1015.pdf.

*Cl* **104A**　　*SC* **104A.1**　　　　　　*P* **57**　　　*L* **9**　　　　# 67

Gardner, Andrew　　　　　　　　　Linear Technology Cor

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

The informative annex as written is not applicable to the PoDL phantom power architecture.

*SuggestedRemedy*

Either re-write or delete this annex.

*Proposed Response*　　　　*Response Status*　**Z**

REJECT.

This comment was WITHDRAWN by the commenter.

Discuss in room.

OBE by 75.

TYPE: TR/technical required  ER/editorial required  GR/general required  T/technical  E/editorial  G/general
COMMENT STATUS: D/dispatched  A/accepted  R/rejected　　RESPONSE STATUS: O/open  W/written  C/closed  Z/withdrawn
SORT ORDER: Clause, Subclause, page, line

*Cl* **104A**
*SC* **104A.1**

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