C/ 01 SC 1.5	P 18	L 21	# 389	C/ 33	SC 33		P 0	L 0	# 322		
Dove, Daniel	Dove Networ	king Solut		Darshan, `	Yair		Microsemi				
Comment Type TR	Comment Status D		Editorial	Comment	Туре Е	R	Comment Status D		MultiPort		
Missing Abbreviations	S			I could	dnt find in tl	he text	that all requirements are rel	evant to a singl	e port and it is		
SuggestedRemedy				impler 33	mentation s	specific	s to adress the operation of	multi-port syste	ems as regard to clause		
Insert "Dual Signature	e PD - A Powered Device that	presents two si	gnatures, one on each	Suggester	Remedy						
pair set, to the PSE.S	Single Signature PD - A Power	ed Device that = "	presents one signature	Add a	text that s	vas:					
Proposed Response				Claus	e 33 define	s the T	Type 1,2,3 and 4 systems rec	quirements for a	a single port system.		
				Multi-p	port system	ns requ	irements are implementation	ı specific.			
				(or eq	uivalen woi	rding)					
Are these abbreviatio	ons or definitions?			Proposed	Response		Response Status W				
Should SSPD and DS	SPD be added as definitions?			PROPOSED ACCEPT IN PRINCIPLE.							
CI 33 SC	P 88	L 17	# 172	Add te	ext:						
Zimmerman, George	CME Consult	ing		"This (clause defi	nas the	a requirements for a single p	ower system M	Aulti-port power system		
Comment Type ER	Comment Status D		PSE Power	require	ements are	imple	mentation specific."	Swer System. IV	tutti port power system		
Table 33-18: 'guarant page 90, lines 1 and	teed'? this is a requirement all 4.	ready. the word	is redundant. Also on	To en	d of 33.1						
SuggestedRemedy											
Remove the word gua	aranteed (4 occurances, 2 in th	ne table and 2 c	on page 90)								
Proposed Response	Response Status W										
PROPOSED REJEC	Т.										
I believe this word wa distinguish between t	as added as part of the Extend hose classes with extended po	ed Power work ower and those	and is needed to without.								

CI 33 SC 33

C/ 33	SC 33	P1	L 1	# 20		CI 33	SC 3	3.1.1	P 19)	L 53	# 176
Yseboodt,	Lennart	Philips				Zimmerma	n, Geor	ge	CME	Consulting	9	
Comment	Туре Е	Comment Status D			Editorial	Comment	Туре	т	Comment Status	D		Cabling
Bulkco	omment to consi We have ref	stently reference to ISO/IEC 1 ferences on: ne 53	1801 without yea	ar.		Type 2 standa	2 require ard for 80	s 11801: 02.3at to	1995 Class D unless delete category 5 ope	we explic eration.	itly meant to ch	hange the base
	- page 22, li	ne 15				See al	so on pa	age 23, li	ne 11			
	- page 22, li	ne 19				Suggested	Remedy	/				
	- page 22, ii - page 23, li - page 23, li - page 102, - page 103,	ne 10 ne 32 line 27 line 33				Chang and a cabling Both re	e 'Type derating g, and Ty equire a	2 and Ty ' to 'Ty ype 3 ope derating	/pe 3 operation requir pe 2 operation require eration requires ISO/I '	es ISO/IE es ISO/IE0 EC 11801	C 11801:2002 C 11801:1995 (I:2002 Class D	Class D or better Class D or better or better cabling.
	- page 104,	line 49				Make	a similar	⁻ change	on page 23, line 11.			
	- page 105,	line 9				Proposed	Respons	se	Response Status	w		
	- page 107, - page 137,	line 45				PROP	OSED A	CCEPT.				
	- page 138,	line 19				C/ 33	SC 3	3.1.3	P 2 1	1	L 39	# 230
Suggested	Remedy					Schindler,	Fred		Seen	Simply		
Repla	ce reference (wit	th year) to "ISO/IEC 11801".				Comment	Type	TR	Comment Status	D		Editorial
PROP Are re	OSED ACCEPT	TIN PRINCIPLE.				The de progre unpub whethe	efinitions ss revisi lished P er it is th	(line 39 ion P802 802.3bx/ e same a	and line 41) reference 3.3bx/D2.0. I do not ha D2.0 draft. I am not a as the public specifica	ed both th ive the pri able to con ation.	e IEEE 802.3-2 vate password nfirm if this refe	2012 and the in to check the erence is acceptable or
CI 33	SC 33.1	P 19	L 11	# 371		Suggested	Remedy	/				
Thompson	i, Geoff	GraCaSI S.A.				If the t	ext is the	e same ir	n both referenced doo	uments the	nen remove the	e P802.3bx/D2.0
Comment	Туре Е	Comment Status D			Cabling	reierei	ice so tr	lat there	is no confusion as to	what the	demnition is.	
THE T cablin	EXT: "These en g as is used for o	tities allow devices to draw/su data transmission." is too gen	ipply power using eral. It should be	the same ger restricted to t	neric wisted	l am o chang	kay with ed we sł	the defir hould rev	nitions in the IEEE 80 riew the definition pote	2.3-2012 entially ac	specification. I cept or change	f the definition has it.
pair co	opper cabling.					Proposed	Respons	se	Response Status	w		
Suggested	Remeay	EAD: "These entities allow de	vices to draw/aur		ag tha	PROP	OSED A	CCEPT	IN PRINCIPLE.			
same	generic balance	d copper cabling as is used for	or data transmissi	on."	ig the	Accep	ting this	commer	nt cause no changes t	o the draf	t.	
Proposed	Response	Response Status W										
PROP	OSED ACCEPT	IN PRINCIPLE.										
Coppe	er may be too sp	ecific. We call out cabling rec	quirements speci	ically in Table	33-1.							
CHAN same	GE TEXT TO R generic balance	EAD: "These entities allow de d cabling as is used for data t	vices to draw/sup ransmission."	oply power usi	ng the							
TYPE: TR	/technical require T STATUS: D/di	ed ER/editorial required GR/	general required cted RESPON	T/technical E SE STATUS: (/editorial G/g D/open W/wr	jeneral itten C/closed	I Z/with	drawn		C/ 33 SC 33.1	.3	Page 2 of 50 6/11/2015 5:24:56 P

COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed Z/withdrawn SORT ORDER: Clause, Subclause, page, line

C/ 33	SC Yair	33.1.4		P 21 Microsemi	L 50	# 315	Cl 33	SC Geoff	33.1.4	P 21 GraCaSLS A	L 53	# 386				
Comment The Ti	<i>Type</i> itle of c	TR lause 33.1	Comment	Status D past "Type 1 a	nd Type 2 syste	Power System m parameters" and was	Comment It is ne	<i>Type</i> ot a "linl	TR k segmen	Comment Status D t" that connects a PSE and a	PD when there	<i>Power System</i> is a mid-span PSE.				
This cl The pr "A pov PSEs, Single PSE b In Typ 4 PSE conne	roblem wer sys , is not e PSE v out not l be 3 or es can	is that in t tem, cons correct for vas OK for both so a ' 4 PSEs, th use a PSE ALT A an	ameters . odification in the current statists of a singl r Type 3 and - r Type 1 or 2 "single PSE" the term single that uses A d ALT B pair-	line 54 address andard (IEEE80 le PSE" that v 4 PSEs. due to the fact t term was corre PSE is confus LT A and ALT E sets or using a	types 3 and 4 to 2.3-2012) the te vas correct for Ty that we could use to use. ing term due to to 3 PSEs or use a ny other PSE im	oo. xt in line 50 that says: /pe 1 and Type 2 e ALT A PSE or ALT B he fact that Type 3 and PSE with two outputs plementations that do	Suggester Chan Proposed PROF This is	dRemed ge to "lin Respon POSED s the de ection: 1	ty hk section hse ACCEPT finition fro The portio	" in line 53 <i>Response Status</i> W om 1.4: n of the link from the PSE to t	he PD.					
the wo The po more I	ork. oint is t like a s	hat it is no ingle PSE	ot just a single system etc.	e PSE with one	output connecte	d to two pair-sets. It is	CI 33 Thompsor Comment	SC n, Geoff <i>Type</i>	33.1.4 FR	P 22 GraCaSI S.A. Comment Status D	L 27	# <u>379</u>				
Suggested Replac	SuggestedRemedy Replace "single PSE" by "single PSE system"							Note 1 points to 33.4.1.2 as well as Annex 33A. 33.4.1.2 is now effectively empty SuggestedRemedy								
Proposed PROP	Respon POSED	nse REJECT.	Response	Status W			IN LIN <i>Proposed</i> PROF	IE 27, F <i>Respor</i> POSED	REMOVE IISE REJECT.	THE TEXT: "See Section 33.4 Response Status W	4.1.2"					
link se 1000B proces	SE IS C ection. I BASE-T ss thes	DTE powe device wi e data.	ring is intende th a unified ir	ed to provide a nterface for both	single 10BASE-	T, 100BASE-TX, or ires and the power to	Section ISO/II	on 33.4. EC	1.2 still ca	alls out the requirement to me	et unbalance re	equirements stated in				
link se	ection: -	The portio	n of the link fr	rom the PSE to	the PD.											
The Part PSE".	SE spe	ecs are def	fined at the P	I and thus the F	PSE is a black bo	ox and still a "single										

C/ 33 SC 33.1.4

CI 33	SC 33.1.4	P 22	L 39	# 183	C/ 33	SC	33.1.4.1	P 23	L 17	# 177
Zimmerm	an, George	CME Consult	ing		Zimmerm	an, Geo	orge	CME Consultir	ng	
Comment	t Type TR	Comment Status D		Unbalance	Commen	t Type	т	Comment Status D		System Power
The r	note is incompreh	nensible. What is being asked	d of TIA? Of co	urse, there is a	Туре	2 opera	tion never	has all cable pairs energized		
tempe	erature rise with a ptable - however.	the question needs more pre	ion is, what is th cision.	e rise, and is it	Suggeste	dReme	dy			
Suggeste	dRemedy	TIA and ask as a lisioon. Do	loto the note toy		Cons pairs	ider whe are ene	ether type 2 ergized. (De	2 operation requires a 10 deg elete type 2 from sentence, re	C reduction, s tain type 3)	nce only half of the
"TIA v Table	will have to tell us 33-1; What	s regarding the temperature ri	se if 4P total cu	rrent is 2*lcable per	Proposed PRO	l Respoi POSED	nse REJECT.	Response Status W		
if tota 2P_u	Il 4P current is ke nb and other	ept but one of the pairs has th	e above pair wit	h maximum Icont-	This	s alread	ly included	in the sentence.		
did w	e expect that	ney expect temperature rise?	based on the h		C/ 33	SC	33.1.4.1	P 23	L 20	# 178
it will	not affect tempe	rature rise over the cable."		e e e te the europeatie e	Zimmerm	an, Geo	orge	CME Consultir	ng	
liaiso	nally replace the n document.	note text with a simple quest	ion and a refere	nce to the supporting	Commen	t Type	т	Comment Status D		System Power
Proposed	l Response	Response Status W			Add I	eferenc	e to TSB-1	84-A for operation on all type	s in this standa	ird.
PRO	POSED ACCEPT	IN PRINCIPLE.			The e	t Type 2	note on line 2 and need	s to be changed.	ie sentence lim	its the TIA document
l belie	eve we have aske	ed TIA or others about tempe	rature rise as a	esult of unbalance (we	Suggeste	dReme	dy			
expec	ct less temperatu	re rise in the presence of unb	alance). What i	s the status of that	See	commen	nt.			
liaiso	n?				Proposed	l Respoi	nse	Response Status W		
Repla	ace note beginnir	ng "TIA will have…" with:			PRO	POSED	ACCEPT	IN PRINCIPLE.		
"Liais	on underway with	h TIA and others to study the	effect of unbala	nce on temperature rise	Char	ge Sent	ence from	"Additional cable ambient o	perating tempe	rature guidelines for
. Au					provi	ded in IS	SO/IEC TR	29125 [B49]1 and TIA TSB-1	I84 [B60]."	
C/ 33	SC 33.1.4	P 23	L 32	# 265	То. "	Addition	al aabla ar	abiant anarating tomporatura	quidalinaa far	Line 2 Turne 2 and
Dwelley, I	David	Linear Techn	ology		Tu: Type	4 opera	at cable at	noient operating temperature	guidelines ioi	rype 2, Type 5, and
Comment	t Туре Т	Comment Status D		Unbalance	provi	ded in IS	SO/IEC TR	29125 [B49]1 and TIA TSB-1	184 [B60]."	
This o unbal	defines cabling p ance requiremer	arameters: "Operation for all t hts stated in ISO/ IEC 11801:2	types shall meet 2002."	the resistance						
Suggeste	dRemedy									
Repla requii	ace with: "Operat rements stated ir	ion is assured when the chan ISO/ IEC 11801:2002."	nel meets the re	sistance unbalance						
Proposed	l Response	Response Status W								

PROPOSED 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

C/ 33 SC 33.1.4.1 Page 4 of 50 6/11/2015 5:24:56 PM

C/ 33	SC 33.1.4.1	P 23	L 5	# 221	C/ 33	SC 33.2	0A	P 24	L 31	# 326
Schindler,	Fred	Seen Simply			Darshan, `	Yair		Microsemi		
Comment	Type ER	Comment Status D		System Power	Comment	Type EF	Comm	nent Status D		PSE Type
The ad power the se Suggested	dded text appers to r levels, which is no entence does not pr dRemedy	suggest that CAT-3 cables t permitted by other specific: ovide a requirement beyond	may be used t ation requirem what is alread	for higher than class-4 ents. The remainer of ly stated in the standard.	It is cl allowe power It will b PSE to	ear from diff d to implem supported p be helpful to ypes.	erent locations ent the maxim er its type and add such note	in our standard tha um class events tha class. right after Table 33	t PSE that imple it corresponds to -1a that summa	ments DLLL is also the maximum PSE rize the permissible
Strike "The s require true bi transn levels and (n Proposed PROP	the added sentence supply of power ove ements to the cabli ut may require som nitted over all spec may require heavin nore uncommonly) <i>Response</i> POSED REJECT.	e, er the data connection is inten ng that is normally installed the further attention. Power at ified premises cabling withou er guage conductors than are in some lighter guage Class <i>Response Status</i> W	nded to opera or data usage Type 1 powe t further restri of found in Clas D or better ca	te with no additional . This is approximately r levels may be ctions. Higher power ss C/Category 3 cabling able."	Suggested Add n 5-PSE corres Proposed PROP This is	IRemedy ote 5 after n that is defin ponds to the Response OSED REJ s already col	ote 4 below tal led as DLLL c PSE maximu <i>Respor</i> ECT.	ble 33-1a that says: apabale and implem im power supported inse Status W able by use of the w	ents the maxim is allowed acco rork "optional" in	um class events rding to this standard. a the DLL column.
المرام ا		need that way . Da way have	h attan taut0		CI 22	SC 22.2	00	P 24	1 42	# 195
				# 160	Zimmerma	an, George	Ud	CME Consulti	ng	# 165
Zimmerma	an George	CMF Consultin	L 32	# 109	Comment	Type TR	Comm	nent Status X		PSE Type
Comment Some require require Opera on the	<i>Type</i> ER where in the editing ement is unclear. " ements stated in IS ation of what, for wh e link section. I'm a	Comment Status D g, we've made enough holes Operation for all types shall r SO/IEC 11801:2002." hat, what requirements? Is the ssuming first its on the link s	in this swiss oneet the resis is a requirem ection below,	Editorial cheese that the tance unbalance ent on the port (PI) or then on the PSE/PD.	New 2 mainta manag of the Suggested Remo	-pair PSEs ained by the gmeent infor scope which <i>Remedy</i> ve 2 pair Ty	are out of scop Chair in many mation. Introd would require be 3 PSEs (bo	be of the PAR. The cases as limiting to uction of new types an amendment to the	scope of the PA 4 pair operatior of 2 pair PSE ar the PAR. from table 33-1	R has been and associated ad PDs is an expansion a.
Sugaested	dRemedv				Proposed	Response	Respo	nse Status W		
Rephr compl If it is Clause unbala	rase similar to how ly with the resistant on the PSE/PD op es 33.2 and 33.3 sl ance specified in IS	it is in PHY requirements: "I ce unbalance requirements s eration, then state, "PSE PI a nall be met over link sections O/IEC 11801:2002."	ink sections f pecified in ISC and PD PI elea with the full r	or all Types shall D/.IEC 11801:2002/" ctrical requirements in ange of resistance	This s	hould be dis	cussed by the	group.		
Proposed	Response	Response Status W								
PROP	POSED ACCEPT IN	N PRINCIPLE.								
Rephr	rase similar to how ly with the resistant	it is in PHY requirements: "I ce unbalance requirements s	ink sections f	or all Types shall D/.IEC 11801:2002/"						

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

CI 33 SC 33.2.0a PSE Types

PSE Types

C/ 33 SC	33.2.0a	P 25	5 L1	# 261	CI 33	SC 33.2	2 P:	25	L 24	# 204
Dwelley, David		Linear	Technology		Dove, Dar	niel	Dove	e Networki	ing Solut	
Comment Type	ER	Comment Status	D	PSE Types	Comment	Type E	Comment Status	5 D		Editorial
Note 4 does falls into row	n't add any 4 which al	information. Class 4 lows 2-pair power. If	power or less is all we're trying to ensu	ways 30W or less, which ire that falling back from 4- t this note is not the right	How on name	lo we deal w them based	ith some of the new tech on type of technology or	nologies l bandwidt	ike 2.5G, 5G an h rather than sp	d 100T1? Should we becific to PHY?
place for it.	5 2 pail pov	ver is compliant bena		t this note is not the right	Suggeste	dRemedy				
SuggestedReme	edy				Spend and c	d some discu nange as ne	ission with group decidin w PHYs are introduced	g if we wa	int this area to r	equire constant update
Remove not	e 4.				Proposed	Response	Response Status	w		
Proposed Respo	onse	Response Status	W		PROF	POSED ACC	EPT IN PRINCIPLE.			
PROPOSED	REJECT.				Accep	ting this con	nment results in no chan	ges to the	text.	
This note do would like it	es address removed, p	that 2-pair power is please suggest an alte	compliant if the povernate place to mal	ver is less than 30W. If you that clarification.	C/ 33 Zimmerm	SC 33.2	2 P:	25 Consultir	L 35	# 179
C/ 33 SC	33.2.1	P 25	5 L 8	# 374	Commont		Commont Status		19	Midenan
Thompson, Geof	ff	GraCa	aSI S.A.		10GB	ASE-T Midsi	oan PSEs may not be co	mpatible v	with 10BASE-T	or 100BASE-TX due to
Comment Type	Е	Comment Status	D	PSE Types	magn	etics OCL re	quired. Requires further	study.		
THE TEXT:	"PSEs may	be placed in two loc	ations with respect	to the link segment, either	Suggeste	dRemedy				
SuggestedReme REPLACE V segment, eit Proposed Respo PROPOSED This is existi	edy VITH: "A PS her coincid onse D REJECT. ng text that	SE may be placed in lent with the DTE/ Re <i>Response Status</i> t we are not changing	one of two location peater or midspan. W J. This could be file	s with respect to the link " d as a maintenance	10GB "Edito with 1 the O 10GB <i>Proposed</i> PROF	ASE-T mids r's note (to b 0BASE-T an CL requirem ASE-T band <i>Response</i> POSED ACC	ban (on line 37): e removed prior to public d 100BASE-TX requires ents for 10BASE-T /100E width needs to be showr <i>Response Status</i> EPT.	cation) - C further str BASE-TX i " W	compatibility of 1 udy, specifically interoperability i	OGBASE-T midspans , technical feasiblity of n conjunction with
					C/ 33	SC 33.2	2 P1	25	L 38	# 222
					Schindler,	Fred	See	n Simply		
					Comment I do n does	<i>Type</i> ER ot see a reas not determin	Comment Status son for the added senten e whether it is 2P or 4P of	D ce. The d capable.	lata rate passed	<i>Midspan</i> I through a midspan
					Suggeste	dRemedy				
					Strike "Addit power	the sentenc ionally, 1000	e, IBASE-T and 10GBASE	T Midspa	n PSEs may be	capable of 4-pair
					Proposed	Response	Response Status	w		
					PROF	OSED ACC	EPT.			
TYPE: TR/techni	ical require	d ER/editorial require	ed GR/general req	uired T/technical E/editorial G/	general			CI 33		Page 6 of 50

TYPE COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed Z/withdrawn SC 33.2.2 6/11/2015 5:24:56 PM SORT ORDER: Clause, Subclause, page, line

C/ 33 SC 33.2.2	P 31 Dave Networl	L 50 king Solut	# 205	C/ 33 Yseboodt	SC 33.	2.3	P 32 Philips	L 31	# 124	
Dove, Daniel Comment Type TR Missing descriptive illu SuggestedRemedy Add figure(s) showing Proposed Response PROPOSED ACCEPT We should add definit would begin to infringe Add Definitions from a Single-Signature PD: signature, and mainta Dual-Signature PD: A signatures, and mainta	Comment Status D ustrations for Single/Dual sign single signature PD and dual <i>Response Status</i> W T IN PRINCIPLE. tions of single-signature and d e on implementations. abramson_03_0315 (shown be A PD that shares the same d in power signature between b A PD that has independent det ain power signatures on each	ature PDs ature PDs signature PD c lual-signature Pl elow) to 1.4: letection signature oth pair sets. tection signature pair set.	Definitions configuration. Ds to 1.4. Figures ure, classification es, classification	Table 33-2a introduces a new pinout configuration 'Alternative B(X)'. The other polarity configuration is named 'Alternative B'. Possible confusion can occur now when referring to 'Alternative B'. - does it mean the specific polarity configuration ? - or to the pinout configuration ? We need a distinct name for the "Alternative B" polarity configuration, term "Alternative B" refers to which pins are used independent from polarity. SuggestedRemedy Rename 'Alternative B' to 'Alternative B(S)' in the third column of Table 33-2a. S for Straight X for Cross Other option: Alternative B(X) => Alternative B(N) N for Normal Alternative B(X) => Alternative B(R) R for Reversed Proposed Response Response Status W PROPOSED ACCEPT IN PRINCIPLE. Rename 'Alternative B' to 'Alternative B(S)' in the third column of Table 33-2a. S for Straight						
				Cl 33 Dove, Dar Comment Missir Suggestee Add e Proposed PROF No rea	SC 33. niel Type T ng explanat dRemedy xplanation Response POSED RE ason to add	2.3 R tion for in the JECT. d expla	P 32 Dove Network <i>Comment Status</i> D why AltA (MDI) and AltB(X) : text <i>Response Status</i> W nation to text. The requirem	<i>L</i> 38 king Solut are not allowed ents are the im	# 206 PSE Types I for Type 4 PSEs	

CI 33 SC 33.2.3

Cl 33 SC 33.2.3 P 33 L 19 # <u>385</u>	Cl 33 SC 33.2.4.1 P 33 L 50 # 266
Thompson, Geoff GraCaSI S.A.	Dwelley, David Linear Technology
Comment Type T Comment Status D PSE Types	Comment Type T Comment Status D PSE Backc
It is not clear to me whether or not this change will end up disenfranchising some currently compliant PSEs. It is unacceptable to do so and I see no need to do so.	This sentence is redundant and is not normative: "A Type 3 or Type 4 PSE that will deliver power over both Alternative A and Alternative B simultaneously". Also, it seems like some "shalls" are missing - this is required behavior.
SuggestedRemedy	SuggestedRemedy
Restore deleted text or prove that no existing compliant DTE/PSEs are disenfranchised.	Remove sentence, and add the words "only" and "shall" to page 34, line 1: "A PSE
Proposed Response Response Status W PROPOSED REJECT.	performing detection using Alternative B *only* may fail to detect a valid PD detection signature. When this occurs, the PSE *shall* back off for at least Tdbo as specified"
	Consider also adding a "shall" to page 34 line 8.
according to table 33-2a.	Proposed Response Response Status W
	PROPOSED ACCEPT IN PRINCIPLE.
C/ 33 SC 33.2.3 P 33 L 26 # 223	Remove new sentence on page 33, line 50/51, and add the words "only" and "shall" to
Schindler, Hed Seen Shippy	page 34, line 1: "A PSE performing detection using only Alternative B may fail to detect a
Type 3 PSE that provide more than 30W require both Alternatives.	valid PD detection signature. When this occurs, the PSE shall back off for at least Tdbo as specified"
SuggestedRemedy	Pg 34, Line 8 should not be changed.
Replace "Type 1, Type 2 or Type 3 PSEs shall implement Alternative A, Alternative B, or both. Type 4 PSEs shall	CI 33 SC 33.2.4.4 P 34 L 40 # 246 Schindler, Fred Seen Simply
Implement Alternative A and Alternative B.	Comment Type TR Comment Status D PSE State Diagram
with "Type 1, Type 2 or Type 3 PSEs shall implement Alternative A, Alternative B, or both. Type 3 PSEs providing class 5 or 6 power levels and Type 4 PSEs shall implement Alternative A	New variable both_alts_valid appears to be incomplete. Some PSE implementations will power one pairset when a valid detection signature is present. Note that the legacy standard did not have a variable to indicate a valid PD detection signature.
and Alternative B."	SuggestedRemedy
Proposed Response Response Status W PROPOSED ACCEPT.	This variable should be replaced by do_detection adjustments provided in the comment flagged by FRS-2.
	Proposed Response Response Status W
	PROPOSED ACCEPT IN PRINCIPLE.
	OBE by comment # 229

C/ 33 SC 33.2.4.4

C/ 33	SC 33.2.4.4	P 35	L 16	# 252		C/ 33	SC :	33.2.4.4		P 35	L 17	# 282	
Schindle	er, Fred	Seen Simply				Picard, Je	an			Texas Instru	ments		
Comme	nt Type TR	Comment Status X			4PID	Comment	Туре	TR	Comment	t Status X		4PID	
Tex	t,					lt is n permi	ot appro tted, as	priate to s it may tak	imply provid e a very long	e power and ch g time to go thro	eck through LLE	DP if 4-pair power is including boot-up time),	
"ma This prov rese disc	intain_4pair_powe s variable is provid viding a 4 pair pow et by a LLDP mess cretion.	ue e dor	which rely o deterr time) scena	may ca n LLDP mined th time limi arios, eith	use dama boot up tir at 4P pow it to turn o ner electri	ge to certair me to avoid o ver can be re ff the power cally or therr	n types of dual s damaging PDs. cceived, a "shor has to be defin nally related.	signature PDs. It If power is appli t term" (much sh ed based on pot	is also NOT reliable to ied without having horter than LLDP cycle tential damage				
Valu	ues:False:Remove	e power from at least one pair :	set.			Suggeste	dRemed	'y					
True: Power may be maintained on both pair sets." Indicates a PD has been incorrectly powered on both pair sets. To avoid interoperability or						replace 3rd sentence with "if it has not been determined that 4P power can be received, this variable shall be reset within TBD ms after the 4-pair power has been applied."							
dam	nage to a network	device, power should only be	applied on one	pair set of this PD		Proposed Response Response Status W							
Sugges	tedRemedy					Based on the number of comments, there needs to be a big discussion about 4PID and							
A so sub	olution has been p mitted.	rovided in the comment flagge	ed with FRS-1 a	nd other commen	ts	how it is currently implemented.							
						l wou	d like to	hear the	group's opini	ion on this com	ment.		
The pow	e state machine wh ver on all pair sets.	nen it is created shall prevent p	owering of a P	D that does not ac	cept								
Stril	ke the reference te	ext.											
Propose	ed Response	Response Status W											
Bas how	ed on the number it is currently imp	of comments, there needs to lemented.	be a big discus	sion about 4PID a	nd								
l wo	ould like to hear the	e group's opinion on this comn	nent.										

Cl 33 SC 33.2.4.4

CI 33	SC	33.2.4.4	P 35	L 19	# 354	C/ 33	SC 33.2	.4.4	P 35	L 20	# 129
Darshan,	Yair		Microser	ni		Johnson,	Peter		Sifos Technolog	ies	
Comment	t Type	TR	Comment Status D		4PIL	Comment	Туре Т		Comment Status D		4PID
The r ID me	naintain echanis	i_4pair_po ms.	wer signature current te	ext blocks us to imple	ement more reliable 4P-	The s event class	s including L power draw	e varial LDP m (power	ble "maintain_4pair_power" can nessage (e.g. "PD does not wa r policing to class?), and "veno	an be reset a ant 4-pair po dor discretion	is a result of 3 possible wer"), enforcement of n".
Ine t "It is i	ext says initially s	s: set to the v	/alue of pd_4pair_candi	date"		As th	is is an inter	operabi	ility specification, how is a PD	designer to	know what constitutes
The "	is" shou	uld be repla	aced with "may"			signa won't	ture (or dual	load) F	PD, how does the PD designe	r know to de	sign a PD where this
Suggeste	dReme	dy				worn	nappens				
Repla "It is i	ace: initially :	set to the v	value of pd_4pair_candi	date"		Furth decis faulty	ermore, ther ion nor is the processing	e is no ere one of an N	possible recipe by which to very to distinguish the power remo IPS or overload type of shutdo	erify the integoval from who	grity of the PSE's at might otherwise be a
"It ma	ay initial	ly set to the	e value of pd_4pair_ca	ndidate"		Suggeste	dRemedy				
Proposed	l Respo	nse	Response Status W	,		Eithe more not a	r remove "ve detailed crite dvisable.	ndor di eria is r	iscretion" as a criteria or expa required explaining why a PSE	nd the Edito might decid	r's Note to indicate that a de that 4-pair powering is
PRO	POSED	ACCEPT	IN PRINCIPLE.			Proposed	Response		Response Status W		
Repla "It is i	ace: initially :	set to the v	value of pd_4pair_candi	date"		PROI	POSED ACC		N PRINCIPLE.	aditar'a pate	
To:						Auu		lellon	leeus explanation. to endo or		
"It ma	ay initial	ly be set to	o the value of pd_4pair_	candidate"		C/ 33	SC 33.2	.4.4	P 35	L 27	# 226
						Schindler	, Fred		Seen Simply		
						Comment The v interc may a depen	<i>Type</i> TF rariable and to perability. T accept powe ndent.	the lang hey ap r on bo	Comment Status X guage for deny_dual_sig_4pai pear to be implementation sp th pair sets. Whether the PSI	r_power are ecific. Some E powers a F	4PID not required for e dual signature PDs PD is implementation
						Suggeste	dRemedy				
						Use t signa	he results of ture PD to m	the co ake ch	nnection check, which indicate noices already permitted by the	es whether a e specification	a PD is a single or dual on.
						Strike	e variable de	ny_dua	l_sig_4pair_power and assoc	iated text.	
						Proposed	Response		Response Status W		
						Base how i	d on the num t is currently	nber of implen	comments, there needs to be nented.	a big discus	ssion about 4PID and
						l wou	ld like to hea	ar the g	roup's opinion on this comme	nt.	

C/ 33 SC 33.2.4.4 Page 10 of 50 6/11/2015 5:24:56 PM

C/ 33	SC 33.2.4.4	P 35	L 27	# 283	C/ 33	SC 33.2.4.4	P 35	L 5	# 281
Picard, Je	ean	Texas Instru	iments		Picard, J	ean	Texas Inst	ruments	
Commen	t Type T	Comment Status X		4P.	D Commen	t Type TR	Comment Status X		4PID
The v interc	variable and the lapperability. They	anguage for deny_dual_sig_ appear to be implementation	4pair_power are n specific.	not required for	there while	has been no det both pair sets an	ermination yet that the resi e unpowered, can confirm	ult of detection ar that a dual signat	nd connection check, cure PD is able to receive
Suggeste	dRemedy				Suggest	d Domody			
Use t signa Elimi	he results of the ture PD to make nate the variable	connection check, indicating choices permitted by the sp deny_dual_sig_4pair_power	y whether a PD is ecification. r and associated	a single or dual ext.	chan meth	ge the last senter od to be defined"	nce as following, "detection	n, connection che	ck and an additional 4PID
Proposed	l Response	Response Status W			Proposed	d Response	Response Status W		
Base how i	d on the number t is currently impl	of comments, there needs to emented.	o be a big discus	sion about 4PID and	Base how	ed on the number it is currently impl	of comments, there needs lemented.	to be a big discu	ssion about 4PID and
l wou	ld like to hear the	group's opinion on this con	nment.		l wou	Id like to hear the	e group's opinion on this co	omment.	
C/ 33	SC 33.2.4.4	P 35	L 5	# 225	C/ 33	SC 33.2.4.4	P 35	L 6	# 321
Schindler	, Fred	Seen Simply	/		Darshan,	Yair	Microsemi		
Varia PD_4 main deny	bles, bles, pair_candidate ain_4pair_power _dual_sig_4pair_	comment Status X		4P,	D Comment In the PD This a car	e following variabl apair_candidate variable is providu ndidate to receive	ed for Type 3 and Type 4 F	PSEs to determin	4PID
are p open	rovide without a r for comment unti	elated state diagram. Text i I the related state diagram i	related to these v s provided.	ariables need to be left	the p The s	hrase "a connect variable PD_4pair 4P. power	ion" is not clear. r_candidateIt is to determir	ne if a class 0-4 P	D can recived and work
Suggeste	dRemedy				with	4P power.			
Keep	this comment un	resolved until the state diag	ram is provided a	nd one subsequent	The	text "a connection	n" can be "a PD" or "a devio	ce" or "a PD class	s 0-4".
Proposed	l Response	Response Status W			Suggeste	edRemedy			
This	comment to be le	ft open.			Repl	ace "a connectior	n" with "a PD class 0-4"		
		•			Proposed PRO	d Response POSED ACCEPT	Response Status W		
					Need	to see associate	ed state diagram and where	e/how this variable	e is used.
					See	comment # 225.			
					No c	hanges to the tex	t are required at this time.		

C/ 33 SC 33.2.4.4

C/ 33 SC 33.2.4.4 Schindler, Fred	P 35 Seen Simply	L 7	# 224		C/ 33 Darshan, `	SC : Yair	33.2.4.4	P 36 Microsemi	L 11	# 363
Comment Type TR C This text used may confuse SuggestedRemedy	Comment Status D e readers as to what this v	variable accom	plishes.	4PID	Comment The te " is It show	<i>Type</i> ext " fo not acc uld be (a	TR or PSEs that urate. adding the	Comment Status D at monitor the per pair set vol word "only"):	tage output a	PSE State Diagram nd use that information
Proposed Response R	esponse Status W				" for It is w Suggester	· PSEs t ith sync	hat monito to lines 13	or only the per pair set voltage 3-14 that means the same and	e output and u d use the wor	ise that information" d "only" as well.
C/ 33 SC 33.2.4.4 Darshan, Yair	P 35 Microsemi	L 9	# 323		Repal inform with:	ce The thation	text " for ." hat monito	PSEs that monitor the per part	air set voltage	output and use that
Comment Type TR C There is no reason why PD It can be ready at any time	Comment Status X 0_4pair_candidate results prior power_up.	will be ready o	only before classifi	4PID cation.	Proposed	Respon	nat monito ise REJECT	Response Status W		
SuggestedRemedy Change lines 9-10 from: Values: False: Do not proceed to 4	pair classification.				This is This c	s existing	g text and filed as a	should not be changed unles maintenance request.	s we change	it for 4P or HP operation.
True: Proceed to 4 pair cla To:	ssification.				C/ 33 Dwelley, D	SC : David	33.2.4.4	P 37 Linear Technol	L 4 ogy	# 268
Values: False: This PD is not a car True: This PD is a candida	didate for powering up wi te for for powering up with	th power on be	oth pair sets. h pair sets.		Comment Add "d	<i>Type</i> on at lea	T ast one pai	Comment Status D rset" to the end of the "TRUE	value definit	PSE State Diagram
Proposed Response R PROPOSED ACCEPT IN F	esponse Status W PRINCIPLE.				Suggested Add "d	d <i>Remed</i> on at lea	<i>ly</i> ast one pai	rset" to the end of the "TRUE	" value definit	tion
Need to see associated sta	ate diagram and where/ho	w this variable	is used.		Proposed PROF	Respon POSED	nse ACCEPT I	Response Status W N PRINCIPLE.		
See comment # 225. No changes to the text are	required at this time.				Also r	eplace a	all VPort_P	PSE references to Vport_PSE	-2P.	

C/ 33 SC 33.2.4.4

CI 33 SC 33.2.4.4	P 37	L 9	# 324	CI 33	SC 33.2.4	.4	P 39	L 36	# 287
Darshan, Yair	Microsemi			Picard, Je	an		Texas Instrur	ments	
Comment Type TR	Comment Status D		PSE State Diagram	Comment	Type ER	Commen	t Status X		PSE Types
At the system level w pair-sets.	e need to know if we have ove	er load conditio	n over a pair set, for both	The p PSE.	aragraph belo	w is misleading,	, referring to "ha	rdware limitation	", in the case of type 4
As a result, the variat	ble ovid_detected text need to	be updated.		Suggestee	dRemedy				
SuggestedRemedy Change from: A variable indicating i 33.2.7.6) for"	f the PSE output current has b	been in an over	load condition (see	Repla "For e mode	ce the second example, this w or a Type 3 P	sentence with: ould apply to a SE that has a h	PSE that is ove ardware limitation	rsubscribed and on."	in power management
To				Proposed	Response	Response	Status W		
A variable indicating i condition (see 33.2.7)	f the PSE output current over 6) for"	a pair-set has l	been in an overload	This g this.	joes to the hea	art of what a Typ	be 4 PSE is. I w	ould like to hear	the group's opinion on
Brononad Boonanaa	Deenenee Statue M			See C	comment # 99.				
PROPOSED ACCEP	T.			C/ 33	SC 33.2.4	.4	P 39	L 5	# 99
C/ 33 SC 33.2.4.4	P 39	L 3	# 227	Yseboodt,	Lennart		Philips		
Schindler, Fred	Seen Simply			Comment	Туре Т	Commen	t Status X		PSE Types
Comment Type ER	Comment Status D		PSE State Diagram	A Typ must i	e 4 PSE is dis implement 4P	tinct from a Typ	e 3 PSE in way	s other than pow	er (Vpse min, polarity,
Table 33-3 column ps reader.	e_dll_capable may be replace	ed by text for ea	asier processing by the	We de Curre	not want to p ntly Table 33-3	revent Type 4 F 3 requires a Typ	PSEs from provi e 4 PSE to have	ding also power e class_num_eve	below class 7. ents = 5, possibly
SuggestedRemedy				Currente					
On page 38, line 8 re	place text,			Suggester	arkemedy	onto 1, 2 and 4 a	alaa far Turaa 4		
"See 33.6 for a descr	iption of Data Link Layer funct ariable with PSF Type and cla	ionality and Ta	ble 33-3 for the allowed	Add C					
"See 33.6 for a descr	iption of Data Link Layer funct	ionality. Varial	ble pse_dll_capable shall	Proposed	Response	Response	Status W		
be TRUE for Type 2 I	PSEs with class_num_events	of 1."		This g this.	joes to the hea	art of what a Typ	De 4 PSE IS. Tw	ould like to hear	the group's opinion on
Note all occurrences not addressed by this	of Table 33-3 were considered comment.	d when creating	this solution. PIC text is	See C	comment # 28 ⁻	7.			
Proposed Response	Response Status W								

PROPOSED ACCEPT.

Cl 33 SC 33.2.4.4

C/ 33 SC 33.2.4.6 P 40 L 52 # [186] C/ 33 SC 33.2.4.6 P 40 L 52 # [186]	C/ 33 SC 33.2.4.6 P 41 L 48 # 229
Commont Type TB Commont Status D	Commont Turo TP Commont Status P BCE State Diagram
Comment Type TR Comment Status D PSE State Diagram do_connection_check needs a home in the state diagram. According to 33.2.5.0a it has to occur prior to classification. It also shouldn't happen significantly before detection. The Task Force has been clear that it doesn't want connection check pinned down, so the only place left is to put it inside the "DO_DETECT" state in parallel with do_detection (but not included in do_detection). SuggestedRemedy add "do_connection_check" to state START_DETECT in Figure 33-9a. Proposed Response Response Status W PROPOSED ACCEPT IN PRINCIPLE. We need to add it to the state diagram for Types 3 and 4, but adding it to Start_Detection would require you to finish detection and the connection check within tdet. We need to create a Type 3 and 4 state diagram that considers these issues.	Comment Type TR Comment Status D PSE State Diagram Function do_detection appears to be incomplete. Some PSE implementations will power one pairset when a valid detection signature is present. The text should be written with respect to PSE behavior. SuggestedRemedy Replace "valid: The PSE has detected a PD requesting power." With "valid_A: The PSE has detected a valid PD detection signature on ALT A. valid_B: The PSE has detected a valid PD detection signature on power on ALT B. valid_AB: The PSE has detected a valid PD detection signature on power on ALT A and ALT B." Strike out text, "both_alts_valid:A Type 3 or Type 4 PSE has detected a PD requesting power on both pair sets." Text,
Accepting this comment results in no changes to the text. See comment # 225.	"This variable indicates the presence or absence of a PD." Should be replaced by "This variable indicates the presence or absence of a valid PD detection signature." Flag this comment with FRS-2.
	Proposed Response Response Status W
	PROPOSED ACCEPT IN PRINCIPLE.
	Replace "valid: The PSE has detected a PD requesting power." With "valid_A: The PSE has detected a valid PD detection signature on ALT A. valid_B: The PSE has detected a valid PD detection signature on ALT B. valid_AB: The PSE has detected a valid PD detection signature on ALT A and ALT B."
	Strike out text, "both_alts_valid:A Type 3 or Type 4 PSE has detected a PD requesting power on both pair sets."
	Text, "This variable indicates the presence or absence of a PD." Should be replaced by "This variable indicates the presence or absence of a valid PD detection signature."
	Flag this comment with FRS-2.

Cl 33 SC 33.2.4.6

01 33	SC 33.2.4.6	P 41	L 50	# 280	C/ 33	SC 33.	2.4.6	P 41	L 51	# 3
Picard, Jea	an	Texas Instrum	nents		Beia, Chri	stian		STMicroelect	ronics	
Comment	Type TR (Comment Status D		PSE State Diagram	Comment	Туре Т	R (Comment Status D		PSE State Diagrar
We als both w	so need to know if th hen 4P systems are	e result of do_detection is used.	s valid for pair-s	set A or pair set B or	To co variab a sing	ver all the p le should a le alternativ	oossible ca Iso have a /e.	ases, and allow maximun a definition for a PSE whi	n design flexibili ch detected a P	ty, the signature D requesting power on
Suggested	Remedy				Suggester	Remedy				
Chang To	e from: valid: The Pa	SE has detected a PD re	questing power.		To ad	d two more	definition	of the signature variable		
valid: f valid_4	For type 1 and Type 4P_A: For type 3 and	2 PSEs: The PSE has de 1 Type 4 PSEs: The PSE	etected a PD ree has detected a	questing power. PD requesting power	Valid_ Valid_	AltA: A Typ AltB: A Typ	be 3 or Ty be 3 or Ty	pe 4 PSEs has detected pe 4 PSEs has detected	a PD requesting a PD requesting	g power on Alternative A. g power on Alternative B.
on Alte	ernative A pairs.	Type / DSE: The DSE	has detected a	PD requesting power	Proposed	Response	R	esponse Status W		
on Alte	ernative B pairs.			T D requesting power	PROF	OSED AC	CEPT IN F	PRINCIPLE.		
Proposed	Response R	esponse Status W			OBE I	by commer	it # 229.			
PROP	OSED ACCEPT IN I	PRINCIPLE.			CI 33	SC 33.	2.4.6	P 42	L 14	# 170
					Zimmerma	an, George		CME Consult	ing	
OBE D	y comment # 229.				Comment	Туре Е	R (Comment Status D		PSE State Diagrar
CI 33	SC 33.2.4.6	P 41	L 50	# 325	definit	ion of set_	parameter	_type has gotten convolu	ited	-
Darshan, Y	'air	Microsemi			Suggestee	dRemedy				
Comment	Type TR (Comment Status D		PSE State Diagram	Recas	t definition	as a table	with permissible values	for each PSE ty	/pe, or reference such a
In the	system level we nee	d to know if the result of	do_detection is	valid for pair-set A or	table i	f it exists.				
pair se	et or both when 4P sy	stems are used. Last tim	ie we covered t	he case where both pair	Proposed	Response	R	esponse Status W		
We ne	ed also to know if it	is valid on ALT A only or	valid on ALT B	only.	PROF	OSED RE	JECT.			
Suggestea	IRemedy				The c	omment an	d suggest	ed remedy is not clear e	nough to know v	what should be changed.
Chang	e from:								-	-
valid:	The PSE has detected	ed a PD requesting powe	r.							
valid: I	For Type 1 and Type	2 PSEs: The PSE has d	etected a PD re	equesting power.						
valid_4	4P_A: For Type 3 an	d Type 4 PSEs: The PSE	has detected a	a PD requesting power						
	de A 1 P. B: For Type 3 an	d Type / PSEs: The PSE	bas detected :	PD requesting power						
un nu valid v			. 1183 06166160 8							

Proposed Response Response Status W PROPOSED ACCEPT IN PRINCIPLE.

OBE by comment # 229.

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

CI 33 SC 33.2.4.6 Page 15 of 50 6/11/2015 5:24:57 PM

PSE State Diagram

PSE State Diagram

CI 33	SC 33.2.4.6	P 4	2	L 41	# 187
Zimmerman,	George	CME	Cons	ulting	
Comment Ty	vpe TR	Comment Status	D		PSE State Diagram
Text has there are words, a Note ren	become convection the PSE Type and the fact that nedy uses _sul	oluted. There is the e requirements that t t PSEs don't "choose o_ to indicate propos	PSE he PS e", ha sed su	Type, then there is SE is applying, the ving the option 'm ubscripts.	s the PD Type, then n there are missing ay' is enough.
In the pr greater t	ocess the text han the PD typ	has gotten wrong as e allows	well,	e.g., a PSE shoul	dn't be supplying Ptype
SuggestedR	emedy				
"When a type (Type (Type_s shall me Type_su	PSES powers pe_sub_PSE), ub_PD), excep et the requiren b_PSE.	a PD of lower Type the PSE shall meet t for ICon-2P, ILIM-2 nents of any PSE typ	(call the P P, TL e Ty	this Type_sub_PE I electrical require .IM-2P, and PType pe_sub_PD <= PS	0) than its own native ments of the PD Type e, for which the PSE SE Type <=
Proposed Re	esponse	Response Status	w		
PROPO	SED ACCEPT.				
C/ 33	SC 33.2.4.6	P 4	2	L 42	# 147
Walker, Dyla	in	Cisco)		
Comment Ty "The PS TLIM-2P and grea	<i>tpe</i> ER E may choose b, and PType (s ater than equal	Comment Status to apply the electrics see Table 33-11) of a to the PD Type."	D al req any Ty	uirements for ICor pe lower than or o	PSE State Diagram n-2P, ILIM-2P, equal to the PSE Type
Missing	"or", assuming	this paragraph isn't	modif	ied per the Editor	s Note anyway.
SuggestedR	emedy				
"The PS TLIM-2P and grea	E may choose , and PType (s ater than or equ	to apply the electrica ee Table 33-11) of a al to the PD Type."	al req any Ty	uirements for ICor pe lower than or o	n-2P, ILIM-2P, equal to the PSE Type
Proposed Re	esponse	Response Status	w		
PROPO	SED ACCEPT	IN PRINCIPLE.			
Possible	OBE by comn	nent # 187			

33	SC	33.2.4.6	P 4 2	2	L 42	# 3	1	
seboodt	, Lennar	t	Philip	S		•		
omment	Туре	Е	Comment Status	Х			Edit	orial
" ele	ectrical r	equiremen	ts of PSE Type that	corresponds	s to the con	nected PD 1	Гуре."	

SuggestedRemedy

"... electrical requirements of a PSE Type that corresponds to the connected PD Type."

Proposed Response Response Status W PROPOSED ACCEPT IN PRINCIPLE.

Possible OBE by comment # 187

If 187 not accepted, replace with:

"... electrical requirements of the PSE Type that corresponds to the connected PD Type."

CI 33	SC 33.2.4.7	P 45	L 1	# 233
Schindler	, Fred	Seen Simply		

Comment Type TR Comment Status D

PSE State Diagram

The State Diagram provided in Figure 33-9a was created to be easier to follow than the existing approach. The existing approach takes two pages to cover Type 1 and Type 2 PSEs. The new approach takes 5 pages and does not yet cover classification and potentially other necessary requirements.

Other approaches should be considered and the suggested approach should be discussed to converge on a solution for Type 3 and Type 4 PSEs.

SuggestedRemedy

For all past PoE efforts, Task Force meeting time was devoted to discussing and refining state diagrams. I recommend that this approach is also taken during .3bt meetings and that we provide time for others to present alternative approaches to solving this problem.

Proposed Response Response Status W PROPOSED ACCEPT IN PRINCIPLE.

No changes to the text result from accepting this comment.

C/ 33 SC 33.2.4.7

CI 33 S	SC 33.2.4.7	P 45	<i>L</i> 1	# 312	CI 33	SC	33.2.4.7	P 46	L 19	# 220
Picard, Jean		Texas Instrur	nents		Dove, Da	niel		Dove Networ	king Solut	
Comment Type	e TR	Comment Status D		PSE State Diagram	Comment	t Type	TR	Comment Status X		Pres: State Diagram
the state d required be	diagram does efore I will rev	not cover Type 3 and Type <i>v</i> iew it.	4 PSEs and the	at a replacement is	The c addeo	lo_conn d	ection_che	eck function needs to be add	led. 4PID funct	ion may also need to be
SuggestedRen	nedy				Suggeste	dRemed	ły			
New Type	3-4 state dia	gram to be provided.			See o	dove_01	_0615 for	specific recommendations.		
Proposed Res	ponse	Response Status W			Proposed	l Respor	ise	Response Status W		
PROPOSE	ED ACCEPT	IN PRINCIPLE.			Waiti	ng for pr	resentation	1		
The PSE S	State diagram	will be left open for comme	ent in the next c	omment cycle.	CI 33	SC	33.2.4.7	P 46	L 30	# 213
See comm	nent # 225				Dove, Da	niel		Dove Networ	king Solut	
	10111 # 220.				Comment	t Type	TR	Comment Status X		PSE State Diagram
Accepting	this commen	t results in no changes to th	e text.		Missi	ng T14A				
CI 33 S	SC 33.2.4.7	P 45	L 8	# 35	Suggeste	dRemed	ły			
Yseboodt, Len	inart	Philips			Add 1	Г14А				
Comment Type	e E	Comment Status D		PSE State Diagram	Proposed	l Respor	ise	Response Status W		
The overvi states.	iew diagram s	should not mix container box	es for sub state	e machines with actual	Wher	re?				
SuggestedRen	nedv				CI 33	SC	33.2.4.7	P 47	L 1	# 232
Only show	/ container bo	exes (dashed) in the overvie	w and the detai	s go in the sub state	Schindler	, Fred		Seen Simply		
machines.		, , , , , , , , , , , , , , , , , , ,		0	Comment	t Type	TR	Comment Status D		PSE State Diagram
Proposed Res	ponse	Response Status W			The s	tate dia	gram provi	ided in Figure 33-9a does no	ot include Type	3 and Type 4 PSE
PROPOSE	ED ACCEPT.				requii only s	rements show Ty	. It is not a be 1 and T	suppose to include Type 1 a	nd Type 2 requ	irrements. It appears to
CI 33 S	SC 33.2.4.7	P 45	L 8	# 34	Suggeste	dRemed	ły	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
Yseboodt, Len	inart	Philips			Remo	ove the s	state diagra	am on pages 47-49 and rep	lace with,	
Comment Type	e E	Comment Status D		PSE State Diagram	"Edito	or's Note	The state	e diagram for Type 3 and Ty	pe 4 PSEs nee	eds further study and
Most of the	e state name	s have an abbreviated name	e. This increase	s complexity.	Proposed	l Resnor		Response Status W	13 to address th	is need.
	Especially the	e abbreviation for POWER_	DENIED, PD is	highly confusing.	PRO	POSED	ACCEPT			
SuggestedRen	nedy	and data and alchemicate			11(0)	0020				
PICK 1 nam	ne for a state	and do not abbreviate.			Add E	Editor's I	Note in sug	ggested remedy below Type	3/4 PSE State	Diagram.
Proposed Res	ponse	Response Status W								
PROPOSE	ED 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

C/ 33 SC 33.2.4.7 Page 17 of 50 6/11/2015 5:24:57 PM

Cl 33 C Dove, Daniel Comment Typ	SC 33.2.4.7	P 50 Dove Networ	L 51	# 217	(122	00 00 01	-			11
Dove, Daniel Comment Typ		Dove Networ			01 33	SC 33.2.)	P 51	<i>L</i> 1	# 258
Comment Typ		Deventerior	king Solut		Dwelley, D	David		Linear Techr	ology	
The last of	e TR	Comment Status D		PSE Detection	Comment	Туре Е	Com	ment Status D		PSE Detection
reduces c	tatement in th larity	s paragraph claims to pres	erve clarity, but I	think it actually	The fi "The f	rst two senter	nces in this s quired to cor	section are of questi ntinuously probe to c	onable value and letect a PD signa	are not normative: ature. The period of
SuggestedRei	medy				time v	when a PSE is	s not attemp	ting to detect a PD s	signature is imple	ementation dependent."
Either clar it more cle	rify exactly wh ear	/ the link is not being called	out, or correct th	nis statement to make	Suggestee Remo	dRemedy we the secon	d sentence.	Consider removing	the first sentence	e. Remove "Also" from
Proposed Res	sponse	Response Status W			the th	ird sentence.				
PROPOS	ED REJECT.				Proposed	Response	Respo	onse Status W		
This is suf			4 af 0b4		PROF	POSED REJE	CT.			
i nis is exi	isting text that	we are not changing as par	t of .3Dt.		This is	s text that we	are not char	nging as part of the	.3bt project.	
This can b	pe filed as a m	aintenance request.			Thio r	aguaat aan b	filed on a m	nointanonan karupa		ammand the contance
CI 33	SC 33.2.5	P 50	L 43	# 262	stay a	equest can be	e filed as a n ty.	naintenance reques	i, but i would rec	ommend the sentence
Dwelley, David	d	Linear Techn	ology		,	00.00.0		0.54	1.40	# 000
Comment Typ	e ER	Comment Status D		PSE Detection	C/ 33	30 33.2. :	0.0a	P 31 GraCasi S A	L 1 Z	# 383
The "pair s require the	set" edits have e original beha ents adequatel	e changed the meaning of the view of the sector of the sec	he original senten nce mandates the	nce - we still want to e T3/4 detection	Comment Sub-c	<i>Type</i> ER	Com	ment Status D	 conform to SA S	Editorial Style Manual
SuggestedRe	medv	,			Suggester	dPomody				
Restore o	riginal senten	e: "In any operational state	the PSE shall r	ot apply operating	Suggesie	urrenieuy vrm to Style M	anual 11 1			
power to t	the PI until the	PSE has successfully dete	cted a PD reque	sting power."	Dranaaad			0444		
Remove t	he word "Spec	ifically" from line 47. Might	also want to requ	uire success (not just	Proposed PROF	POSED ACCE	Respo PT IN PRIN	onse Status WIICIPLE.		
Broposod Por		Deenenee Status M			All su	bclauses sho	uld be renun	nbered properly.		
		Response Status W								
FROFUSI	LD REJECT.				This s	subclause sho	uld be 33.2.	5.1 and all subsequ	ent subclauses s	hould be increased.
The follow not that it	ving sentence detects a valio	only says the PSE shall app I signature.	bly the detection	probe to each pair set,						
If we read	ore the origina	sentence a PSE could app	bly detection prot	es to both pair sets,						

C/ 33 SC 33.2.5.0a

Cl 33 Zimmerm	SC 33.2.5.0	a P 51 CME Consult	L 20	# 189	CI 33	SC 33	2.5.3	P 53	L 24	# 259
Comment Conn the P Suggeste chang signa	<i>Type</i> TR ection check det D is a much mor <i>dRemedy</i> ge "determine the ture or dual signa	Comment Status D ermines the signature type or e general thing. e architecture of the PD" with ature is attached to the two pa	n the link segme "determine whe air-sets in the lin	Connection Check ent. The architecture of ether the a single nk section."	Comment This s Suggested Replac charad	<i>Type</i> E entence is <i>Remedy</i> ce with: "A cteristics a	awful PSE sl s a valio	Comment Status D nall detect a pair set within a d PD detection signature:"	link section wit	PSE Detection
Proposed PROF chang or dua	Response POSED ACCEPT ge "determine the al signature is att	Response Status W IN PRINCIPLE. e architecture of the PD" with ached to the two pair-sets in	"determine whe the link section	ether a single signature	PROP The su C/ 33	POSED RE uggested r SC 33	JECT. emedy .2.5.6	does not include an offset vo	Itage or current	t. # [<u>290</u>]
Cl 33 Yseboodt Comment "The as sp Suggeste Chan range	SC 33.2.5.1 , Lennart <i>Type</i> E PSE shall not be ecified in Table 3 Voc is not a <i>dRemedy</i> ge to: "The PSE s of OV to V_oc a	P 52 Philips Comment Status D damaged by up to 5 mA bac 33-4." range, only lists a maximum hall not be damaged by up to s specified in Table 33-4."	L 21 kdriven current	# 39 PSE Detection over the range of V oc	Picard, Jei Comment The st simply Also, \ with a In the can be power Suggested	an <i>Type</i> 1 tatement b v apply 4-p what if the dual signation case of dual contained ed and pri <i>dRemedy</i> the first	R elow is air pow- e is no ature PE all signa through or to po	Comment Status X vague, unclear and could be er and then check after if the such system information and)? ature PD, the other system in physical layer or LLDP, for evering the second pair set.	ents misleading, it a load can accep I the PSE has t formation need example after a	4PID appears that a PSE can bt it, which is incorrect. to decide what to do ded to determine 4PID a first pair set has been
Proposed PROF This i This r	POSED REJECT Societ REJECT Request can be fil	Response Status W	.3bt project. t.		Chang Type 3 candic <i>Proposed</i> Based how it	ge the first 3 and Type date to rec <i>Response</i> I on the nu is currentl d like to he	sentend 4 PSE eive pov mber of y implei	e as: s shall determine whether an wer on both pair sets prior to <i>Response Status</i> W comments, there needs to b mented. group's opinion on this comm	attached PD v applying power be a big discuss ent.	with classes 0 to 4 is a r to the second pair set. sion about 4PID and

C/ 33 SC 33.2.5.6 Page 19 of 50 6/11/2015 5:24:57 PM

CI 33	SC 33.2.5.6	P 54	L 44	# 367	CI 33	SC	33.2.5.6	P 54	L 47	# 245
Darshan, Y	air	Microsemi			Schindler,	Fred		Seen Simply		
Comment 7	Type TR	Comment Status D		4PID	Comment	Туре	TR	Comment Status X		4PID
Adress "Type 3 candida Does it apply 2 reads t	ing the text: 3 and Type 4 PSI ate to receive por means that appl P check LLDP a hat I cant do it	Es shall determine whether an wer on both pair sets prior to a ying 4P power (all pairs at the nd then connect the 2nd pair?	attached PD opplying 4 pair same time) is this is the relia	with classes 0 to 4 is a power" the only choice, can I able way to do it but it	The te: that va on botl The co PD is a	xt "It sh ariable p h pair s onnectio able to	hall be stor od_4pair_c sets. This on check (accept po	red in the variable pd_4pair_c: candidate indicates that the at is incorrect. (33.2.5.0) and detection alone wer on both Modes. These m	andidate, defi tached class are not able t aethods reduc	ned in 33.2.4.4." Implies 0 to 4 PD accepts power to determine if a legacy e the likelihood of
Suggestedl	Remedy				interop	oerabilit	y issues for s) The 3	or PDs capable of accepting p	ower on both	Modes (single and dual
Add no Note: A pair set Tble TE	te after line 47: Applying 4P powe t is powered first 3D tem TBD."	er doesn't imply if both pair-set and later the 2nd pair is power	are powered a ed within the	at the same time or one time limit specified in	accept indicat require both pa	t power es PD ed to su air sets	on both N ability to a upport pow	Addes. Classification results in accept power on both pair sets ver on both pair sets. Type 1 a	n the PD Type . Type 3 and and Type 2 PI	and LLDP data that Type 4 PDs are Ds may accept power on
Proposed F	Response	Response Status W			Suggested	IRemed	ly			
PROPO	OSED ACCEPT I	N PRINCIPLE.			Replac	ce the e	entire text	of 33.2.5.6 with,		
Add Ed "Editor' single a	litor's Note after I 's Note to be rem and dual-signatur	ine 47: oved before publication: Need re PDs."	I to define sta	rtup timing for both	"Type : candid determ Type a	3 and 1 late to r nination and may	Type 4 PS receive po is referre y be used	Es shall determine whether ar wer on both pair sets prior to a d to as 4PID. Classification ir to obtain LLDP variable PD 4	n attached PD applying 4 pai n 33.2.6 may b P-ID in Table	with classes 0 to 4 is a r power. This be used to obtain the PD 79-6b. PSEs may
CI 33 Thompson,	SC 33.2.5.6 Geoff	P 54 GraCaSI S.A.	L 45	# 375	power LLDP v	both P variable	D modes o e 4P-ID ino	of Type 3 and Type 4 PDs, an dicating that powering of both	d Type 1 and PD Modes is	Type 2 PDs that have supported."
Comment 7 I have i	<i>Type</i> E no idea what "init	Comment Status D ially" means in this sentence.		4PID	Note th covere	hat deta ed in a s	ails related separate d	d to the connection check and comment. Flagged with comm	variable pd_4 nent-FRS-1.	pair_candidate are
Suggestedl	Remedy				Proposed I	Respor	nse	Response Status W		
Remov	e the word "initia	lly".			Based	on the	number o	f comments, there needs to b	e a big discus	sion about 4PID and
Proposed F	Response	Response Status W			now it	is curre	ently imple	ementea.		
PROPO	OSED REJECT.				I would	d like to	hear the	group's opinion on this comme	ent.	
Better I be chai	angauge is alwa	ys welcome, but "initially" is a l ngs than those listed as detern	key part of the nining the initi	e sentence as 4PID can al value.						

C/ 33 SC 33.2.5.6

C/ 33	SC 33.2.5	.6	P 57	L 45	# 236	C/ 33	SC	33.2.6	P 55		L 13	# 247
Schindler, Fre	ea 💶	0	Seen Simply			Schindler, I	-rea		Seen Si	mpiy		
The text r	pe TR needs to be	Comment e updated to su	pport Type 3 and ⁻	Type 4 classific	DS behavior ation.	Comment I Senten	ype ice,	TR	Comment Status			PSE Classification
SuggestedRe Add to the	emedy e end of th	e paragraph on	line 45, the sente	nce,		asserts	a volta r of po	age onto wer class	the PI and the PD responsion of the PD responsion o	PSE sup onds with	h a current rep	presenting a limited
"Both pair and Type	r sets of th e 4 PSEs."	e PI attached to	o a Dual Signature	PDs shall be c	lassified by Type 3	Need to	o be co	orrected f	or Type 3 and Type 4 P	SEs.		
Dranged Day		D	0			Suggested	Remec	dy				
PROPOS	SED ACCE	PT.	Status W			"Physic asserts numbe	al Lay a voltar of por	er classifi age onto wer class	ication occurs before a a pair set and the PD re ifications."	PSE sup esponds	oplies power to with a current	a PD when the PSE representing a limited
CI 33	SC 33.2.5	.6	P 57	L 49	# 237	Proposed F	Respor	nse	Response Status V	v		
Schindler, Fre	ed		Seen Simply			PROP	DSED	ACCEPT		•		
Comment Typ	be TR	Commen	nt Status D		4PID							
Text need signature	ds to show PDs and I	that a TBD stat now to process	te diagram may ide them.	entify single sig	nature or dual	C/ 33 Schindler, I	SC Fred	33.2.6	P 55 Seen Si	mply	L 19	# 248
Note: This	is commen	t is flagged with	n comment-FRS1 f	or easy search	ing.	Comment 7	Гуре	ER	Comment Status)		PSE Classification
SuggestedRe	emedy					The ne	w text,	n nowor (output by the DSE for a	porticula	n PD close is a	defined by Equation
After the	paragraph	ending on line	49, add the new pa	aragraph,		(33-3).	Inninu	n power c		particula	ai FD Class 15 (
"The conr determine comply w predeterm 33.2.5.6."	nection che e the value /ith the TBI mined to be "	eck, described i of variable pd_ O state diagram connected to a	in 33.2.5.0, and the _4pair_candidate, o n, which determine: a PD capable of ac	e results of oth defined in 33.2. s the power rec ccepting power	er system information, 4.4. PSEs shall quirements for pair sets on both pair sets, see	Alterna RCh m pair sys may be	tively, ax whe stems e impro	PSE implen poweri and to and oved by te	lementations may use ng using two-pairs, or R rive at over-margined va erms already used in the	/PSE = \ Chan = alues as spec. a	VPort_PSE-2F RCh/2 when p shown in Tabl	P min and RChan = powering using four- e 33-7." grammar.
Proposed Res	sponse	Response	e Status W			Suggested	Remed	lv				
I don't une	derstand th	ne suggested re	emedy.			Replac	e with,	, ,				
This solution			and the second	T I	and the second states to the	"The m	inimun	n power o	output by the PSE for a	particula	ar PD class is (defined by Equation
go in the	classificati	on section whic	ch is not correct.	s wrong. The s	uggested remedy is to	(33-3). Alterna RCh m	tively, ax whe	PSE impl en poweri	lementations may use V ng using two pairs sets,	/PSE = \ or Rcha	VPort_PSE-2F an = RCh/2 wh	^o min and RChan = en powering using four
In addition	n, I am uns	sure about the p	ohrase "which dete	ermines the pov	ver requirements for	pair se	ts to ar	rrive at ov	ver-margined values as	shown ir	n Table 33-7."	
sets"	predeterm					Proposed F	Respor	ise	Response Status V	v		
						PROP	DSED	ACCEPT	IN PRINCIPLE.			
						"The m (33-3).	inimur	n power o	output by the PSE for a	particula	ar PD class is o	defined by Equation
						Alterna RCh wi pair sei	tively, hen po ts to ar	PSE implowering us rrive at ov	lementations may use sing a single pair set, or rer-margined values as	/PSE = \ Rchan = shown ir	Vport_PSE-2F = RCh/2 when n Table 33-7."	e min and Rchan = powering using two
TYPE: TR/tec COMMENT S	chnical req STATUS: D	uired ER/editor /dispatched A/	rial required GR/gr accepted R/reject	eneral required ed RESPON	T/technical E/editorial G/ ISE STATUS: O/open W/w	general ritten C/closed	Z/with	ndrawn	(CI 33 SC 33.2.	.6	Page 21 of 50 6/11/2015 5:24:57

SORT ORDER: Clause, Subclause, page, line

C/ 33 SC 33.2.6	P 55	L 26	# 249	C/ 33	SC 33.2.6	P 56	L 4	# 101		
Schindler, Fred	Seen Simply			Yseboodt	, Lennart	Philips				
Comment Type ER The new text, "If the PD connected to the PSE may set its mi increased by at least (1 corresponding PD class	Comment Status D the PSE performs Auto clar nimum power output based 'BD 5%), with a maximum v s and a minimum of 4.0 Wat	ss (see 33.3.5.3 on the power dra alue defined in T tts."	<i>Autoclass</i> and Annex 33-TBD), awn during Auto class, able 33-17 of the	The construct "xx W or Ptype as defined in Table 33-11 whichever is less" is used. Unless a PSE is providing more class events than its Type would allow, Ptype is always larger or equal than any class power valid for its Type. The part "or Ptype as defined in Table 33-11 whichever is less" has no effect. SuggestedRemedy						
has a typo and a requir	ement that could be remove	ed.		Remo	ove "or Ptype as d	lefined in Table 33-11 which	ever is less" fro	m each row that has it.		
SuggestedRemedy Replace Table 33-17 w "and a minimum of 4.0 in the Table but the low	ith Table 33-7. Discuss in the Watts." is necessary. A PD ver bound is determined by N	he room whether o using Autoclass MPS.	r removing the text, s may draw up to a valid	<i>Proposed</i> PROF I do n Ptype	Response POSED REJECT. ot believe this is of of 60W but will s	Response Status W correct. A Type 3 PSE that ee "90W" as the request fro	tries to power a m the PD. Thu	class 8 PD, will have a s the minimum		
Proposed Response PROPOSED ACCEPT Replace with "Table 33	Response Status W IN PRINCIPLE. -17" with "Table 33-7"			suppo langu Ptype	orted power from age in the draft: I	the PSE would have to be 6 Ptype (60W) or 90W whiche le 33-11 per type (class fing	0W rather than ver is less. ers have no infl	90W. In terms of the uence on Ptype).		
The minimum of 4W wa can't draw less current, (class 1). At these pow	<i>Cl</i> 33 Walker, D	SC 33.2.6 ylan	P 57 Cisco	L 1	# [141					
C/ 33 SC 33.2.6 Yseboodt. Lennart	P 56 Philips	L 4	# 100	Comment Table	33–8—PSE and	PD classification permutation	ons	Table 33-8		
Comment Type T Table 33-7, 3rd column Note 2 says "This is the The output level at the Pedantic reading would SuggestedRemedy Replace by "Minimum s and the note by "This is Proposed Response PROPOSED ACCEPT.	Comment Status D title is "Minimum power leve e minimum power at the PSI PSE PI can be anything bet d seem to imply that PSE mu supported power level at the s the minimum supported po <i>Response Status</i> W	els at the output E PI." ween MPS and I ust source Pclas output of the PS ower at the PSE	PSE Classification of the PSE (Pclass)". Pclass. s at all times. SE (Pclass)" PI".	PD pe clause (1) Re (2) Mo (3) Ha classi Proposed PROF	ermutations are in e. dRemedy ename "Table 33- ove "PD Permuta ave the text on lin fication permutati Response POSED ACCEPT	the PSE clause, but they w -8—PSE classification perm tions" half of the table to 33. e 41 above it reference the r ons" <i>Response Status</i> W	ould stand on th utations" 3.5, page 83, lir new table numb	neir own in the PD ne 43 er with title "PD		

C/ 33 SC 33.2.6

C/ 33 SC	33.2.6	P 57	L 27	# 102	C/ 33	SC 33	2.6.1	P 58	L 11	# 235			
Yseboodt, Lenn	art	Philips			Schindler,	Fred		Seen Simply	- • •	200			
<i>Comment Type</i> In Table 33- Class 3 or b	T -8. Type 3, - below PDs a	Comment Status D 4 PDs, intersection of 'Multipl are not required to support DL	e-event' and 'Ne	Table 33-8 o DLL'.	Comment The tex "The P	<i>⊺ype</i> T tt, SE shall p	R provide	Comment Status D to the PI VClass with a curre	nt limitation of	PSE Classification			
SuggestedRem	edy				in Tabl	e 33-10."	Need to	o be updated to support Typ	e 3 and Type 4	4 classification.			
Add a Table "2 A Type 3	e footnote '2 or 4 PD tha	2' there that says: at is limited to Class 0-3 powe	er levels may or	nit DLL support".	Applica permai	tion of the	e classif nage a c	fication voltage to a pair set device. For example, Bob S	with an invalid mith terminatio	detection signature may on resistors (0.125W			
Proposed Resp PROPOSEI Add a Table "Any PD tha	onse D ACCEPT e footnote '2 at is limited	Response Status W IN PRINCIPLE. 2' there that says: to Class 0-3 power levels ma	v omit DLL sup	port".	typically). During detection, which is not likely to cause device damage, the PSE may provide 5mA short-circuit current and up to 30V open circuit. This permits up to 37.5 mV to device during detection. Classification permits (20.5V x 0.1A) up to 2.1W to be dissipated in a device. Legacy PSEs detect, classify and power on using the same Alternative (pair set).								
CI 33 SC Yseboodt, Lenn	C 33.2.6 art	P 57 Philips	L9	# 104	New PSE may detect, classify, and power on, on all pair sets of the PI. Therefore, we need to prevent damage to network equipment.								
Comment Type	т	Comment Status D		Table 33-8	Suggested	Remedy							
There is a ir Two rows fo	nadvertent o or Type 1 Pl	content change in Table 33-8 Ds have been swapped.	compared to th	e old table format.	Modify "The P	the sente SE shall p	nce as provide	follows, to a pair set VClass with a cr	urrent limitatio	n of IClass_LIM, as			
SuggestedRem	edy				defined	l in Table	33-10 c	only for a pair set with a valid	detection sigr	nature."			
Change Typ Change Typ Change Typ Change Typ	be 1, PD, M be 1, PD, M be 1, PD, N be 1, PD, N be 1, PD, N	ultiple-event, No-DLL from No- ultiple-event, DLL from NO to one, No-DLL from YES to NO one, DLL from YES to NO	O to YES) YES)		Proposed I PROP	Response DSED AC	CEPT.	Response Status W					
See yseboo	odt_Table_3	3_8_v100.pdf											
Proposed Resp PROPOSEI	<i>onse</i> D ACCEPT	Response Status W IN PRINCIPLE.											
Make edits	as suggeste	ed, but change yes and no to	valid and invali	d respectively.									

C/ 33 SC 33.2.6.1

C/ 33 Darshan, Y	SC 33.2.6.2 Yair	P 59 Microsemi	L 53	# 330	C/ 33 Yseboodt	SC 33.2.6.3 , Lennart	P 61 Philips	L 34	# 47
Comment It is no	<i>Type</i> TR ot clear how PSE	Comment Status X issues the classification ever	nts in case of S	Pres: Dual Class ingle or Dual signature.	Comment Section	<i>Type</i> E on title is "(TBD)	Comment Status D Autoclass"		Editorial
SS PE same the 2n DS PE can be Suggested To add SS PE same the 2n DS PE can be Proposed Waitin	D: Classification et time or some of t id pair-set as long D: Classification et applied at the s dRemedy d the following te d the following te D: Classification et time or some of t d pair-set as long D: Classification et applied at the s Response ng for Yair's Prese	events may apply on one of the the events on first pair set and g as the PD receives the corre- events need to be applied to e- ame time to both pair sets or ext after the end of clause 33.2 ext at the classification section events may apply on one of the the events on first pair set and g as the PD receives the corre- events need to be applied to e- ame time to both pair sets or <i>Response Status</i> W entation.	e pair-sets or o d then the rema ect total numbe each pair set. A in non-overlapp 2.6.2: at clause TBD e pair-sets or o d then the rema ect total numbe each pair set. A in non-overlapp	n both pair sets at the ining class events on r of class events. oplication of the events oing way. after line TBD: n both pair sets at the ining class events on r of class events. oplication of the events oing way.	Suggeste Remo Proposea PRO Remo	dRemedy ove TBD and add Response POSED ACCEPT ove Space but do	d space: "Auto class" <i>Response Status</i> W Γ IN PRINCIPLE. o not add space.		
C/ 33 Darshan.	SC 33.2.6.2 Yair	P 60 Microsemi	L 22	# 352					
Comment Table	<i>Type</i> T 33-9, missing the	Comment Status D e case Iclass>51.0mA.		PSE Classification					
Suggested Add ne Measu Classi	dRemedy ew row to table 3 ure Iclass columr fication column:	3-9 and insert the following. n: >51.0mA Invalid class.							
Proposed PROP	<i>Response</i> POSED REJECT.	Response Status W							
This li	mit is covered in	the Iclass lim value in Table	33-10 and is re	fered to in the text.					

C/ 33 SC 33.2.6.3

C/ 33 SC 33.2.7	P 62	L 1	# 106	CI 33	SC 33.2.7	P 62	L 22	# 269		
Yseboodt, Lennart	Philips			Dwelley, Dav	id	Linear Techn	nology			
Comment Type T	Comment Status D		PSE Power	Comment Ty	be TR	Comment Status X		PSE Power		
We currently do not have sets power up. A PD cannot easily meas If the pair sets are not bro the 2P power limit (even if it waited for Tdela	a specification for the ma sure if it is getting 2P or 4F ought up together, a PD c ay_2P).	aximum delay be P power. ould draw double	tween bringing the pair e the inrush, or exceed	Table 33 an AT de New title: pairset. SuggestedRe	-11: Several vice that clai s with "per pa emedy	symbols have -2p added to th ms to meet Vport_pse will no air set" can stay, as all valid A	nem. This breaks t find a spec with F/AT devices op	continuity with AF/AT - that name anymore. erated over a single		
SuggestedRemedy				Remove	-2p suffixes t	rom Items 1 and 4-10.				
Introduce a new paramet 50ms.	er Tpud (T Pair set Power	r up delay) with a	a maximum value of	Proposed Response Response Status W This should be discussed by the group.						
A PSE that decides to 4F within Tpud.	o power a SS PD will need	d to transition bo	th pair sets into inrush	C/ 33	SC 33.2.7	P 62	L 42	# 273		
Proposed Response	Response Status W			Dwelley, Dav	id	Linear Techn	nology			
PROPOSED ACCEPT IN	N PRINCIPLE.			Comment Ty	be TR	Comment Status D		PSE Power		
Add new row "1b" to Tab	le 33-11.			Table 33 PDs mus	-11: this seer it use 45W tr	ms to imply that 45W over a s ansformers on each pairset	ingle pairset is C	0K. This means all 45W		
Parameter: Power up de Symbol: Tpud	elay between pair sets			SuggestedRe Add to A	emedy dditional Info	rmation: "Class 4 and lower o	nly"			
Unit: s Min: Blank Max: TBD				Proposed Re PROPOS	sponse SED ACCEP ⁻	Response Status W T IN PRINCIPLE.				
Additional Information: S	See 33.2.7.5			This app	ies to middle	e row of item # 4 in Table 33-1	1:			
Add:				Add to A	dditional Info	rmation: "Class 4 and lower o	nly"			
"Editor's Note to be remo be added to this section.'	oved before publication: T	iming requireme	nts for 4-pair power to							

to beginning of section 33.2.7.5

CI 33 SC 33.2.7

C/ 33	SC 33.2.7	P 62	L 51	# 130	CI 33	SC	33.2.7	P 63	L 11	# 337	
Johnson,	Peter	Sifos Techn	ologies		Darshan,	Yair		Microsemi			
Comment	Туре Т	Comment Status X		PSE Power	Comment	Туре	т	Comment Status D		PSE Power	
Item 5 currer damag <450r Suggestee	5, Inrush-2P, a htly phrased. ge existing PE nA if/when tho d <i>Remedy</i>	llows 4 pair PSE's to limit curr This behavior, that is allowing i 's that were designed to expen- ise PD's receive 4-Pair power.	ent to 450mA PE up to 900mA dur ct PSE would lim	R PAIR SET as ing inrush, would it inrush current to	Table At wo Icut_r (Icont (0.66	33-11 orst case min-2P= t-2P_un 8/0.6)*0	item 7, Icu e P2P_lun =Icont-2P_ ıb_max/Ico).5*Pclass/	it-2P for type 3,4: To replace T b conditions: unb= ont-2P_max)*0.5*Pclass/Vport_ Vport_PSE-2P=0.556*Pclass/	BD with exp _PSE-2P= Vport_PSE-:	ression. 2P for Type 3 PSE.	
The re topic.	emedy to this	may get involved. For now, we	e could create an	Editor's Note on the	In similar way for Type 4: Icont-2P_unb=(0.931/0.865)*0.5*Pclass/Vport_PSE-2P=1.076*0.5*Pclass/Vport_PSE-2P. Icont-2P_unb=0.538*Pclass/Vport_PSE-2P						
async	hronously by	Finrush so inrush is fully exper	ienced on just a	single pair set.)	Suggeste	dReme	dy				
Proposed This s	Response	Response Status W ussed by the group.			1. Sp detail	lit Icut-2 s). place T	2P for two	lines for Type 3 and Type 4 (se	e attached	darshan_06_0615.pdf for	
Shoul	nould we just use one	lcut-2 lcut-2	P_min= P_min=	=0.556*Pc =0.538*Pc	ass/Vport_PSE-2P for Type 3 ass/Vport_PSE-2P for Type 4	PSE PSE					
pair se	et for inrush fo				Proposed	Respo	nse	Response Status W			
C/ 33	SC 33.2.7	P 63	L 10	# 294	PROF	POSED	ACCEPT				
Comment	Type ER	Comment Status D	inents	PSE Power	<i>Cl</i> 33 Picard, Je	SC ean	33.2.7	P 63 Texas Instrume	L 11 ents	# 295	
Table The m	ax limit shoul	d be ILIM-2P			Comment	Type	TR	Comment Status D		PSE Power	
Suggestee Repla	dRemedy ce ILIM with II	-IM-2P			Table ICUT Shoul	33-11: -2P mir ld refer	needs to to ICON-2	be specified. P-unb			
Proposed PROF	Response POSED ACCE	Response Status W PT IN PRINCIPLE.			Suggeste Repla	dReme ace TBI	<i>dy</i> D with sam	e values used for ICON-2P-un	b		
This a	pplies to item	# 7 in Table 33-11			Proposed PROF	Respo POSED	nse ACCEPT	Response Status W IN PRINCIPLE.			
					OBE	by com	ment # 33	7.			

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				<u></u>			.					
C/ 33 SC 33.2.7	P 63	L 17	# 296	C/ 33	SC 33.2	2.7	P 63	L 19	# 297			
Picard, Jean	Texas Instrur	nents		Picard, Je	ean		Texas Instru	ments				
Comment Type TR	Comment Status D		Pres: ILIM	Commen	tType T	R	Comment Status D		Pres: ILIM			
Table 33-11: Regarding type 3, the imbalance.	ILIM-2P min definition is NOT	right, it does no	ot take into account the	Table ILIM- Suggeste	e 33-11: 2P min neec d <i>Remedv</i>	ds to b	e defined for type 4					
SuggestedRemedy				Defin	e Type 4 II I	M-2P	min_starting from (1+K) x IF	Peak-2P, which m	eans around 1.2A			
Redefine Type 3 ILIM-	2P min, using the unbalance	factor.		Proposoc	l Posponso							
Proposed Response	Response Status W			PRO	POSED ACC	CEPT	IN PRINCIPLE.					
				OBE	by comment	t # 33	7.					
OBE by comment # 33	39.			CI 33	SC 33 2	27	Pes	/ 24	# 338			
CI 33 SC 33.2.7	P 63	L 17	# 339	Darshan.	Yair	L. /	Microsemi	- 24	# <u>550</u>			
Darshan, Yair	Microsemi			Common			Commont Status D		DSE Dowor			
Comment Type T Table 33-11 item 9, IL calculations shown in Short summary: ILIM-2P_MIN>=Ipeak- Ipeak_max for Type 3	Comment Type T Comment Status D Pres: ILIM Table 33-11 item 9, ILIM-2P for type 3,4: To replace TBD with numbers per the the calculations shown in Darshan_06_0615.pdf. Short summary: ILIM-2P_MIN>=lpeak-2P_max per figure 33-14.						Table 33-11 item 10, TLIM-2P for type 4: We can replace the TBD with a shorter number than 10sec in order to keep the same energy content used in Type 3 in order to keep the same stress over the current limiter. Type 3 worst case energy on current limiter over a pair set: 30W*10msec=0.3Joule Type 4 worst case energy on current limiter over a pair set: 50W*TLIM-2P=0.3Joule. TLIM-2P=0.3/50=6msec max. Design margin=2msec.					
Ppeak_PD-2P per equ	ation 33-12 and 33-12a and	Table 33-18 iten	1 ·	Sugaeste	dRemedv							
				TLIM	-2P minimur	n=0.0	04 for Type 4					
SuggestedRemedy				Proposed	l Response		Response Status W					
See darshan_06_0615	5.pdf for updated Table 33-11	item 9.		PRO	POSED ACC	CEPT	IN PRINCIPLE.					
Proposed Response PROPOSED ACCEPT	Response Status W			There we do	e must have o not need to	been badd	margin already in the Type 3 more margin.	3 number (directl	y based off Type 2), so			
Waiting for Presentation	on.			For T TLIM	able 33-11, -2P minimur	item 1 n=0.0	0: 06 for Type 4					

CI 33 SC 33.2.7

C/ 33 SC 33.2.7	P 64	L 12	# 347	C/ 33	SC 33.2.7	P 64	L 38	# 342
Darsnan, Yair	Wicrosemi			Darsnan, Yair		Microsemi		
Table 33-11 item 17, The text: "The pair se	additional information column, et with highest current" is not cle	line 12 ear since we are	PSE MPS	Table 33- Cout is co	e TR 1 item 22, 0 rrect over a	Comment Status D Cout. pair-set for type 3 and 4 as	s well.	PSE Detection
with the highest curre	ent.	nighest current	and not the pail-set	SuggestedRei	nedy			
SuggestedRemedy Change to "The pair	with highest current"			Change pa "Output ca Change P	arameter na ipacitance c SE Type to	ume to: during detection state over a 1,2,3,4.	a pair set"	
Proposed Response PROPOSED REJEC	Response Status W			Proposed Res PROPOSI	ponse ED ACCEP ⁻	Response Status W		
All of the specification pair set with the high	ns are per pair set. Here, we a est current, even if the PSE is c	re requiring that only looking at o	the PSE look at the ne of the pairs.	C/ 33 S Yseboodt, Len	SC 33.2.7.2 nart	P 65 Philips	L 30	# 108
C/ 33 SC 33.2.7	P 64	L 25	# 299	Comment Typ	e T	Comment Status X		PSE Power
Picard, Jean	Texas Instrum	nents		"The minir	num PD inp	out capacitance allows the I	PD to operate for ar	ny input voltage
Comment Type TR PSE systems need n	Comment Status D nore flexibility for disconnect tim	ning	PSE MPS	30 us. Tra	nsients last	ing more than 250 us shall	meet the V Port_P	SE-2P specification."
SuggestedRemedy				This state	ment is not	true for the higher power cl	asses.	
Table 33-11: Reduce TMPDO min [*]	imum to 320 ms for type 3 or 4			SuggestedRer Option 1 (nedy preferred):	ma (20us) to:		
There is a correspone	ding request for PD.			Type 3: 15	ius	me (3003) to.		
Proposed Response PROPOSED ACCEP	Response Status W PT IN PRINCIPLE.			Type 4: 10 Option 2:)us			
OBE by comment # 1	198			Increase t Type 3: 10 Type 4: 15	he minimum)uF SuF	n capacitance of PDs to:		
C/ 33 SC 33.2.7	P 64	L 25	# 198	(double th	at for DS PI	Ds)		
Bullock, Chris	Cisco System	S		Proposed Res	ponse	Response Status W		
Comment Type T Item 18 in Table 33-1	Comment Status D 11: Tmpdo		PSE MPS	This shoul remedy.	d be discus	sed by the group as there a	are two options liste	ed in the suggested
Multiport PSE implem	nentations that utilize separate MPS for both pair-sets.	controllers for p	air-sets could require					
SuggestedRemedy Change Tmpdo (min)) from 0.354s to 0.320s							
Proposed Response PROPOSED ACCEP	Response Status W							
TYPE: TR/technical requi	ired ER/editorial required GR/	general required	l T/technical E/editorial G/g NSE STATUS: O/open W/wi	general itten C/closed Z/	withdrawn	CI SC	33 33.2.7.2	Page 28 of 50 6/11/2015 5:24:5

SORT ORDER: Clause, Subclause, page, line

57 PM

Cl 33 Darshan, N	SC: Yair	33.2.7.4a	P 66 Microsemi	L 50	# 345		<i>Cl</i> 33 Darshan, Ya	SC 3 : air	3.2.7.5	P 67 Micros	7 L semi	1922	# 362
Comment Update Remo	<i>Type</i> the co ve edito	T Constant from 0	Comment Status D 0.040 to 0.042 per latest re age 67 line 6. (Work is dor	eview. ne.)	PSE Unbala	ance	Comment Ty The text "Howeve	ype :: er, for p	TR practical i	Comment Status	D recommende	d that the POW	PSE Power
Comment Comment Class Class Comment Class	dRemed ge 66 lin e the co ge 67 lin Respon POSED SC : Cen Type is a rec sh in sec immendat y power-	y e 50 in equationstant from 0 e 50 in equationstant from 0 e 6: Remove lise Ri ACCEPT. 33.2.7.5 T Commendation ction 33.2.7.5 ion against us un can end P	P 67 Sifos Technolo Comment Status X o that POWER_UP mode p of the existing standard. O Sing LEGACY POWER_U OWER UP mode prior to OWER UP mode prior to	<i>L</i> 19 gies, In Commensurately, P in section 32.2. the end of PD In	# [1 PSE Po nplete duration of there is a 4.4. This is becau	ower	The text "Howeve a pair se correctly The prot 1. It is re lines 11- 2. It is no conclusi may not be delet 3. The s when it i 4. This t 5. This t importar SuggestedR	er, for p er, for p et persis y ascert blems v edunda -15. ot accu ion of a : know e ed. state ma is not re ext mal eext pre- nt for ef Remedy	ractical i st for the ain the c with this t nt. A bett rate. The PD's inr etc. but th achine va ecommer kes assu vents goo fective lo	implementations, it is complete duration of conclusion of a PD's i text are: ter version of it can b e text "the PSE may r ush behavior" is inco here is a correct way ariable legacy_power nded. (It is not recom imption that we can't od working solutions ow dissipation POWE	recommended f TInrush-2P, a nrush behavio e found in lega not be able to o rrect. If you do to do it so I be up allows it an imended if you know the inrus that monitor va R-UP control f	d that the POW as the PSE ma r." acy_powerup v correctly ascerr o it in a wrong v elieve that the v d supply accur u look only on th sh profile which oltage and curr for Type 3 and	/ER_UP mode on y not be able to ariable page 36 tain the yay than PSE whole text should ate instructions he voltage) is incorrect. ent which is 4.
The re figure damaç curren PD. The re 4 PSE PSE's Howev a pair correc	essult of a 33-13, a ging an its durin ecomme 's in the For re ver, for p set pers	an early exit o and inrush cui existing Type g PD Inrush i endations used a draft. The s oference, the e practical imple sist for the con-	f POWER_UP mode is that rrent could exceed expected 1 or Type 2 PD. Type 3 a n this scenario, increasing d in the existing standard I uggested remedy makes i existing text is shown below ementations, it is recommend mplete duration of TInrush clusion of a PD's inrush be	at current is not lii ed values for a PI and Type 4 PSE's the probability of have been applied t a requirement fo w: ended that the PC I-2P, as the PSE i havior.	mited to the levels D, potentially could deliver high damage to a lega d to Type 3 and Typ or Type 3 and Typ DWER_UP mode a may not be able to	s in her acy ype e 4 on o	Remove POWER PSE ma Proposed Re PROPO This is o	e the tex R_UP m ay not b espons SED R only a re	xt "Howe" node on a e able to e EJECT. ecommer	ver, for practical impl a pair set persist for t o correctly ascertain th <i>Response Status</i> ndation and I would r	ementations, i he complete d he conclusion W not recommend	it is recommend uration of Tinru of a PD's inrus d removing it.	ded that the Ish-2P, as the h behavior."
Suggested Chang Howev 1 and be abl PSE's	dRemed ge the te ver, for p Type 2 le to cor	by ext to: practical imple PSE's persist rectly ascerta	ementations, it is recomme for the complete duration in the conclusion of a PD's	ended that POWE of TInrush-2P, as s inrush behavior.	ER_UP mode in T s the PSE may no Type 3 and Type table 33-11 is m	ype ot e 4							
Proposed This s statem	Respon hould be nent cor	e discussed b npletely.	esponse Status W y the group as there was a	a comment lookin	ig to remove this		orol				CL 22		Dogo 20 of 50
COMMEN SORT OR	T STAT DER: C	ai required E US: D/dispate lause, Subcla	R/editorial required GR/gi shed A/accepted R/reject use, page, line	eneral required 1 ted RESPONSI	E STATUS: O/ope	en W/writte	eral en C/closed	Z/withd	Irawn		SC 33.2.7.5		Page 29 of 50 6/11/2015 5:24:57 PM

CI 33	SC :	33.2.7.5	P 67	L 36	# 346	CI 33	SC 33.2.7.6	P 68	L	# 366
Darshan,	Yair		Microsen	ni		Darshan, Ya	air	Microsemi		
Comment	t Type	TR	Comment Status D		PSE Power	Comment T	ype TR	Comment Status D		PSE Power
It is u start f a)Rec b)Rea c) Ha Suggeste Add t The n PSE shall Proposed PROI Allow and b	Isefull to for the fo ducing dy ach faste indle diffe <i>dRemed</i> he follow naximum inrush te not exce <i>I Respon</i> POSED I ing highe build cons	allow high- llowing rea /namic strup r startup w erent load y ing text af n inrush cu mplate in I dd ILIM-2F se REJECT. er current h sensus for	er Inrush current than 4 asons: ess on the MOSFET du <i>i</i> th lower probability for behaviour during startu ter line 36. Figure 33–13 only TBD P maximum as specifier <i>Response Status</i> W pased on time is a bran this idea.	ISOMA after TBD tim uring POWER UP an startup oscilations p that is time depend SE per pair set may of msec after POWER d by Table 33-11 iter Id new topic. Please	e from POWER UP d dent. exceed the per pair set UP has started and n 9. create a presentation	Per the above t conditio Current to decid We nee timing t required conditio SuggestedF PSE ma or the n request When F power f Proposed R PROPO Icut and Add tex "A PSE set or th request to end o	current require he advertised of ins. ly we have spe le when to remu- do make it clu- hresholds and id d by other parts ins that Pclass <i>Remedy</i> ay remove powe heasured powe ed by the PD a <i>PSE</i> is measuri- from the port, lo <i>response</i> <i>DSED</i> ACCEPT d Ilim should not t: may remove po- he measured po- ed by the PD a of 33.2.7.6	ements PSE is allowed to rem class or remove power as a re- cified the ICUT, TCUT, ILIM, ove power. ear that PSE may remove pow also based on the measured is of the standard regarding PS is violated. er from a pair set if the measured r delivered from both pair sets s advertised by its class. ng its output power and use it cut and ILIM threshold may be <i>Response Status</i> W TIN PRINCIPLE. It be ignored.	ove power if P sult of overload TLIM requirem wer based on the power consum SE and PD that ured power del s exceeds the in to limit the por i ignored.	D consumes power d or short circuit eents in order to help us he above current and ed from the port as t operating in a ivered from that pair set maximum power wer to the PD or remove delivered from that pair the maximum power

C/ 33 SC 33.2.7.6

C/ 33	SC 33	.2.7.7	P 68	L 43	# 302	C/ 33	SC	33.2.7.7	P 6	8 L 43	3	# 110
Picard, Jea	n		Texas Instrur	nents		Yseboodt, I	ennar	t	Philip	S		
Comment 7	уре .	R Cor	nment Status D		PSE Power	Comment 7	уре	т	Comment Status	D		PSE Power
Each pa of them link the Also, th The PS possible	Il current limiting requered ey will meet their indivered e needs to related to to of currents to apply lo	irement (current a vidual spec, so tha the total PI current CUT, and that wou	and time), and if both at there is no need to t. Jd be the minimum	D0.4 and 802.3-2012 text said that power shall be removed before crossing the upperbound template. D1.0 text says this: "When connected to a single signature PD, a Type 3 or Type 4 PSE may remove power from both pair sets if the current draw exceeds the "PSE lowerbound templateâ€ion either pair set, and shall remove power from								
Suggestedl	Remedv					both p	air sets	s if the cu	rrent draw exceeds th	ne "PSE uppe	r bound temp	olateâ€īon
Remov	e the pai	agraph with:				either p	air set					
A PSE lowerbo before t Proposed F	may rem bund tem the pair s Response	ove power fro plate" in Figur et current exc Resp	m the PI if the PI curr e 33-14. Power shall eeds the "PSE upper ponse Status W	rent meets or exce be removed from bound template" i	eeds the "PSE a pair set of a PSE n Figure 33-14.	When any pai the â€ exceed the â€ Power	conne r set th œPSE s œPSE may b	cted to a chat exceed lowerbou upperbou	dual signature PD, a ds ind templateâ€īand s und templateâ€⊡ d from both pair sets	Type 3 or Type 4 hall remove powe any time power is	PSE may report of the second s	nove power from ir set that om one pair set."
PROPU	JSED AU		INCIPLE.			Suggested	Remea	ly				
See co	e comment # 238 for resolution.					Note: remedy does 3 things: - insert space between "fromany" - add references to Fig 33-14 and Eq 33-7 - change "exceeds" to "equals or exceeds"						
						"When connected to a single signature PD, a Type 3 or Type 4 PSE may remove power from both pair sets if the current draw exceeds the "PSE lowerbound template" □ defined in Equation 33-7 and Figure 33-14, on either pair set, and shall remove power from both pair sets if the current draw equals or exceeds the "PSE upper bound template" on either pair set.						
						When o any pai the "PS exceed Power	connec r set th E lowe s the " may be	eted to a d nat exceed erbound to PSE uppo e removed	lual signature PD, a ⊺ ds emplate" and shall re erbound template" ⊡ d from both pair sets	Type 3 or Type 4 I move power from any time power is	PSE may ren any pair set removed fro	nove power from that equals or m one pair set."
						Proposed F	Respon	ise	Response Status	w		
						PROP	SED /	ACCEPT	IN PRINCIPLE.			
						Possib	e OBE	by comn	nent # 238.			
						"When from bo the cur 33-7 ar before	conne oth pair rent dra id Figu the cur	cted to a s r sets if aw meets ire 33-14, rrent draw	single signature PD, or exceeds the "PSE on either pair set, an equals or exceeds th	a Type 3 or Type E lowerbound tem Id shall remove po he "PSE upper bo	4 PSE may r plate" □define ower from bo ound template	emove power ed in Equation th pair sets " on either pair
TYPE: TR/t COMMENT SORT ORD	echnical STATU ER: Cla	required ER/ S: D/dispatche use, Subclaus	editorial required GR ed A/accepted R/reje e, page, line	/general required acted RESPON	T/technical E/editorial G/ SE STATUS: O/open W/w	general ritten C/closed	Z/with	ndrawn		Cl 33 SC 33.2.7.7		Page 31 of 50 6/11/2015 5:24:57 P

	C
When connected to a dual signature PD, a Type 3 or Type 4 PSE may remove power from any pair set that meets or exceeds	S
the "PSE lowerbound template" and shall remove power from a pair set before the current draw equals or exceeds the "PSE upperbound template" on that pair set. Power may be removed from both pair sets any time power is removed from one pair set."	C

set.

CI 33	SC 33.2.7.7	P 6	B L 43	# 238
Schindler, Fr	ed	Seen	Simply	
Comment Ty	vpe TR	Comment Status	D	PSE Power
The cha	naed text.			

"The "PSE lowerbound template" and "PSE upperbound template" are shown in Figure 33-14.

When connected to a single signature PD, a Type 3 or Type 4 PSE may remove power from both pair sets if the current draw exceeds the "PSE lowerbound template" on either pair set, and shall remove power from both pair sets if the current draw exceeds the "PSE upper bound template" on either pair set. When connected to a dual signature PD, a Type 3 or Type 4 PSE may remove power from the any pair set PI if the PI pair-set current meets or that exceeds the "PSE lowerbound template" and in Figure 33-14. Power shall be removed from the PSE upperbound template". in Figure 33-14. Power may be removed from both pair sets any time power is removed from one pair set.'

Has broke legacy requirements, places unnecessary restrictions on PSEs, adds unnecessary text, and contains typos.

This new text no longer covers legacy PSEs. Permissible operations do not need to be repeated. The existing text addresses both legacy and new Types.

SuggestedRemedy

Restore the original text with the following minor edit,

'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 a pair set of a PSE before the pair set current exceeds the "PSE upperbound template" in Figure 33-14.'

Proposed Response Response Status W PROPOSED ACCEPT IN PRINCIPLE.

Would OBE comment # 110 and all comments OBEd by comment # 110.

Change text to:

'A PSE may remove power from any pair set if the pair set current meets or exceeds the "PSE lowerbound template" in Figure 33-14. Power shall be removed from a pair set of a PSE before the pair set current exceeds the "PSE upperbound template" in Figure 33-14.

See comment # 275 for more information.

C/ 33 SC 33.2.7.7 Page 32 of 50 6/11/2015 5:24:57 PM

-				· · · · · · · · · · · · · · · · · · ·	-						
C/ 33	SC 33.2.7.7	P 68	L 50	# 275	C/ 33	SC	33.2.7.8	P 70		L 33	# 6
Dwelley, Da	ivid	Linear Techno	logy		Beia, Chr	istian		STMicr	oelectronio	CS	
Comment 7	ype TR	Comment Status D		PSE Power	Comment	t Type	TR	Comment Status	D		PSE Power
Move th	ne "Power may l	be removed" sentence to se	ection 33.2.9 sc	it covers all cases	As do refer	one in th to the pa	e rest of th air set in pl	e document, also for tace of the PI.	the Turn o	ff time parag	raph it is needed to
Suggestear Move th	remeay oo "Power may l	he removed "sentence to na	na 71 at the e	nd of line 51	Suggeste	dReme	dy				
Proposed F		Boononoo Statuo W			Repla	ace "PI"	with "pair s	et" in the whole parag	graph, to re	ead:	
PROP					The s	pecifica	tion for TO	ff in Table 33–11 sha	Il apply to	the dischard	e time from VPort_PSF
					to VC	off of a p	air set with	a test resistor of 320	kOhm att	ached to tha	t pair set. In addition, it
Move to	o 33.2.7 which is	s power supply output. 33.2.9	is specifically	about MPS.	is rec drops	ommen	ded that the	e pair set be discharg adv-state value after t	ed when to the pi pow	urned off. TO rered variable	Off starts when VPSE e is cleared(see Figure
CI 33	SC 33.2.7.7	P 69	L 1	# 313	33–9)). TOff e	nds when '	VPSE<=VOffmax. The	e PSE rem	nains in the I	DLE state as long as
Picard, Jea	n	Texas Instrum	ents		the	nae volta		the nair set is VOff. T		tata is tha st	ate when the PSE is not
Comment 7	ype TR	Comment Status X		Pres: Type 4 Power	in det	ection,	classificatio	on, or normal powering	g states.		
A Type	4 version of figu	ure 33-14 will be needed. The	re are fundame	ental differences	Proposed	l Respoi	nse	Response Status	w		
Detwee	n type 3 and ty	pe 4 Power on state behavior			PRO	POSED	ACCEPT.				
Suggestear	<i>Remedy</i>	anacad			CI 33	SC	33 2 7 8	P 70		1 34	# 297
					Thompso	n. Geoff	55.2.7.0	GraCas	SI S.A.	L 34	# 307
Proposed F	tor Voir's Droom	Response Status W			Common	t Tyne	тр	Comment Status			DSE Dower
waiting					Spec	does no	ot call out h	low the test resister is	to be hoo	ked to the P	I
CI 33	SC 33.2.7.7	P 70	L 26	# 276	in the	2 pair-s	set case. Is	it across just one, ifs	o which or	ne? Is it acro	ss either? Is it
Dwelley, Da	ivid	Linear Techno	logy		requi	red to be	e hooked to	both.			
Comment T	ype TR	Comment Status X		PSE Power	Suggeste	dReme	dy			<i>.</i> –	
The PS	E voltage on bo	oth pair sets may drop in this of	case: "If IPort-2	P exceeds the PSE	Spec	ify how t	test resiste	r is to be hooked to th	e PI in the	e case of Typ	be 3 and/or Type 4.
2P min	."		t pair set may t		Proposed	Respor	nse	Response Status	W		
Suggested	Remedy				PRO	POSED	ACCEPTI	N PRINCIPLE.			
Remov	e "on that pair s	et" or add "or both pair sets":			Need	a speci	fic remedy				
"If IPort below \	-2P exceeds the /Port_PSE-2P r	e PSE lowerbound template, t nin."	the PSE output	voltage may drop	Possi	ible OBI	E by comm	ent # 6.			
"If IPort or both	-2P exceeds the pair sets may d	e PSE lowerbound template, t Irop below VPort_PSE-2P mir	the PSE output ι."	voltage on that pair set							
Proposed F	Response	Response Status W									
This sh	ould be discuss	ed by the group.									
It could	penalize DS, D	L PDs.									
TYPE: TR/t	echnical require	ed ER/editorial required GR/g	general require	d T/technical E/editorial G/g	general				CI 33		Page 33 of 50

COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed Z/withdrawn SORT ORDER: Clause, Subclause, page, line

 C/
 33
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 SC
 33.2.7.8
 6/11/2015 5:24:57 PM

C/ 33 SC 33.	2.8	P 71	L 27	# 303	C/ 33	SC	33.3.1	P 74	L 38	# 239		
Picard, Jean		Texas Instru	ments		Schindler	, Fred		Seen Simply				
Comment Type T	R Com	ment Status X		PSE Power	Comment	Туре	TR	Comment Status D		4PII		
The sentence do section.	es not comply	with the power dem	notion concept de	efined in mutual ID	The new sentence, "Type 1 and Type 2 PDs wishing to avoid 4 pair power for longer than a minimal amoun time may signal this by a message via LLDP to the PSE setting the							
Penlace the sen	onco with:				maint	ain_pow	/er_signa	ture variable to false."				
"At the exception power provision t requested by the	of the situatic o a link if the l PD based on	on when it applies po PSE is unable to pro the PD's class"	ower demotion, a ovide the maxim	PSE does not initiate um power level	This t on bo voltag	ext char oth pair s ge. Lega	nges lega ets shoul acy PDs a	cy behavior. PDs not identifie d never be exposed to voltage are required to provide an inva	ed as being cap es that exceed ilid detection sig	able of accepting power Vvalid, the detection gnature on an		
Proposed Response	Resp	onse Status 🛛 🛛 🛛 🛛 🛛 🗤			unpov	wered pa	air set wh	en powered on by a legacy P	SE. An invalid	detection signature		
This is handled in something simila	n Type 1/2 by ⁻ r?	Type 1 PSEs treatin	ng class 4 as cla	ss 0. Should we do	Indicates a PD does not want to be powered (33.2.5.4, 33.3.4). SuggestedRemedy							
Add following te>	dd following text to classification section:						Replace the sentence with, text that indicates how legacy PDs may show that they accep power on both pair sets.					
A Type 3 or Type requests a highe Add text in sugg	4 PSE shall a r class than th ested remedy a	assign a PD the high e PSE can support. as well?	nest class it can This is called p	support when a PD ower demotion.	"Type 1 and Type 2 PD may indicate their ability to accept power on both pair sets by providing a valid detection signature on an unpowered pairset requesting power. These PDs may indicate the ability to accept power on both pair sets using LLDP variable 4P-IC in Table 79-6b."							
CI 33 SC 33.	2.9.1	P 72	L 7	# 376	On pa	age 81, l	ine 51 rei	place legacy sentence,				
Thompson, Geoff		GraCaSI S.A	λ.		"Whe	n a PD b	pecomes	powered via the PI, it shall pr	esent a non-val	lid detection signature		
Comment Type E	Com	ment Status D		Editorial	on the	e set of p	pairs from	which it is not drawing powe	ſ."			
Improve structure SuggestedRemedy Change "33.2.9.1.1 PSE	e/grammar of s	sub-clause titles and	d voltage terms		With, "Whe on the signa accep	n a PD b e set of p ture on a oting pov	becomes bairs from a pair set ver on bo	powered via the PI, it shall pr which it is not drawing powe from which it is not drawing p th pair sets. "	esent a non-val r. A PD may pr ower when the	lid detection signature resent a valid detection PD is cable of		
to:"33.2.9.1.1 PS and "33 2 9 1 2 [E MPS AC co SE DC MPS (mponent requireme	nts" nents"		Proposed	Respon	ise	Response Status Z				
to:"33.2.9.1.2 PS	E MPS DC co	omponent requireme	ents"		PROF	POSED	REJECT.					
and "AC MPS co and "DC MPS cc	and "AC MPS component" to "MPS AC component" and "DC MPS component" to "MPS DC component" throughout the draft						t was WI	THDRAWN by the commente	r.			
Proposed Response	Resp	onse Status 🛛 🛛 🛛 🛛 🛛 🛛 🗤			Renla	aced by (comment	# 254				
PROPOSED RE	JECT.				ropic		Sommon					
These are the ters suggested remen	ms used since ly brings any r	e AF. They should I new clarity to them.	be left the same	as I do not think the								

C/ 33 SC 33.3.1

C/ 33	SC 33.3.1	P 74	L 39	# 254	CI
Schindler	, Fred	Seen Simply			Pica
Comment	t Type TR	Comment Status X		4PID	Cor
The					

The new sentence,

"Type 1 and Type 2 PDs wishing to avoid 4 pair power for longer than a minimal amount of time may signal this by a message via LLDP to the PSE setting the maintain_power_signature variable to false."

This text changes legacy behavior. PDs not identified as being capable of accepting power on both pair sets should never be exposed to voltages that exceed Vvalid, the detection voltage. Legacy PDs are required to provide an invalid detection signature on an unpowered pair set when powered on by a legacy PSE. An invalid detection signature indicates a PD does not want to be powered (33.2.5.4, 33.3.4).

SuggestedRemedy

Replace the sentence with, text that indicates how legacy PDs may show that they accept power on both pair sets.

"Type 1 and Type 2 PD may indicate their ability to accept power on both pair sets by providing a valid detection signature on an unpowered pairset requesting power. These PDs may indicate the ability to accept power on both pair sets using LLDP variable 4P-ID in Table 79-6b."

On page 81, line 51 replace legacy sentence,

"When a PD becomes powered via the PI, it shall present a non-valid detection signature on the set of pairs from which it is not drawing power."

With,

"When a PD becomes powered via the PI, it

may present a non-valid detection signature on the set of pairs from which it is not drawing power. A PD that presents a valid detection signature on the pair set from which it is not drawing power may get powered by Type 3 and Type 4 PSEs."

Proposed Response Response Status W

Based on the number of comments, there needs to be a big discussion about 4PID and how it is currently implemented.

I would like to hear the group's opinion on this comment.

Picard, Jea	30 33.3.	1	P 74	L 39	# 304
Commont 7	n		Texas Instrum	ents	
Comment	ype TR	Comm	nent Status X		4PIL
It may r is perm time), v PDs. If which is In some want th We car	not be appro itted, as it m which may ca there is a lir s much shor e cases, the is power.	priate to simp nay take a ver ause damage mit of time, it l rter than react re may be NC that ALL exist	by provide power ar y long time to go thi (ex: energy dissipa has to be short, mos ion time through LL) minimal acceptable ing PDs can comply	Ind check throug rough that cycle ted) to certain t st likely 0.5 to 1 DP. e on time at 57 v with such requ	h LLDP if 4-pair power e (including boot-up ypes of dual signature second maximum, V when a PD does not nirement.
Suggested	Remedy				
Remov	e the secon	d sentence fro	om the paragraph.		
Proposed F	Response	Respor	nse Status W		
Based how it is	on the numb s currently ir	per of comme mplemented.	nts, there needs to b	be a big discuss	sion about 4PID and
I would	like to hear	the group's o	pinion on this comm	nent.	
CI 33	SC 33.3.2	2	P 76	L 11	# 348
Darshan, Ya	air		Microsemi		
Comment 7	ype TR	Comm	nent Status D		PD Powe
The tex "The m Table 3 issues	t: aximum pov 3–18." was as discusse	wer a PD expe removed and d in 802.3at.	ects to draw from a l should be restored.	PSE is PClass_ Without it we v	PD max as defined in vill have interoperability
Suggested	Remedy				
Suggesteur	the text "Ti	he maximum	nower a PD expects	to draw from a	DSE is DClass DD
Restore max as	defined in T	Table 33–18."			
Restore max as Proposed F PROPC	defined in 1 Response OSED ACCE	Table 33–18." <i>Respor</i> EPT IN PRINC	nse Status W		FOL IS FOIASS_FD
Restore max as Proposed F PROPC Add tex	defined in 7 Response DSED ACCE	Table 33–18." <i>Respor</i> EPT IN PRINC	nse Status W CIPLE.		FGL IS FOIASS_FD
Restore max as Proposed F PROPC Add tex "For All PSE is	defined in 7 Response OSED ACCE dt: PDs other t PClass_PD	Table 33–18." <i>Respor</i> EPT IN PRINC than class 6 a max as define	nse Status W CIPLE. and 8, the maximum ed in Table 33–18."	power a PD ex	pects to draw from a

CI 33 SC 33.3.2 Page 35 of 50 6/11/2015 5:24:57 PM

CI 33	SC	33.3.2	P 76	L 7	# 11	CI 33	SC	33.3.2	P 76	L 7	# 306		
Beia, Chr	istian		STMicroeleo	tronics		Picard, Je	ean		Texas Instru	ments			
Comment	t Type	TR	Comment Status D		PD Types	Comment	Туре	TR	Comment Status D		PD Types		
Type releva	3 and 1 ant to e	Гуре 4 are ach Type.	described in the same sen	tence and it is no	ot clear what clesses are	The paragraph is incorrect and misleading relative to type 4 PD, which apply only to clas and 8.							
Suggeste	dReme	dy				Suggeste	dReme	dy					
Repla Type great Data	ace the 3 and 1 er imple Link La	following s Type 4 PD: ement both yer classif	sentence: s operating with a maximun n multiple-Event Physical La ication (see 33.6)and adver	n power draw con ayer classification tise a class sign	rresponding to Class 4 or 1 (see 33.3.5.2)and ature of 4, 5, 6, 7 or 8.	Repla "Type imple Layer	ace the 3 PDs ment bo classifi	paragraph operating v oth multiple ication (see	with: vith a maximum power dra -Event Physical Layer clas : 33.6) and advertise a clas	w corresponding sification (see 3 s signature of 4	to Class 4 or greater 3.3.5.2) and Data Link ,5 or 6."		
With: Type imple Layer Type 33.3.4	3 PDs ment b classif 4 PDs 5.2)and	operating operating operating oth multiplication (se implement Data Link	with a maximum power drav e-Event Physical Layer cla e 33.6)and advertise a clas both multiple-Event Physi Layer classification (see 3:	v corresponding ssification (see s signature of 4, cal Layer classifi 3.6)and advertise	to Class 4 or greater 33.3.5.2)and Data Link 5, 6. cation (see a class signature of 7,8.	Also, "Type imple Layer <i>Proposed</i> PROF	add this 4 PDs ment bo classifi <i>Respo</i> POSED	s one: operating v oth multiple ication (see <i>nse</i> ACCEPT I	vith a maximum power dra -Event Physical Layer clas 33.6) and advertise a clas <i>Response Status</i> W N PRINCIPLE.	w corresponding sification (see 3 s signature of 7	to Class 7 or greater 3.3.5.2) and Data Link or 8."		
Proposed	Respo	nse	Response Status W										
PRO	POSED	ACCEPT	IN PRINCIPLE.			OBE	by com	ment # 250					
OBE	by com	ment # 25	0.			CI 33	SC	33.3.3.4	P 78	L 46	# 65		
C/ 33	SC	33.3.2	P 76	L7	# 250	Yseboodt	, Lenna	irt	Philips				
Schindler	, Fred		Seen Simply	/		Comment	Туре	Е	Comment Status D		PD State Diagram		
Comment New "Type or gre Data	t <i>Type</i> text, e 3 and eater im Link La	ER Type 4 PD plement b yer classif	Comment Status D os operating with a maximu oth multiple-Event Physical ication (see 33.6) and adve	n power draw co Layer classifica rtise a class sigr	<i>PD Types</i> prresponding to Class 4 tion (see 33.3.5.2) and nature of 4, 5, 6, 7 or 8."	"A tim PSE's inrus <i>Suggeste</i> Chan	ner used s h period dReme ge to "T	d to prevent d; see T de <i>dy</i> ſ Delay" to '	the Type 2 PD from drawi lay in Table 33-18." 'Tdelay-2P"	ng more than in	rush current during the		
Confl	icts with	n Table 33	-13a. A Type 4 PD was cre	ated to support	high power applications.	Proposed PROF	<i>Respo</i> POSED	nse ACCEPT I	Response Status W N PRINCIPLE.				
Suggeste	акете	ay 	20			OPE	hu oom	mont # 112					
"Type or gre Data or 6,	ace text a 3 and eater im Link La while Ty	Type 4 PC plement b yer classif ype 4 PDs	o with, os operating with a maximu oth multiple-Event Physical ication (see 33.6). Type 3 advertise a class signature	n power draw co Layer classifica PDs advertise a of 7 or 8."	prresponding to Class 4 tion (see 33.3.5.2) and class signature of 4, 5,	OBE	by com	ment # 112					
, ioposed	nespu	100	Response Status W										

PROPOSED 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

CI 33 SC 33.3.3.4 Page 36 of 50 6/11/2015 5:24:57 PM

C/ 33	SC 33.3.3.4	P 78	L 46	# 112	CI 33	SC 33.3.5.1	P 84	L 11	# 307
Yseboodt,	Lennart	Philips			Picard, Jea	an	Texas Instr	uments	
Comment	Type T	Comment Status D		PD State Diagram	Comment	Type ER	Comment Status D		PD Classification
"A tim PSE's	er used to preven	t the Type 2 PD from drawin	ig more than inri	ish current during the	The pa and 8.	aragraph is incoi	rect and misleading relative	e to type 4 PD, wr	nch apply only to class 7
inrusi	n period; see 1 de	lay in Table 33-18."			Suggested	Remedy			
This a	also applies to Ty	pe 3 and 4.			Replac	ce: 1 Event classific	ation is a subset of Multiple	Event eleccificat	ion Type 2 Type 3 and
Suggestee	Remedy				Type 4	PDs operating	with a maximum power dra	w corresponding 1	to class 4 or higher
"A tim the PS	er used to preven SE's	t a Type 2, 3 or 4 PD from c	rawing more tha	n inrush current during	respor	nd to 1-Event cla	ssification with a Class 4 si	gnature	
inrusi	n period; see 1 de	lay-2P in Table 33-18."			With: Since	1-Event classific	ation is a subset of Multiple	-Event classificat	ion, Type 2 and Type 3
This	OBEs the editoria	I comment to change T dela	y to T delay-2P		PDs o	perating with a n	naximum power draw corre	sponding	sification with a Class
Proposed	Response	Response Status W			4 signa	ature	s well as Type 4 PDS, lespo	nd to T-Event clas	ssincation with a class
PROF	OSED ACCEPT.				Proposed	Response	Response Status W		
CI 33	SC 33.3.4	P 82	L 1	# 171	PROP	OSED ACCEPT			
Zimmerma	an, George	CME Consult	ing		C/ 33	SC 33.3.5.1	P 84	L 28	# 272
Comment	Type ER	Comment Status D		4PID	Dwelley, D	avid	Linear Tech	inology	
Editor 4PID.	s note has been	resolved - no change to valio	d or non valid sig	natures is required by	Comment	Type TR	Comment Status D		PD Classification
Suggester	Remedy				lf a Ty multi-e	pe 3/4 PD draws event class signa	s 0mA as Class 0, the line v ature may be read incorrect	oltage may never y by the PSE.	return to Vmark and a
Dropood					Suggested	lRemedy			
PROF	OSED REJECT.	Response Status w			Add to Add a	Parameter at lin new row below the same	ne 28: "(Type 1/2)" this row: "Current for Class	0 (Type 3/4)" with	1mA as the minimum,
Based	l on the number o	f comments related to 4PID	and this text, I s	uggest we keep the	anoun	er specs the same	ne.		
editor	s note there for n	ow.			Alterna 1mA n	ately, split the Co nin.	onditions column to show T	ype 1/2 with 0 mir	n and Type 3/4 with
					Proposed	Response	Response Status W		
					PROP	OSED ACCEPT	IN PRINCIPLE.		
					Type 4	1 PDs never sho	w class 0 (only 4, 2, and 3).		
					Add to Add a	Parameter at lin	ne 28: "(Type 1/2)" this row: "Current for Class	0 (Type 3)" with 1	mA as the minimum, all

C/ 33 SC 33.3.5.1

Darshan, Yair	C 33.3.5.2	P 85 Microsemi	L 27	# 329	CI 33 Schindler, Fi	SC 3 : ed	3.3.5.3	P 86 Seen Simply	L 27	# 240
Comment Type	TR	Comment Status X		Pres: Dual Class	Comment Ty	pe	TR	Comment Status D		Autoclass
The followir addresses of 4 PSE.	ng is a simple classification	e proposal that doesn't add r requirements when dual sig	new requiremer nature PD is co	nts for PSE and PD and onnected to Type 3 and	The requ measure line nois	iiremei ment i e.	nts for the s only (3	e power measurement are i .28 - 1.35) 1.93 ms long, wh	ncomplete. The ich is not long e	e period for the enough to cancel out AC-
1. No need load. Resul 2. Efficient 3. Dual sigr over each p using the re are 0 to 5. (4. A Dual S If it does so 5. PSEs that two pair set 6. PSEs that See darsha SuggestedRem 1) Add the f 17:	to distinguis t with simple L1 power ma hature PD (si oair-set. The elevant class (5+5 = 90W, bignature, sin b, it will likely at don't want ts and apply at don't want an_05_0615. Medy following text	h between Dual Signature Si specification. anagement ngle load or dual load, doesr PD specifies the amount of p code (from the exiting list) or 4+4 = 60W, $4+3 = 45W$ and gle load PD is allowed to sho violate the current limit of on to deal with different class co that power to both. to deal with dual load PDs ca pdf for detailed discussion ar	ngle Load and I o't matter) will u bower required o ver each pair se so on). bw different class de of its pair sets odes can take t an opt not to po nd remedy. in page 85 after	Dual Signature Dual se only classes 0 to 5 over each pair set by et. Valid class codes as codes. s and get disconnected. he larger class of the ower them.	SuggestedR Change Note tha line volta Replace "After po througho VPort_P consum VPort_P With, "After po througho average from wh the powe point un	emedy variabl t a slid ges. the ex wer up ut the D rises d durin D falls wer up ut the d using en VPc er cons il VPor	isting services of the service of the services of the service of the services of the service of the services of th	TAUTO_PD2 minimum of ⁻ ow 100 ms wide is an integen ntence, plementing Auto class shall ounded by TAUTO_PD1 and /Port_PD min. The PD shall ne from TAUTO_PD1 to TA Reset_th." nplementing Auto class shall ounded by TAUTO_PD1 and is wide sliding window, ses above VPort_PD min. The uring the time from TAUTO_ Is below VReset_th."	Table 33-17a fro r multiple of cor TAUTO_PD2, not draw more UTO_PD2 plus consume their TAUTO_PD2, he PD shall not PD1 to TAUTO_	om 3.28 ms to 200 ms. mmon 50 and 60 Hz AC maximum power draw measured from when power than the power TBD% at any point until maximum power draw draw more power than _PD2 plus TBD% at any
Dual Signat to 5 power The class of that pair se determine t Dual Signat	ture Single L level over ea code advertis t (The PSE v he total pow ture PDs ma ponse	oad PDs and Dual Signature ich pair set. ed over each pair set is the tr vill deliver to the total class p er that will deliver to the PD). y use different class signatur <i>Response Status</i> W	Dual Load PD: otal power requ ower over each e per pair set.	s shall use only class 0 lested by the PD over l pair set to the PD)	Proposed Re PROPO Partial C The rest the PSE	SED A BE by is requisection	e CCEPT I commer uirements n.	Response Status W IN PRINCIPLE. ht # 113. s on the PSE on how to mea	asure the power	draw and is covered in

Cl 33 SC 33.3.5.3

C/ 33 SC 33.3.6	P 87	<i>L</i> 1	# 194	C/ 33	SC 33.	.3.7	P 87	L 28	# 12
Zimmerman, George	CME Consulting			Beia, Chr	istian		STMicroelect	ronics	
Comment Type TR C	omment Status D			Comment	Туре Т	ſR	Comment Status D		Table 33-18
Do we mean to restrict a Typ similarly, a Type 2 PD from text says. I think we want to it's own type.	be 3 from identifying if it is identifying it is connected to specify that a PD recogni	connected to to a Type 3 P zes and ident	a Type 4 PSE? (or SE?) - that's what this ifies a PSE type up to	Table As de So in for cla	33-18 afined in Ta Table 33-1 ass 4 it is re	ble 33-1 8 the in elevant	I6a the PD Type 4 is only de put voltage definition for cla to Type 2,3; for classes 5,6	efined for classe sses 0-3 is rele it is relevant to	es 7, 8. vant to PD Types 1,3; Type 3 only.
The text as written causes a either Type 1 or Type 2 by a	Type 3 PSE to go unident Type 2 PD.	ified or to be	randomly identified as	Suggeste Remo	dRemedy ove PD Typ	e 4 into	PD type column, rows 1-6	of Table 33-18 I	tem 1 as follows:
SuggestedRemedy Replace paragraph beginnin "A PD shall identify any PSE recognize a Type 1 or Type 1, Type 2 or Type 3 PSE, ar identify a PSE of higher type 2 PSE as a Type 2 "	ng with "A Type 2 PD" as fo E type up to and including i 2 PSE (see figures 33-16) nd a Type 4 PD shall recog e than itself as its Type, e.g	ollows: t's own type (, a Type 3 PC nize PSEs up g., a Type 2 P	e.g., a Type 2 PD shall o shall recognize a Type o to Type 4). A PD may PD may identify a Type	Parar Parar Parar Parar Parar Parar	neter Input neter Input neter Input neter Input neter Input neter Input	voltage voltage voltage voltage voltage voltage	per pair set, Class1 PD T per pair set, Class2 PD T per pair set, Class0,3 PD per pair set, Class4 PD T per pair set, Class5 PD T per pair set, Class6 PD T	ype 1,3 ype 1,3 Type 2,3 ype 1,3 ype 3 ype 3	
Proposed Response Dr	ananaa Statua M			Proposed	Response		Response Status W		
				PROI	POSED AC	CEPT.			
FROFOSED ACCEPT IN FI	RINGIFLE.			C/ 33	SC 33	37	P 87	/ 28	# 309
This sentence should be cha	anged, but the comment is	not correct.		Picard, Je	ean		Texas Instrun	nents	# <u>1</u> 303
Type 4 PDs (class 7/8) shou fingers. Type 3 PDs should For example, a Class 3 Type Type 3 PSE, and even then Change paragraph to:	Id be able to identify all typ be able to identify the type a 3 PD only needs to tell th it only cares about the diff	bes based str es of PSEs up he difference l erence if it wi	ickly on the number of o to their power level. between a Type 1 and II do MPS pulsing.	Comment Table table Suggeste simpl	t <i>Type</i> T 33-18: looks too c <i>dRemedy</i> ify the table	r complica e and re	Comment Status D ted, too many unnecessary group around a more limited	choices. I number of alte	Table 33-18 ernatives.
A Type 2 PD shall identify th	e PSE Type as eiher Type	e 1 or Type 2	(see Figure 33-16).	Proposed PROI	<i>Response</i> POSED RE	JECT.	Response Status W		
A Type 3 PD shall identify th be able to identify the PSE T Type 3 PDs may also differe monitoring the length of the	ne PSE Type as either Typ Type as Type 1, Type 2, or entiate Type 3 PSEs from ⁻ first class event.	e 1 or Type 2 Type 3 if it is Type 1 and Ty	t if it is a class 4 PD and a class 5 or 6 PD. ype 2 PSEs by	Inee	d a specific	sugges	sted remedy.		

CI 33 SC 33.3.7

CI 33	SC 33.3.7	P 87	L 36	# 270	CI 33	SC	33.3.7	P 88	L 21	# 264	
Dwelley, D	David	Linear Techn	ology		Dwelley, I	David		Linear Techno	logy		
Comment	Type TR	Comment Status X		Table 33-18	Comment	Туре	т	Comment Status D		Table 33-18	
Table an AT New t pairse	33-18: Several s device that clain itles with "per pa	symbols have -2p added to th ms to meet Vport_pd will not t ir set" can stay, as all valid A	em. This breaks find a spec with t F/AT devices op	continuity with AF/AT - hat name anymore. erated over a single	"71.3" watt class has too much precision. Cutting max power to 71W is only an 0.5% reduction in PD power. Rounding up runs the risk of non-interoperability with an LPS-limited PSE and a maximum-resistance cable plant. SuggestedRemedy						
Suggestee	dRemedy				Chan	ge to 71	.3W to 71	IW.			
Remo	ve -2p suffixes f	rom Table 33-18, Items 1-3, 5	5, 6, and 9.		Proposed	Respo	nse	Response Status W			
Proposed	Response	Response Status W			PROF	POSED	ACCEPT	IN PRINCIPLE.			
This s	hould be discus	sed by the group.			OBE	oy com	ment # 5.				
C/ 33	SC 33.3.7	P 88	L 20	# 5	C/ 33	SC	33.3.7	P 88	L 48	# 114	
Beia, Chri	stian	SIMicroelect	ronics		Yseboodt,	Lenna	rt	Philips			
Comment	Type TR	Comment Status D		Table 33-18	Comment	Tvpe	т	Comment Status X		Pres: Table 33-18	
The m in a p pair-s This v value	haximum input g erfectly balanced et. ralue is larger tha for Pclass min a	uaranteed available power for d system it would result into a an Icon-2P min defined at PSI nd Vport_PSE_2P min is: Ico	Class 8 PDs ca 0.5*71.3W/41.1 E output in Table n_2P min= 0.5*	nnot be 71.3W, since V=0.867A current per e 33-11. The calculated 00W/52V=0.865A.	The Cport(min) for Type 1 and 2 was 5uF. This number should apply both in 2P mode as well as in 4P mode for Type 1 and 2. By changing Cport to Cport_2P, a Type 2 PD with 5uF would no longer be compliant when powered over 4P.						
0.5*7	uggest modifying IW/41.1V=0.864	A.	asso which result	S Into	Suggeste	dReme	dy				
Suggester	dRemedy				Since	PDs ca ot chang	annot char je Type 1,	nge their capacitance whether 2 I would suggest this:	they are 4P or	2P powered and we	
Item: with the Max:	4, Parameter: In ne following valu 71.0	put guaranteed available aver e:	rage power, Clas	s8	Type 1,2 in 2P mode => $5uF(min)$ at the PI (total) Type 1,2 in 4P mode => $5uF(min)$ at the PI (total) Type 3,4 in 2P mode => $5uF(min)$ at the PI (total)						
Proposed PROF	Response	Response Status W			Туре	3,4 in 4 3,4 in 4	P mode, 3 P mode, I	Dial Sig => 5uF(min) at the Dial Sig => 5uF(min) on each	pair set		
		-			Chan	ge the r	name Cpo	rt_2P back to Cport.			
					Proposed	Respo	nse	Response Status W			
				Waiting for Presentation from Yair.							

C/ 33 SC 33.3.7

-												
CI 33	SC 33.3.7	P88	L 49	# 271	C/ 33	SC 33.3.7	P 88	L 50	# 75			
Dwelley, Da	avid	Linear rechno	biogy		rseboodi	, Lennari	Philips					
Comment T Table 3 to 1800	<i>Type</i> TR 33-18, item 9: C uF per Straw Pc	Comment Status X hange to "per pair set capacit oll 2 in Pittsburgh.	ance" allows 36	Pres: Table 33-18 OuF. We changed this	Comment Table	t Type E e 33-18, Item 9 fe	Comment Status X or Type 3/4 empty.		Pres: Table 33-18			
Suggested Change Proposed F	Remedy e back to "PD c Response	apacitance" Response Status W			Suggeste Inser Proposec Waiti	edRemedy t TBD. d Response ng for Presentat	<i>Response Status</i> W ion from Yair.					
Cl 33	SC 33.3.7	P 88	L 49	# 350	C/ 33 Yseboodt	SC 33.3.7 , Lennart	P 89 Philips	L 15	# 115			
Comment T	Type TR	Comment Status X		Pres: Table 33-18	Comment Von a	<i>t Type</i> T and Voff are TBI	Comment Status D D for Type 3 and 4.		Table 33-18			
Cport-2 In addir Suggested (Update darsha	Table 33-18 item 9 Cport-2P minimum value. Cport-2P need to be defined for Type 3 and 4. In addition, it should be defined for Single signature PD and Dual signature PD. SuggestedRemedy (Update table 33-11 item 9 per the following (See table formate and details in darshan_08_0615.pdf)					SuggestedRemedy There is no reason to pick new numbers for the new Types. Use Von = 42V for Type 1-4. Use Voff = 30V for Type 1-4. Proposed Response Response Status W PROPOSED ACCEPT.						
2. Add For Typ	to the additiona	al information of type 1,2,3 the tures PD.	e following:		<i>CI</i> 33 Darshan,	SC 33.3.7 Yair	P 89 Microsemi	L 16	# 349			
For Typ capacit 3. Char 2. Add See 33	pe 3 single sign tance is 10uF w nge PSE type fi to the additiona 3.3.7.6, 33.3.7.3	ature PD during 4P operation hen Mode A and Mode B pair rom 3,4 to 4. al information of type 4 the foll	, the total minim is are tied togeth owing:	ium PD input ner.	Comment Table It ma	Table 33-18						
For Typ For Typ	pe 4 dual signat pe 4 single sign	tures PD. ature PD during 4P operation	, the total minim	um PD input	Suggeste Chan	edRemedy age PD Type to 1	.2.3 and 4					
capacit	tance is 10uF w	hen Mode A and Mode B pair	s are tied togeth	ner.	Proposed PRO	Response	Response Status W T IN PRINCIPLE.					
						OBE by comment # 115.						
Proposed F	Response	Response Status W										

Waiting for Presentation from Yair.

C/ 33 SC 33.3.7

C/ 33	SC 33.3.7	P 89	L 20	# 358	CI 33	SC :	33.3.7.3	P 90	L 28	# 328
Darshan, `	Yair	Microsemi			Darshan,	Yair		Microsemi		
Cl 33 Darshan, ^V Comment Table It may Suggested Chang Proposed PROF OBE t	SC 33.3.7 Yair <i>Type</i> TR 33-18 item 11 V be 30V for Type <i>IRemedy</i> ge PD Type to 1, <i>Response</i> OSED ACCEPT by comment # 17	P 89 Microsemi Comment Status D off: It is 30V for Type 3 as well. e 4 as well. 2,3 and 4 for Voff. <i>Response Status</i> W IN PRINCIPLE. 15.	L 20	# 358 Table 33-18	Cl 33 Darshan, Comment The c 33.3.7 Inrush pair s before per pa From capac It is a conta POW For T As a gener currer fully c Tinrus 0.35A In sim 180uf As a 1 (withii frame There stable detec Suggester Add tl	SC : Yair Type comment 7.3 Input h current et comple e TInrush air set cu- the current is set cu- the current is o not c in a resis Iso not c in a resis ER UP ti ype2,3 a result th rating a c nt=0.4A- tharged v sh=Cpd_ v)=50.4m hilar way F*20V/(0 result, lin n few ms e with ma e are 2-3 e. 3. Vpo t without dRemed he follow essful PC	33.3.7.3 TR addresse: inrush cur per pair-s liant with V h-2P min p urrent thres ent text, it er PD input clear that it stive load c ime frame and 4 PDs e PD input charging cu 0.35A=50r within 50.4 max*(Vps for Type 2 0.4A-0.308/, for Type 2 0.4A-0.308/ for Type 2 0.4A-0.308/ mush is ob sec) and P aximum val main PD F rt, short load t waiting for ty ing text aff DWER UP ng more that ss PD input	<i>P</i> 90 Microsemi <i>Comment Status</i> D s the following text in lines 2 rrent et is drawn beginning with th /port_PD-2P requirements a ber Table 33-11. After TInrus shold corresponding to its cla is not clear that linrush is the t capacitance is charged, the is possible that during POW component that is limited for it is limited to 350mA for at le t current is split to the PD resurrent of: Icharging=linrush- inA which guarantees that m msec for Type 1 systems ar e_min-Voff)/(lunrush_min-lp is the reason why Tinrush m 2: Tinrush =180uF*(50V-30V A)=39.13msec <50msec whi served almost immediately v D resistive load may follow if lue of 350mA. POWER UP profiles (1. sho ad, ramp, stable). In all of the r the completion of Tinrush t ter line 31: is guaranteed by PSE supp an Type 1 maximum DC curr t capacitor. See details in Ar	<i>L</i> 28 8-40 but focus the application of s defined in Ta h-2P min, the ass level. The response of is e capacitor cur ('ER UP, the in all PD types the east 80msec f sistive load an 2P_min -Type aximum PD in to Type 1 max ort_cont)=180 ax for the PD ()/(0.4A-15.4W ch is OK. when PSE app t at any time d rt load, ramp, em completion imer.	 # <u>328</u> PD Inrush ed on lines 28-31): of input voltage at the able 33-18, and ending PD shall not exceed its applying voltage to a rent is decaying to zero put current to the PD o 350mA during rom STARTUP begin. d PD input capacitor, 1 maximum DC put capacitor=180uF is imum allowed DC load. uF*(44V-30V)/(0.4A-is 50msec. I//50V)= blies Voltage to PD uring POWER UP time stable. 2. Flat, ramp, n of linrush is possible to P minimum value and ult with stable voltage rush.
					(Anne Proposed PROF	ex A_PD Respon	Inrush is se ACCEPT I	included in darshan_08_061 <i>Response Status</i> W N PRINCIPLE.	5.pdf)	rusn.

Nothing here is normative. I suggest all of this be added to a new informative annex (Annex A_PD_Inrush as you call it).

C/ 33 SC 33.3.7.3

C/ 33	SC	33.3.7.3	P 90	L 43	# 369	C/ 33	SC	33.3.7.3	P 90	L 53	# 334			
Darshan,	Yair		Microsemi			Darshan,	Yair		Microsemi					
Commen	t Type	TR	Comment Status D		Pres: Table 33-18	Commen	t Type	TR	Comment Status D		PD Inrus			
We r total	need to re of 360uF	esearch if ⁻ as per th	180uF total for a single signat e current draft.	ure PD is su	fficient or we must have	We o requi	don't war ired due	nt to wait 5 to measur	50- 75msec in Type 3 and 4 sy ring PD voltage/current/time p	/stems for linru rofile by the PS	sh to be ended if not E and knowing that it			
Suggeste	edRemed	dy				was	ended e	arlier.	systems time for all parts to b	o ON is affects	ad by Tipruch*NL N			
Add Edito up to chan	Editor No or Note: 7 99.9 W nel resis	ote after lir To investig under all stance rand	ne 48 page 90: ate the max Cport value that e current specification of PSE V pe etc.	nsures stab oltage, Volta	le operation for 60W and age/Current transients,	num beha	per of po vior.	orts and PS	SE power supply power capab	bility and its res	ponse to dynamic load			
Proposed	d Respor	nse	Response Status W			SuggestedRemedy								
PRO	POSED	ACCEPT				To a	dd Edito	r Note at th	he end of 33.3.7.3.					
						1. Sł	nortening	g Tinrush if	f PSE has the knowledge that	PD is done wit	th its Inrush.			
Altho seen	on each	current dra n pair set.	aft limits single signature PDs	to 180uF as	the total capacitance is	2. Fa Tinru	stening	Tinrush by big PD cap	v allowing higher linrush_max pacitors.	during Tinrush	time frame to shorten			
CI 33	SC	33.3.7.3	P 90	L 51	# 364	Propose	d Respo	nse	Response Status W					
Darshan,	Yair		Microsemi			PRO	POSED	REJECT.						
Commen	t Type	TR	Comment Status D		PD Inrush	This is a brand new topic that has a large techinical impact on the standard. Please giv								
Defin For a And t a fac	nition of (a single le the inten tor of 2.	Cport at the oad PD, 10 ation is that	e PD over a pair set is not acc 0uF will be seen as 10uF from t we will have twice the capaci	urate. any pair set or value if w	by the PSE. e increase the power by	pres	entation	on such m	naterial if you would like it to b	e included in th	ie standard.			
Suggeste	edRemed	dy												
Add Edito PD.	Editor No or Note: (ote to be a Cport need	dded after line 52 page 90: I to be clarified when used in s	ingle signatu	ure PD and dual signature									
Proposed	d Respor	nse	Response Status W											
PRO	POSED	ACCEPT	IN PRINCIPLE.											
Char	nge note	on line 51	to:											
NOT	ECport	t per pair s	et is the Cport seen by an atta	ched PSE w	hen it probes the given									

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

pair set.

C/ 33 SC 33.3.7.3 Page 43 of 50 6/11/2015 5:24:57 PM

PD Inrush

C/ 33 Darshan, Y	SC 33.3.7.3 Yair	P 90 Microsemi	L 90	# 365	<i>CI</i> 33 Yseboodt,	SC 33.3.7.4 Lennart	P 91 Philips	L 22	# 117			
Comment Some IEE88 The re is accu charge 33-11 Suggested Modify	Type TR of important PD fa 02.3-2012. ason why they we urate phisycal beh ed to 99% of its fir etc. <i>IRemedy</i> the text per the fa	Comment Status D actual behaviour was removed is relevent to aviour of the PD i.e. Inrus al value within a time dura	oved from lines 28 the PSE but not re h current period er ation of Tinrush-2P	<i>PD Inrush</i> -31 that was in elevant for the PD as it ads when Cport is r minimum per Table	Comment "The m followin Iportm This d Suggested "The m operat	Type T maximum I Port mg equation: max = Pclass_Pl lisallows extend Remedy maximum I Port ing V Port_PD to be defined by the	Comment Status I value for all operating V D / Vport_PD (A) (33-1 ded power by limiting the value for all PDs except range, the following equation:	 Port_PD range shall 1)" current. those in Class 6 or C 	PD Power be defined by the Class 8, over the			
Strike Inrush pair se when (TInrus per pa	text XXX: (Strike) current per pair-s et compliant with \ Cport is charged t h-2P minimum pe ir set current three	<pre>(XX): et is drawn beginning with 'port_PD-2P requirements o 99% of its final value wit r Table 33-11. After TInru shold corresponding to its</pre>	n the application of s as defined in Tab thin a time duratior sh-2P min, the PD class level.	input voltage at the le 33-18, and ending n of (strike "before") shall not exceed its	Iportmax = Pclass_PD / Vport_PD-2P (A) (33-11)" "The maximum I Port value for all PDs in Class 6 or Class 8, over the operating V Port_PD range, shall be defined by the following equation: Iportmax = Pclass_PD / Vport_PD-2P(min) (A) (33-11a)							
Proposed PROP This cl capact "After" corres	Response OSED REJECT. hange was made tiance by Tinrush- TInrush-2P min, ti ponding to its clas	Response Status W because a PD may not ne 2p min, but it is still requir he PD shall not exceed its is level."	ecessarily be done red to meet the res per pair set currer	charging its t of the text such as ht threshold	where Iportmax is the maximum DC and RMS input current Vport_PD-2P(min) is the minimum static input voltage at PD PI Pclass_PD is the maximum power, P Class_PD max, as defined in Table 33-18" Proposed Response Response Status W PROPOSED ACCEPT.							

In the field, PDs will switch over to their "nominal" current draw once their cap was charged even if it only took 10ms. This note about the cap being charged to 99% was the source of

a great deal of confusion.

C/ 33 SC 33.3.7.4 Page 44 of 50 6/11/2015 5:24:57 PM

CI 33	SC 33.3.7	.4	P 91	L 44	# 370	CI 33	SC 33.3.7.4		P 91	L 5	# 116
Darshan, Y	<i>r</i> air		Microsemi			Yseboodt,	Lennart	F	Philips		
Comment	Туре Т	Comme	ent Status D		PD Power	Comment	Туре Т	Comment St	atus D		PD Power
I am w E2EP2 affect Workir be too due to specifi	vorking on way 2P_lunb which the transformed ng with curren high for Type E2EP2P_lun ications.	ys to reduce p n affects the v er design. t equation 33 4. In additior b and PD pea	pair maximum curre ralues of lcut-2P_n -12a with the 1.07 n, since it is new sta ak which doesnt ha	ent due to Ppeal nax and ILIM_2F constant, is cau andard we can e we to be similar	k-PD and P_min which eventually sing ILIM_2P_MIN to ease Type 3 currents to Type 2	"At an excee P Cla Peak shall "Ripp allowe powe	y static voltage a d iss_PD max for r operating power not exceed P Pe le current conter d if the total inpu- er is less than or	at the PI, and any nore than T CUT ak max." nt (I Port_ac) su t equal to P Class	y PD operati ⁻ min, as de perimposed s_PD max."	ing condition, the fined in Table 33- on the DC currer	e peak power shall not -11 and 5% duty cycle. nt level (I Port_dc) is
Suggested 1. Cha 2. Cha "Peak Peak p Equati powers power	IRemedy ange equation ange lines 35 t power, PPeal oower, PPeak on (33-12) an s of Class 0 th for PPeak_PI	33-12a const to 40 to: <_PD, for Class d equation 33 rrough Class D values obta	ant from 1.07 to 1. ss 0 through 4 is base s 5 through 8 is base 3-12a are used to a 8. This equation m ined via Data Link	.05. ased on Equation sed on Equation approximate the lay be used to ca Layer classifica	n (33-12). 33-12a. ratiometric peak alculate peak operating tion or Auto class."	This o Suggested "At an 6 or cl P Cla Peak shall	disallows extend dRemedy y static voltage a lass 8 PDs, the p las_PD max for r operating power not exceed P Pe	ed power. This is at the PI, and any beak power shall nore than T CUT ak max."	s the text de y PD operati not exceed ⁻min, as de	scription of Figur ing condition, witl fined in Table 33	e 33-18. h the exception of class -11 and 5% duty cycle.
Proposed Response Response Status W PROPOSED ACCEPT. Will OBE comment # 359 if accepted.					"At any static voltage at the PI, class 6 or class 8 PDs in operating condition, the peak power shall not exceed PClass at the PSE PI for more than T CUT min, as defined in Table 33-11 and 5% duty cycle. Peak operating power shall not exceed Ipeak * Vpse at the PSE PI." "Ripple current content (I Port ac) superimposed on the DC current level (I Port dc) is						
					allowed if the total input power is less than or equal to P Class_PD max, or Pclass at the PSE PI for class 6 and class 8 PDs." Proposed Response Response Status W PROPOSED ACCEPT.						

Cl 33 SC 33.3.7.4

CI 33	SC	33.3.7.6	P 93	L 28	# 361	C/ 33	SC	33.3.7.9	P 94	L 32	# 360	
Darshan, '	Yair		Microsemi			Darshan,	Yair		Microsemi			
Comment	Туре	Е	Comment Status D		PD Power	Comment	Туре	TR	Comment Status D		Pres: PD Unbalance	
Lines Type after 1 applie Table VPort 2250	22-25 : 1 PD ir FLIM m d. A cu 33–1). _PSE r V/s.	say: iput current in (see Tab irrent limite The currer nin to VPor	t shall not exceed the PD u ole 33–11 for a Type 1 PSE d voltage source is applied nt limit meets Equation (33 rt_PSE max at	pperbound temp) when the follow I to the PI througi -14) and the volt	late (see Figure 33–18) ving input voltage is n a RCh resistance (see age ramps from	We no and c In Tab effect This c a PD specif	eed to a urrent u ole 33-7 of E2E current vendor fied in t	add new si unbalance. 11 item 4a, EP2P_lunb is also a lii will have t the proposi	Joclause 33.3.7.10 after 3 I cont-2P_unb we defined /Runb. mit for the PD due to the fa o design his PD to not exc ed 33.3.7.10.	3.3.7.9 for PD PI I the maximum pai act that it is the sa seed under the tes	Pair to Pair resistance r set current with the me current. As a result, t setup conditions	
Sente The "t	nce co he follo	nstruction r owing input	makes it unclear. voltage is applied." can be	removed.		Suggeste	dReme	edy				
Suggested Chang Type after 1 is app Equat	dReme ge to: 1 PD ir ILIM m lied to ion (33	<i>dy</i> iput current in (see Tab the PI throu –14) and th	t shall not exceed the PD u ole 33–11 for a Type 1 PSE ugh a RCh resistance (see ne voltage ramps from VPc	pperbound temp) when a current Table 33–1). The rt_PSE min to VI	late (see Figure 33–18) limited voltage source e current limit meets Port_PSE max at 2250	1. Adi 33.3.7 Type when 2 Add resist Insert	d new of 7.10 PE 3 and 1 tested new cl ance ar the co	Clause with O PI Pair to Type 4 PDs with the te lause 33.3 nd current ntent of PI	the following content: Pair resistance and curres s shall not exceed Icont-2I st setup specified in 33.3. .7.10.1: Test setup and te unbalance. D PI baseline text proposa	nt unbalance. Punb as specified 7.10.1. st conditions for P in darshan_01_0	in Table 33-11 item 4a D PI pair to pair 615.pdf to 33.3.7.10.1.	
Pronosed	Resno	nso	Posponso Status M			Proposed Response Response Status W PROPOSED ACCEPT IN PRINCIPLE. Waiting for presentation.						
PROF	POSED	REJECT.	Response Status W									
Thie is		a 1 babavi	or only. This can be subm	tted as a mainter	nance request							
1113 13	затур		or only. This can be subm		lance request.	<i>Cl</i> 33 Beia, Chri	SC stian	33.3.8	P 94 STMicroele	L 40 ectronics	# 10	
						Comment	Type	TR	Comment Status D		PD MPS	
						In tab note b inform In Tab	le 33-1 below re nation. ble 33-2	3a there is efers to se 17 there is	a column which describe ction 33.3.8 for details but also reference to 33.3.8 b	s the MPS options there is nothing th ut no explanation	"high" and "low". The here which gives extra there.	
						Suggeste	dReme	dy		·		
						Add tl	ne follo	wing sente	ence after first paragraph o	f 33.3.8:		
						Types reduc class	3 and e TMP event t	4 PDs whi S_PD in or he minimu	ich detect a long first class der to draw a lower stand m TMPS_PD is higher, ar	event in the rang by MPS power. In d the standby MP	e of TLCF_PD may absence of a long first S power is also higher.	
						Proposed	Respo	onse	Response Status W			

PROPOSED ACCEPT.

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C/ 33	SC 33.3.8	P 95	L 8	# 173	C/ 33	SC 33.3.8	Pg	6	L 30	# 300	
	tan, George		g		Picard, Jea	an Turne TD			nts		
Table	e 33-19 deletes the ence to 33.3.8 as	e Input Current requirement to strikeout in the row for input cu	the MPS, doe	PD MPS esn't mention the nen I check 33.3.8, it is	PSE s	ystems need n	nore flexibility for disco	D nnect timin	ıg.	PD MPS	
still w imped	ritten in terms of i dance may imply	nput current, without a requirer a current, the current remains t	ment striken o the requireme	but. While the nt and should be in the	Suggested Table	<i>Remedy</i> 33-19a: Reduc	e TMPDO_PD maxim	um to 300 r	ms if Type 3 o	r 4.	
table, existir base	, OR, should be re ng devices. ALS(text - which it doe	moved from 33.3.8,which wou D, the text should show approp sn't. (see earlier comment)	ld be changin riate edits and	g requirements on d strikeout from the	Proposed PROP	Response OSED ACCEF	Response Status PT IN PRINCIPLE.	W			
Suggeste	dRemedy				OBE b	y comment #	199.				
Reins "addit resist	state strikeout text tional information' ance and Input ca	on Input current requirement, column, as is in the 802.3bx E apacitance,	add reference 03.0 text, and	e to 33.3.8 back to the renumber Input	C/ 33 Walker, Dy	SC 33.4 /lan	P g Cisco	5	L 37	# 153	
Proposed	l Response	Response Status W			Comment	Tvpe E	Comment Status	D		AES	
PROF		IN PRINCIPLE.			"The r the 10	equirements of 0BASE-TX and	33.4 are consistent with 1000BASE-T and 10	th the requ GBASE-T F	irements of th PHYs."	e 10BASE-T MAU and	
11151	ine was replaced	by item 1 in Table 55-19a.			Extra '	and" instead c	f comma				
Editor	r to add reference _MPS).	to Table 33-19a in text where	appropriate (a	after mention of	Suggested	Remedy	i comma.				
Editor	r to add note to be	ottom of Table 33-19a: "See 3	3.3.8 for more	information."	"The r the 10	equirements of 0BASE-TX, 10	33.4 are consistent wi 00BASE-T and 10GBA	th the requ SE-T PHY	irements of th	e 10BASE-T MAU and	
CI 33	SC 33.3.8	P 96	L 10	# 242	Proposed	Response	Response Status	w			
Schindler,	, Fred	Seen Simply			PROP	OSED ACCEF	T IN PRINCIPLE.				
Comment	t Type TR	Comment Status D		PD MPS	l prefe	r the serial cor	nma to be included.				
Table signa using	e 33-19a does not ture Type 3 and 4 text.	cover Type 1 and Type 2 dual PDs. MPS requirements for I	signature PD Dual signature	s but does cover Dual PDs may be covered	"The requirements of 33.4 are consistent with the requirements of the 10BASE-T MAU and the 100BASE-TX, 1000BASE-T, and 10GBASE-T PHYs."						
Suggeste	dRemedy				C/ 33	SC 33.4.1	Pg	6	L 30	# 199	
Strike	e Table 33-19a ite	m 1, last row. Add the followin	g text to 33.3.	.8, page 95, after line 2,	Bullock, C	nris	Cisco	Systems			
"The I Signa	MPS requirement ature PDs."	s of Dual Signature PDs shall I	be half of the	current value of Single	Comment Item 3	<i>Type</i> T in Table 33-19	<i>Comment Status</i> Pa: Tmpdo_pd	D			
Proposed	l Response	Response Status W			Relate	d to comment	requesting Tmpdo to b	e changed	from 0.354s t	o 0.320s. We should	
PROF	POSED REJECT.				also a	djust Impdo_p	d in order to ensure the	at there is s	sufficient marg	gine in the spec.	
Tho o	concept of dual air	nature PDs was not covered h	w the providu	e standard (although	Suggested	Remedy	mou) from 040	0ma far T	ine 2 4 lf laws	first sloss suggit	
they a	are clearly complia	ant to the standard). I do not b	elieve we can	add requirements Type	Chang	e impao_pd (max) from 318ms to 30	oms for Ty	ype 3,4 It long	nist class event.	
1 and	l Type 2 PDs now				Proposed PROP	Response OSED ACCEF	Response Status PT.	W			
TYPE: TR	R/technical require	ed ER/editorial required GR/ge	eneral require	d T/technical E/editorial G/g	general			CI 33		Page 47 of 50	

SC 33.4.1

6/11/2015 5:24:57 PM

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

CI 33	SC 33.4.1.1.2	P 95	L 45	# 118	CI 33	SC 33.4.9.	1.4d	P 107	L 45	# 120	
Yseboodt,	Lennart	Philips			Yseboodt,	Lennart		Philips			
Comment Bulk c supers In the - page - page - page - page - page - page - page	<i>Type</i> T omment to chang seded by IEC 623 following places: 95, line 45 95, line 49 95, line 50 95, line 53 96, line 34 97, line 22	Comment Status D ge reference to IEC 60950-1: 68-1.	2001 which is o	<i>Editorial</i> utdated and	Comment "PSAI values using result PSAI This Suggester	Type T NEXT loss for 1 s determined the equations in NEXT loss valu number of 67df dRemedy	Comn OGBASE-T shown in Ta es greater th 3 does not s	nent Status X capable Midspan able 33-20a for all s han 67 dB shall rev seem to match with	PSE devices sha specified frequer vert to a requiren a Table 33-20a.	AES all meet or exceed the acies. Calculations that ment of 67 dB minimum."	
Suggestea	Remedy				Маке	consistent whi	chever way	is right.			
Refere 60950	ence to IEC 60950	0-1 (without date) and to IEC	62368-1 which	is the successor of IEC	Proposed ResponseResponse StatusWI don't understand this comment. Why does 67dB not match with Table 33-20a?						
Proposed PROP	Response OSED ACCEPT.	Response Status W									
Cl 33 Schindler,	SC 33.4.9.1.4 Fred	c P 107 Seen Simply	L 34	# 243							
Comment The te "Midsp are Additio relating	<i>Type</i> ER xt, ban PSEs intende onally required to g to different link	Comment Status D ed for operation with 10GBAS meet the following paramete segments."	E-T (types 5 &	AES 6 in Clause 33.4.9.1) signals between ports							
May be	e in error or is co	nfusing. What are types 5 &	6?								
Suggested Get ar PoE T Proposed I PROP	IRemedy n expert opinion a ypes. Response OSED ACCEPT	nd craft a sentence that does Response Status W IN PRINCIPLE.	s not confuse re	ferenced types with							
Are the	ese Categories in	stead of Types?									

C/ 33 SC 33.4.9.1.4d

C/ 33 SC 33.5 Yseboodt, Lennart	5.1.1.4	P 111 Philips	L 16	# 126	Proposed PROF	Response POSED ACCEPT.	Response Status W		
Comment Type T	Comment ariable is not vet 4	Status D		Management	<i>CI</i> 33 Yseboodt,	SC 33.6.3.2 Lennart	P 116 Philips	L 4	# 121
"When supported by the read as '10' the PSE. Where the oprovided, setting to '01' shall 11.3:2 to '10' shall 11.3:2 to '10' sha PSE to use If bit 12.0 is corresponding va A and '10' = never be assigne Reading bit determine the pre	option of controlling bits 11.3:2 indicat option of controlling bits 11.3:2 indicat force the PSE to us ill force the only PSE Pinout A one, writing to thes lue: '01' = B. The combinatio d. s 11.3:2 returns an esence	the PSE Pinou se only PSE Pirou ternative B. se register bits sons '00' and '11' unambiguous re	at only PSE Pino Pinout Alternativ t Alternative throu nout Alternative A shall set mr_pse_ for bits 11.3:2 ar esult of '01' or '10	ut Alternative A is re B is supported by ugh these bits is and setting bits alternative to the e reserved and will o' that may be used to	Comment For Pl Type negot LLDF Suggester Chang Proposed PROF CI 70 Schindler, Comment	Type T D_DLLMAX_VALU 4 has a maximum ated. is the best/only w dRemedy ge PD_DLLMAX_V Response POSED ACCEPT. SC 79.3.2.6b Fred Type ER	Comment Status D JE, class 8 is listed as 900. In power of 99.9W, but via phy way to negotiate higher power /ALUE / Class 8 = 999 Response Status W P 156 Seen Simply Comment Status D	rsical layer only than 90.	DLL r up to 90W can be # 253 DLL
SuggestedRemedy Replace by: "When read supported by the read as '10' the PSE. When read Alternative B are Where the of provided, setting to '01' shall 11.3:2 to '10' shall 11.3:2 to '10' shall SE to use Setting bits and PSE Pinout A If bit 12.0 is corresponding va A, '10' = B a never be assigne Reading bit used to determine of the PSE	as '01', bits 11.3:2 PSE. When , bits 11.3:2 indicat as '11', bits 11.3:2 supported by the P option of controlling bits 11.3:2 force the PSE to us Il force the SE to us Il f	indicate that on e that only PSE indicate that bo SE. the PSE Pinou se only PSE Pir lternative B. allow the PSE to aneously. se register bits s he combination unambiguous re	Ily PSE Pinout Alf Pinout Alternativ th Pinout Alternat t Alternative throu nout Alternative A o use both PSE F shall set mr_pse_ '00' for bits 11.3: esult of '01', '10' o	ternative A is re B is supported by tive A and Pinout ugh these bits is a and setting bits Pinout Alternative A alternative to the 2 is reserved and will or '11' that may be	what i Suggestee Repla "1 = D the inv 0 = Si by eith With "1 = P 0 = Pt Proposed PROF	nformation is bein <i>iRemedy</i> ce the existing tex- ual signature. PC dicated PD mode ngle signature. PC ner PD mode powe hysical layer PClas <i>Response</i> OSED ACCEPT.	g conveyed. t, lass_PD is the sum of power class values. class_PD is indicated er class values." ass_PD is the sum of the indi- ass_PD is indicated by either f <i>Response Status</i> W	cated PD mode 2D mode powe	e power class value. r class values."

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

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CI 79	SC	79.3.2.6b	(Table 79-6b)	P 156	L 2629	# 195	
Zhuang, Yar	n		(,	Huawei Tech	ologies		
Comment T	ype	т	Comment S	tatus D			DLL
Table 79 Connec Revise t interface "Consid	9-6b tion c the m e PD s eratio	heck is alr eaning of senario de on on Conr	eady used to in PD PI bit to inc scribed in L2 a nection Check"	ndicate PD si licate PD load ad hoc and av presented in	gnatures. ds for PSEs, so as roid current overlo Jan 2015 meeting	s to support the aded described g.	dual in
SuggestedR	Remed	dy					
Replace "1 = Dua 0 = Sing to: "0= The 1= The provide	e the e al sign gle sig PD is PD is to the	existing tex nature. PC gnature. PC s a single l a dual loa e Mode."	kt class_PD is the Class_PD is ind oad. The Mod d. Each Mode	e sum of the in dicated by eit le class on ea e class power	ndicated PD mode her PD mode pow ach pair-set shall t is used to determ	e power class va ver class values. pe the same. ine the power to	lues. "
Proposed R	espor	nse	Response Si	tatus W			
This sho	ould b	e discusse	ed by the group	o as I did not	attend the L2 Ad I	Hoc.	
Would C	OBE o	comment #	ŧ 253.				