Cl 168	SC 168.5.1	P <b>30</b>	L <b>8</b>	# 37	C/ 168	SC	168.6.1	P <b>33</b>	L <b>11</b>	# 39
Ran, Ade	е	Cisco Syster	ms, Inc.		Ran, Adee	9		Cisco System	s, Inc.	
Commen	t Type TR	Comment Status D		consistency_dj	Comment	Туре	TR	Comment Status D		new
The t a PM	itle of 168.5.1 is "I ID but of a transm	PMD block diagram", but the it/receive path.	e block diagram i	n Figure 168-2 is not of	The si ppm, t	ignaling to avoid	range for possible	recent PMDs with 100 Gb/s performance degradatation.	per lane has be	en narrowed to +/- 50
l am not b	aware that the inc e carried over to a	orrect heading exists in man a new clause.	ny previous claus	es, but an error should	The 1	00 Gb/s	AUIs defi	ined in Annex 120F and 1200	G support this n	arrower range.
Ines	suggested remedy	is being used in similar sub	clauses in P802.	3aj.	See 8 from 8	00GBA	SE-VR8/S ) as an ex	ample of how this is impleme	nted in new PN	167-8 (both amended
Suggeste	edRemedy	title frame "DNAD black dia ana	wall to "Disale dis		Suggester	Reme	, tv			
Chan	ige the subclause		am to Block dia	gram.	In Tab	ole 168-	., 6 and Tab	le 168-7, change the signalin	ig rate range to	53.125 +/- 50 ppm.
Proposed	Response	Response Status W			Proposed	Respor	nse	Response Status W	0 0	
PRO	POSED ACCEPT				PROF	POSED	ACCEPT	IN PRINCIPLE.		
C/ 168	SC 168.6	P <b>32</b>	L 53	# 38	Claus	e 140 u	ses 100pp	om, df has mixed definitions, o	dj uses 50ppm.	
Ran, Ade	e	Cisco Syster	ms, Inc.		C/ 168	SC	168.6.1	P33	L28	# 40
Commen	t Type <b>T</b>	Comment Status D		consistency_CL140	Ran Adee	د		Cisco System	s Inc	
Footr	note a says "The F	RS-FEC correction function r	may not be bypas	ssed for any operating	Comment	Tvpe	FR	Comment Status D	0, 110.	consistency di
distar place	nce". This is not a e in 168.6, which is	n option, so "may" is inappro s about optical specifications	opriate. Also, this 3.	statement is out of	The ro indica	bw for O ted by ii	MA_outer ndentatior	r (min) in Table 167-7 contain n, as done in the "Receiver se	s two sub-rows ensitivity" row in	. This should be Table 167-8, to clarify
l am :	aware that the sar	me text exists in many previo	ous clauses, but	an error should not be	that th	iese are	e two case	S.		
Suggeste	ed over to a new c	lause.			The p	hrase "f	or 1.4 dB	<= max(TECQ, TDECQ) <= <sup>-</sup>	TDECQ(max)" i	s overly long and can
Delet	te footnote a from	Table 168-5, and instead ad	d a footnote for	the "RS-FEC" row in	De sho	uneneu		e readability.		
Table	e 168-1, stating "T	he option to perform error de	etection without e	error correction (see	Suggested	Remed	<i>ily</i> h rowo oto	uting with "for"		
91.5.3	3.3) is not support	ted. FEC error correction sha	all not be bypass	ed".	Chang	ge "for 1	1.4 dB <= 1	max(TECQ, TDECQ) <= TDE	CQ(max)" to "fe	or max(TECQ, TDECQ)
Proposed	Response	Response Status W			>= 1.4	<b>i</b> "		· ,	. ,	, , , , , , , , , , , , , , , , , , ,
PROI Delet	POSED ACCEPT	Table 168-5			Proposed	Respor	nse	Response Status W		
Keep	consistent with c	ause 140.			PROF	OSED	REJECT.	T     (00 0)		
					Follow	ving dj te	ormat (e.g	I., Table 183-6).		

C/ 168	SC 168.6.1	P34	L1	# 42	C/ 168	SC 168.7.1	P <b>36</b>	L <b>1</b>	# 44		
Ran, Adee	9	Cisco System	is, Inc.		Ran, Adee	)	Cisco System	is, Inc.			
Comment	Туре Т	Comment Status D		consistency_dj	Comment	Type TR	Comment Status D		consistency_dj		
Equat anythi	ions 168-1 through ng without the con	168-3 are not equations - t text, which is Table 167-7.	hey are express	ions that don't mean	The tit definit sublcla	ile of Table 168-1 ions; what it cont ause.	0 is incorrect. It does not incl ains is the mapping of param	lude or even ref leters to test pa	fer to test pattern tterns and related		
It wou	ld be a better servi	ce to the reader if these exp	pressions are pla	aced directly in the	l am a	ware that the sa	me title exists in many previou	us clauses but	an error should not be		
Suggester	Remedy				carried	d over to a new o	lause. It has been corrected i	in P802.3dj, and	d the suggested remedy		
Move	these expressions	into Table 168-8, OMA_out	ter row, replacing	g the references to the	is take	en from Table 18	)-15.				
equati	ons.				Suggested	r <i>Remedy</i> the title of Tab	le 168-10 to "Manning of para	ameters to test	natterns and related		
Proposed	Response	Response Status W			subcla	uses".					
Follow	/ dj format, Table 1	83-6.			Proposed	Response	Response Status W				
C/ 168	SC 168.6.1	P <b>33</b>	L <b>36</b>	# 43	PROP Keep	OSED ACCEPT consistent with 8	02.3 dj, Table 183-13.				
Ran, Adee	)	Cisco System	is, Inc.		C/ 168	SC 168.7.11	P <b>41</b>	L3	# 48		
Comment	Type <b>TR</b>	Comment Status X		over/under-shoot	Ran, Adee	•	Cisco System	is. Inc.			
"Trans	smitter over/under	-shoot" is shorthand that she	ould not be used	l in a standard.	Comment Type T Comment Status X consisten						
under:	efinitions in subciai shoot, while "over/i	use 168.7.7 are actually to t under-shoot" is not defined a	two different para	ameters, overshoot and	The si	gnaling rate is 53	3.125 GBd, so the number sh	ould be 53.125	GHz, not 53.2.		
The la	bel in the table has	s been changed to "oversho	oot/undershoot" i	n 802.3db.	Suaaestea	dRemedv					
Also, 1	the definition subcl	ause 168.7.7 should be alig	ned with the rec	ent text in 802.3db	Chang	ge per comment.					
(167.8	8.8) instead of olde	r clauses.			Proposed	Response	Response Status W				
Suggested	lRemedy				PROP	OSED ACCEPT	IN PRINCIPLE.				
Chang	ge the label to "Ove the text in 168 7	ershoot/undershoot (max)".	802 3db-2022		Resolv	ve using the resp	onse to comment #94.				
Chang	ge in Table 168–10	and elsewhere accordingly	/.		C/ 168	SC 168.7.12	P <b>41</b>	L <b>32</b>	# 49		
Proposed	Response	Response Status W			Ran, Adee	9	Cisco System	ns, Inc.			
PROF	POSED ACCEPTE	D IN PRINCIPLE.			Comment	Type E	Comment Status D		ref_receiver		
366 0	omment #95.				Cross <sup>.</sup> Simila	-reference to equ rly for equations	ation 168-4 is not active. 168-5 and 168-6 in the subse	equent paragrap	ohs.		
					Suggested	Remedy					
					Make	the cross-referer	nces active.				
					Proposed	Response	Response Status W				
					PROP	OSED ACCEPT	IN PRINCIPLE.				
					inplei	noni ouggoolou i	entray with caltonal hoolise.				

C/ 168	SC 168.7.12	P <b>41</b>	L <b>40</b>	# 50	C/ 168	SC 168.7.	4	P36	L <b>46</b>	# 73
Ran, Adee		Cisco Systems	s, Inc.		Johnson, J	ohn		Broadcom		
Comment	Type <b>TR</b>	Comment Status D		ref_receiver	Comment	Type <b>TR</b>	Comment	Status X		consistency
Equation receive maxim	ons 168-4 throug er sensitivity doe: um, as shown in	h 168-5 have equal signs and s not need to be equal to a va the figure.	l define receive lue - it should l	er sensitivity - but the be below some	Add te definiti	xt to clarify th ons in 168.7.	e reference receiv 5.	ver used to me	easure OMAoute	r, refering to the
Suggested	Remedy				Suggested	Remedy				
Fither	change the equa	tion to have a "lower than" va	lue or define t	he term as the	Add th	e following se	entence to the end	f of the paragr	apn:	
maxim	um RS.				"OMAd	outer is measu	ured using wavefo	orms captured	at the output of t	he reference receiver
Proposed I	Response	Response Status W			define	d in 168.7.5, k	pefore the referen	ce equalizer."		
PROP	OSED ACCEPT	IN PRINCIPLE.			Proposed	Response	Response S	Status W		
	omment #111.	24			PROP See co	OSED ACCE omment #90.	PT.			
C/ 168	50 168.7.12	P41	LT	# 51						
Ran, Adee		Cisco Systems	s, Inc.							
Comment Figure	<i>Type</i> <b>ER</b> 168-6 is a bitma	Comment Status X p with poor quality.		ref_receiver						
Suggested	Remedy									
Replac	e the figure with	an SVG one.								
Proposed I PROP See co	Response OSED ACCEPT omment #111.	Response Status W IN PRINCIPLE.								
C/ 168	SC 168.7.12	P <b>41</b>	L15	# 52						
Ran, Adee		Cisco Systems	s, Inc.							
Comment	Type <b>TR</b>	Comment Status X		ref receiver						
The lab allowed	bel "Meets equat d range is betwe	ion constraints" appears betw en these lines, which is incorr	een curves. It : ect.	suggests that the						
Suggested Move t	Remedy	ne hottom line								
Dropoord										
	response	Response Status W								
See co	omment #111.	IN PRINCIPLE.								

C/ 168	SC 168.7.5	P37	L <b>21</b>	# 74	C/ 168	SC 168.7.7	P39	L <b>37</b>	# 75			
Johnson,	John	Broadcom			Johnson, J	lohn	Broadcom					
Comment The T of 16	t Type <b>TR</b> ( TDECQ test method in 8.7.5.1 lists test method	Comment Status <b>D</b> 168.7.5 needlessly reite of exceptions that should	rates the definition to the in 168.7.5.3.	<i>consistency_dj</i> ons in 121.8.5. The text 168.7.5.3 has a	<i>Comment</i> Add te the de	<i>Type</i> <b>TR</b> ext to clarify the finitions in 168.	Comment Status X reference receiver used to me 7.5.	asure TX over/u	over/under-shoot indershoot, refering to			
single This speci	e exception for the FFI clause should reference ific to Cl. 168.	E (which is not needed be the 121.8.5 and list a com	ecause it is the s plete set of test r	ame as 121.8.5.4). nethod exceptions	Suggested Replac with "a	<i>Remedy</i> ce "but without t at the output of t	the reference equalizer being a the reference receiver defined	applied in either in 168.7.5, befo	case." re the reference			
Suggeste	eaRemeay	thad of 902 2di D1 5 Cl	190 0 E which in	voludos improved	equalizer."							
desci	riptions of the reference	e receiver that are used	in other test met	hod sub-clauses.	Proposed	Response	Response Status W					
Remo	ove sub-clauses 168.7	.5.1, 168.7.5.3 and 168.7	7.5.4. (168.7.5.2	becomes 168.7.5.1)	PROP	OSED ACCEP	Τ.					
Repla		with the following.			C/ 168	SC 168.7.8	P <b>40</b>	L17	# 76			
The T	TDECQ of each lane s	hall be within the limits g	iven in Table 168	3-6 if measured using	Johnson, J	lohn	Broadcom					
speci	ified in 121.8.5.1, 121.	8.5.3, 121.8.5.4 and 168	.7.5.1, with the fo	ollowing exceptions:	Comment	Type <b>TR</b>	Comment Status X		consistency_dj			
— Th test p	ne signaling rate of the pattern	test pattern generator is	as given in Tabl	e 168-6 and uses the	Add te the de	ext to clarify the finitions in 168.	reference receiver used to me 7.5.	easure TX power	excursion, refering to			
speci	ified for TDECQ in Tab	ble 168-10.	ation of the $\Omega/E$	converter and the	Suggested	IRemedy						
oscill a 3 d respo	oscope, has B bandwidth of approx	imately 26.5625 GHz wit	th a fourth-order	Bessel-Thomson	Replae with "a equali	ce "but without t at the output of t zer."	the reference equalizer being a the reference receiver defined	applied." in 168.7.5, befo	re the reference			
least not e	1.3 × 53.125 GHz, an xceed	d at frequencies above 1	.3 × 53.125 GHz	, the response should	Proposed	Response	Response Status W					
-20 C	nson	y be made for any deviat	ion nom an ideal	iourui-order bessei-								
respo	onse.				C/ 168	SC 168.7.9	P <b>40</b>	L <b>32</b>	# 77			
— Th a fou	e normalized noise po rth order	ower density spectrum N(	(f) is equivalent to	o white noise filtered by	Johnson, J	lohn	Broadcom					
Bess	el-Thomson response	filter with a 3 dB bandwid	dth of 26.5625 G	Hz.	Comment	Type <b>TR</b>	Comment Status X		consistency_dj			
— Th — Th moth	ne optical return loss is ne lowest measured TI od doscribod	as given in Table 168-6 DECQ values are achieve	ed with the equal	izer optimization	Add te definit	ext to clarify the ions in 168.7.5.	reference receiver used to me	asure extinction	ratio, refering to the			
in 12	1.8.5. Alternative optin	nization methods such as	s minimum mean	squared error (MMSE)	Suggested	lRemedy						
may l used equa	be to determine equalize l or	r tap weights to reduce to	est time, and are	expected to report	Add th "The e receiv	e following to the struction ratio is error of the struction ratio is the struction ratio is the structure of the structure structure of the structure struc	ne end of the paragraph: s measured using waveforms o 8.7.5, before the reference eq	captured at the c ualizer."	output of the reference			
highe	er values of TDECQ. T	hese alternative methods	s should not be u	ised for receiver	Proposed	Response	Response Status W					
sensi	sed receiver sensitivity	calibration.			PROP	OSED ACCEP	, Т.					
Proposed	l Response R	esponse Status W										
PRO Imple	POSED ACCEPT IN F	PRINCIPLE. dy with editorial license.										

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 U/unsatisfied Z/withdrawn SORT ORDER: Comment ID

C/ 168	SC	168.7.10	P40	0 L41	# 78	C/ 168	SC	168.7.13	P <b>42</b>	L <b>1</b>	# 79
Johnson	John		Broad	com		Johnson,	John		Broadcor	n	
Commer	t Type	TR	Comment Status	х	consistency_dj	Comment	Туре	TR	Comment Status X		consistency_dj
The rede	referenc fining it	e receiver is	s previously defined e.	in 168.7.5, so it c	an be referenced rather than	The s metho	tressec od spec	l receiver so ified in 121	ensitivity test method in .8.10.	168.7.13 needle	ssly reiterates the test
Suggest	edReme	dy				Suggestee	dReme	dy			
Dele "as r of ar × 53 –20 Thor Rep! "The refer <i>Propose</i> PRC	te the fo neasure proxima 125 GH dB. Con nson res ace with transmi ence rea <i>d Respo</i> POSED	of the second se	n O/E converter and 5 GHz with a fourth- quencies above 1.3 nay be made for any ng text: n time is measured ad in 168.7.5, before <i>Response Status</i>	oscilloscope with order Bessel-Thoi × 53.125 GHz the y deviation from a using waveforms the reference eq W	a combined 3 dB bandwidth mson response to at least 1.3 response should not exceed in ideal fourth-order Bessel- captured at the output of the ualizer."	Follov along Stress measi metho — Thi 168.7 that th signal no gree — Wi turneo RINXO 168-6 — Thi conve given — Thi Stress closur given Table Proposed PROF	w the sp with a sed rec ured us od defir e SECC .5, excr be test is eater th th the C d off, th DMA of e signa e requise sed eye re for P in 168-7. <i>Respo</i> POSED	becification short list of eiver sensition and the strategy fiber is not in Gaussian not e inthe sRS te ling rate of e as le 168-6 usi red values of AM4 (SECO nse ACCEPT.	method of 802.3dj D1.5 exceptions. Replace th tivity of each lane shall l 3.10 with the following e essed receiver conforma- used. The transition tim- te specified in Table 168 bise generator on and th est source should be no the test pattern generat ing test patterns specifie of the "Stressed receive Q), lane under test" and <i>Response Status</i> <b>W</b>	5, CI.180.9.13, where entirety of 168 be within the limit exceptions: ance test signal is e of the stressed 3-6. greater than the or and the extinct ed in Table 168-1 r sensitivity (OM, "OMAouter of ea	ich points to 121.8.10 .7.13 with the following text: given in Table 168-7 if s measured according to receiver conformance test r and sinusoidal interferer value specified in Table tion ratio of the E/O 0. Aouter), each lane (max)", " ach aggressor lane" are as
						0.100		100.7.12		L <b>32</b>	# 84
						Simms, W	Tung	-			und un et al.
						The F Line 3	<i>1 ype</i> igure 1 32, 35, s	⊏ 68-6 has ai and 38	n x-axis of TECQ but the	e test below the f	igure references SECQ.
						Suaaestee	dReme	dy			
						Not su	ure if th	is is an erro	or		
						Proposed	Respo	nse	Response Status W		
						PROF See c	POSED ommer	ACCEPT I nt #111.	N PRINCIPLE.		
	- " · ·										

C/ 168	SC 168.7.4	P <b>36</b>	L <b>41</b>	# 90	C/ 168	SC 168.7.5	P <b>37</b>	L <b>20</b>	# 91
Mi, Guang	Ican	Huawei Techr	nologies Co., Ltd		Mi, Guang	jcan	Huawei Tech	nologies Co., Lt	d
Comment recen CL16	<i>Type</i> <b>TR</b> t clauses has bee 3 as well.	Comment Status X en pointing out the source of 0	OMAout data. Re	<i>consistency_dj</i> commend to add in	Comment lookin and its in CL	<i>Type</i> <b>ER</b> C g back at CL 140.7 an s measurement setup 121.8.5 and writing on	omment Status X d other IMDD clauses i has been referencing a ly the changes and diff	in 100Gbps, the o as much as possi ferences. An exar	consistency_dj description of TDECQ ble the existing content mple in CL140 is:
add "( receiv	DMAouter is mea ver defined in 168	sured using waveforms captu .7.5, before the reference equ	ured at the output ualizer.	of the reference	"TDE0 given Table	CQ, and for 100GBAS in 140–6 if measured us	E-DR only, TDECQ – 1	0log10(Ceq) sha	Il be within the limits
Proposed PROF Imple	Response POSED ACCEPT ment suggested r	Response Status W IN PRINCIPLE. remedy with editorial license.			specif refere also d what v	ied in 140.7.5.2, using nce equalizer as desc louble checking the co was defined in CL 140	the measurement met ribed in 140.7.5.1, with ntent of 168.7.5.1, ther 7.5 or CL 124.8.5, exc obside one consistence	hod specified in the following exc e seems no tech ept need of upda	121.8.5.3, and using a eptions:" nical difference than ites to the table
					new te	est setp, it is recomme only listing out the exc	nded to update the sec eptions.	tion with reference	ces to existing clauses
					Suggested	dRemedy			
					delet s clause	sections 168.7.5.1, 16 es, so that the overall s	8.7.5.3,168.7.5.4. make standard of 802.3 is col	appropriate refense herent. implemer	rences to existing it with editorial licenses.
					some The T Table specif refere The si patter specif — The appro 53.12 20 dB Thom — The white of 26.4	possible languages: DECQ shall be within 168–6 if measured us ied in 168.7.5.2, using nce equalizer as desc ignaling rate of the tes n ied for TDECQ in Table combination of the C ximately 26.5625 GHz 5 GHz and at frequence . Compensation may be son response. e normalized noise por noise filtered by a four 5625 GHz."	the limits given in ing the test setup spec the measurement met ribed in 168.7.5.1, with t pattern generator is a e 168–10. /E converter and the or with a fourth-order Bes cies above 1.3 × 53.125 be made for any deviati wer density spectrum, I th-order Bessel-Thoms	ified in 121.8.5.1 hod specified in 7 the following exc s given in Table 7 scilloscope has a ssel-Thomson res 5 GHz the respor ion from an ideal N(f) in Equation ( son response filte	, with an optical channel 121.8.5.3, and using a eptions: 168–6 and uses a test 1 3 dB bandwidth of sponse to at least 1.3 × ise should not exceed – fourth-order Bessel- 121–9), is equivalent to er with a 3 dB bandwidth
					or "The T setup measu 140.7.	TDECQ shall be within specified in 121.8.5.1 urement method speci .5.1."	the limits given in Tab with an optical channe fied in 140.7.5, and usi	le 168–6 if meası કો specified in 16દ ng a reference e	ured using the test 3.7.5.2, using the qualizer as described in
					or oth	er format that fits.			

Droposed	Deenenee	D			C/ 168	SC 168.6.1	P33	L <b>36</b>	# 95
Proposed	Response	Response Status W			Stassar, P	eter	Huawe	i	
Resol	ve using response	to comment #74.			Comment	Type ER	Comment Status	D	over/under-shoot
C/ 168	SC 168.7.7	P <b>39</b>	L <b>31</b>	# 93	This d "transr	raft still uses "ov nitter over and u	ver/undershoot", In P80 undershoot". Also in 16	2.3dj it was recentl 8.7,1 and 168.7.7	ly agreed to use
Mi, Guang	Ican	Huawei Techr	nologies Co., Ltd		Suggested	Remedy			
Comment	Type ER	Comment Status X		over/under-shoot	168.6.	1 change "Tran	smitter over/under -sho	ot" to "Transmitter	overshoot and undershoot".
There regarc	seems to be no ch ling the calculation	ange from the method defir	ned in CL 140. refe	rence to CL 140	In 168 unders and ur	.7.1, Table 168- shoot". Change idershoot". In pa	-10 change "Over/unde heading of 168.7.7 fron aragraphs 1 and 2 of 16	r-shoot" to "Transm n "Over/under-shoo 88.7.7 change "ove	utter overshoot and ot" to "Transmitter overshoot r/under-shoot" to "over and
Suggested	dRemedy				unders	shoot".			
possik	ble language from (	CL 151, and update the refe	rence tables shou	d serve the purpose :	Proposed	Response	Response Status	w	
"The c	over/under-shoot of	f each lane shall be within th	ne limits given in T	able 151–7 if	PROP	OSED ACCEPT	Т.		
measu	ured using a test	/under-shoot in Table 151_	11		C/ 168	SC 168 3 2	P29	12	# 108
Overs	hoot and undersho	ot are measured using the	waveform captured	for the TDECQ test	Zimmerma			 PL an Cisco Marvell	OnSemi Sony SenTekse
(see 1	51.8.5) and the wa	veform captured for the TE	CQ test (see 151.8	5.6), but without the	Comment	Type <b>TR</b>	Comment Status	n	consistency CI 140
Overs	hoot and undersho	ot are calculated using the	methods in 140.7.	7."	"is" is i	for statements of	of fact. The limitation or	n the skew seems t	to be a requirement.
Proposed PROF	Response POSED ACCEPT IN	Response Status <b>W</b> N PRINCIPLE.			Furthe specifi require	r, the requireme ed? While 83.5 ements apply. H	ents in 83.5.3.4 go furth 5.3.4 was mentioned ea Here is where that shou	er and specify skew rlier defining skew, ld be stated.	w variation. Is that to be it isn't clear that those
Resol	ve using response	to comment #75.			Suaaestea	Remedv			
C/ 168	SC 168.7.11	P <b>40</b>	L <b>51</b>	# 94	Chang	e "Skew at SP2 on at SP2 shall	2 is limited to 43 ns as c comply with the require	lefined by 83.5.3.4' ments of 83.5.3.4"	' to "Skew and skew
Commont			iologies Co., Liu	consistency di	Proposed	Response	Response Status	w	
802.3 update with w https:/	dj has extensively e the definition of R /hat is being used i //www.ieee802.org/	discussed the definition of I INXOMA which better desc n the field. Related contribu 3/dj/public/24_09/chayeb_3	RINxOMA. Conser ribes the actual be tion from Ahmad a dj_01_2409.pdf	sus were made to haviour and aligns nd JJ,	PROP Keep o	OSED REJECT	r. Clause 140.		
Suggestee	dRemedy								
align t	o what is defined in	۱ dj.							
Proposed	Response	Response Status W							
PROF The R Impler	POSED ACCEPT IN INxOMA definition ment suggested rei	N PRINCIPLE. in dj D1.5 could be used as medy with editorial license.	references.						

C/ 168 SC 168	.12.3 P49	L28	# 109
Zimmerman, George	ADI,AP	Lgp,Cisco,Marvell,Or	Semi,Sony,SenTekse
Comment Type <b>T</b> Delay constaints requiremetns that	Comment Status ) is a section of the PICS, not t need to be spelled out in th	<b>(</b> a capability or option eir own table.	<i>consistency_cp</i> . These are
SuggestedRemedy Delete row "DC" and renumber su	in 168.12.3, add new sectior bsequent PICS statements.	ו 168.12.4.1 Delay ar Go through 168.3 an	nd skew specifications d call out the delay
constraint requirn been useful). Proposed Response	ients one-by-one to populate	) (this is where having	g the "shalls" would have
PROPOSED REJ Keep consistent v	IECT. vith 802.3cp.	-	
C/ 168 SC 168	.7.12 P41	L15	# 111
Zimmerman, George	ADI,AP	Lgp,Cisco,Marvell,Or	Semi,Sony,SenTekse
Comment Type T	Comment Status	K	ref_receiver
"Meets equation of is receiver sensiti equations 168-4, should be sensitiv	constraints" cannot possibly vity but the axis says OMAo 168-5, and 168-6 and the te: ve to a signal with an OMA o	be right for all 3 PHY uter(dBm). This need xt to unravel. Is this f the level of equation	s. Also, the plot says it Is further definition in the saying that the RS is 168-4, 168-5, and 168-

6 (depending on the PHY type) (but can be sensitive to a lower level signal)? If so, the label needs to be 3 different labels, each indicating which line they are for, and on the bottom side of the line... The equations need more words to describe the measurement. I'm sorry, but I don't know well enough what you meant to write a good solution.

#### SuggestedRemedy

See comment. Adjust location of "Meets equation constraints" so that it meets all 3 lines. Consider more explanatory words and converting the equations 168-4, 168-5 and 168-6 to inequalities.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE. Follow treatment in 802.3dj CL183.9.12. Implement suggested remedy with editorial license.

C/ 168	SC	168.1	P <b>27</b>	L13	# 119
Zimmerma	an, Geo	rge	ADI,APLgp,Cis	co,Marvell,0	OnSemi,Sony,SenTekse
Comment	Туре	т	Comment Status X		consistency_CL140
Physic	cal impl	ementatio	n of the CGMII is optional, but	that is not v	what Figure 168-1 shows.
Suggestee	Remed	dy			
Add fo is opti	ootnote onal" at	1 to CGM t line 29 (b	II at line 13. Add text of "NOT elow PCS).	E - Physical	I implementation of CGMII
Proposed	Respor	nse	Response Status W		
PROF Keep See fo	OSED consiste	REJECT. ent with Cl a in Table	ause 140. 140-1.		
C/ 168	SC	168.5.9	P32	L <b>21</b>	# 129
Huber, Th	omas		Nokia		
Comment	Туре	Е	Comment Status D		bucket_EZ(quick review)
The fi	st sent	ence of thi	s clause is a comma splice.		
Suggestee	Remed	dy			
Repla PMDs U PM	ce the c , or writ D and c	comma wit te it as "Th optional in	h a semicolon, split into two s e PMD_receive_fault function the 100GBASE-BRx-D PMD."	separate ser is mandato	ntences for the U and D ry in the 100GBASE-BRx-
Proposed	Resnor	nse	Response Status W		

Response Status W

PROPOSED ACCEPT IN PRINCIPLE. Change it to:

The 100GBASE-BRx-U PMD shall include the PMD receive fault function. In the 100GBASE-BRx-D PMD, the PMD receive fault function is optional.

C/ 168	SC 1	68.6	F	<sup>2</sup> 32	L <b>40</b>	# 130	Cl 168	SC	168.5.4	P <b>31</b>	L <b>25</b>	# 176
Huber, The	omas		Nok	kia			Dawe, Pier	s		Nvidia		
Comment	Туре	т	Comment Statu	is <b>D</b>		interoperation	Comment	Туре	т	Comment Status D		consistency_CL140
The se chann that th BR10	entence o el require e BR20 l PMD are	concernino ements aro PMD oper e met?	g BR40 working w e met is helpful, b ates with a BR10	vith BR20 or B out it seems ind PMD as long	R10 as long complete. We as the chann	as the shorter reach ould is also not be true lel requirements of the	While t manag indicat	the sta jed the or of th	tus variabl same as r ne presenc	es have "global" in their na nultilane PHYs, saying tha e of the optical signal isn't	ames so that 1-l it SIGNAL_DET really right.	ane PHYs can be 'ECT is a *global*
Suaaesteo	dRemedv	/					Suggested	Reme "alaba	ay hara an			
Make	the sente	ence more	generic: "A longe	er reach PMD	interoperates	s with a shorter reach	Proposed	giona Resno	nso	Response Status M		
PMD a	as long a	is the char	nel requirments o	of the shorter i	reach PMD a	ire met."	PROP		REIECT			
Proposed	Respons	se	Response Statu	s W			Keep o	consist	ent with cla	ause 140.		
PROP The in Chanc	POSED A Iteropera	CCEPT IN Ition betwe	N PRINCIPLE. en BR10 and BR	40 doen't worl	κ.		C/ 168	SC	168.6.1	P33	L <b>46</b>	# 180
"The 1	100GBAS	SE-BR40 F	MD interoperates	s with the 100	GBASE-BR2	0 PMD provided that	Dawe, Pier	S		Nvidia		
the ch	annel me	eets the re	quirements in Ta	ble 168-15."			Comment	Туре	т	Comment Status D		<pre>bucket_EZ(quick review)</pre>
C/ 168	SC 1	68.1	F	°27	L <b>9</b>	# 171	lt's pro and otl	bably hers w	not worth te ith 15.6 dB	esting some transmitters fo . The cost in paperwork n	or TDECQ and nay outweigh ar	RIN with 15 dB return loss y difference in yield.
Dawe, Pie	rs		Nvie	dia			Suggested	Reme	dy			
Comment In 157	<i>Type</i> , this figu	E ure include	Comment Statues OAM (OPTION	is <b>D</b> IAL)		consistency_CL140	Consic conser Then F	der cha vative	anging 15.6 ). MA can be	to 15 here and in Table 1	68-11 (simplifyi	ng and being
Suggested Do the	<i>dRemedy</i> e same h	/ iere?					If it is t and the	hough e chan	t worthwhil nel optical	e, the discrete reflectances return loss in Table 168-1	s for 100GBASI 2 could be mad	E-BR10 in Table 168-14 e slightly worse, to spend
Proposed	Respons	se	Response Statu	s W			that 0.0	о ав. Посто				
PROP Keep	POSED R	REJECT. nt with exis	sting clauses 140	and 160.			Proposed I PROP Small	Nespo OSED	nse REJECT.	Response Status W	lause 140	
C/ 168	SC 1	68.5.1	F	<sup>2</sup> 30	L <b>39</b>	# 174						
Dawe, Pie	rs		Nvie	dia			C/ 168	SC	168.6.3	P <b>35</b>	L14	# 183
Comment	Tvpe	Е	Comment Statu	is <b>D</b>		bucket EZ(auick review)	Dawe, Pier	S		Nvidia		
This s impler	ays "TP1 nented s	1 and TP4 system)" bu	(these test point this is outdated	nts are not typ .Clause 167	ically be acc (100G/lane \	essible in an /R and SR says "might	Comment <sup>®</sup> 6.3 dB	<i>Type</i> doesr	T I't seem rig	Comment Status <b>D</b> ht for the wavelengths cor	icerned: see co	<i>consistency_CL140</i> mment against 168.9
not be	accessil	ble". Line	ar optical module	s are feasible	at 100G/lane	now, at least for DR.	Suaaested	Reme	dv			
Gram	mar: "are	e not typica	illy be				Chang	e 6.3 t	o 6.0 (or 6	.1); change 10.6 to 10.3 (o	r 10.4)	
Suggested	Remedy	/					Proposed I	Respo	nse	Response Status W		
Chang	ge "are no	ot typically	be" to "might not	t be"			PROP	OSED	REJECT.			
Proposed PROP See c	Respons POSED A omment :	se ACCEPT IN #216.	Response Statu NPRINCIPLE.	s W			Keep o	consist	ent with LF	R PMDs from previous clau	ISES.	

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 U/unsatisfied Z/withdrawn SORT ORDER: Comment ID

C/ 168	SC 168.7.5.1	P <b>38</b>	L <b>5</b>	# 186	C/ 168	SC 168.7.5.4	P <b>39</b>	L19	# 188
Dawe, Pier	rs	Nvidia			Dawe, Pier	S	Nvidia		
Comment	Туре Е	Comment Status X		consistency_dj	Comment T	Туре Т	Comment Status D		consistency_CL1
This lo 150.8. Suggesteo	ong sentence with 5, 150.8.7, 150.8.7 IRemedy	two clauses is hard to unde 10 and 151.8.1 it has been	rstand. In a few divided into two	rplaces such as sentences.	A signa trouble it catch them, t	al that needed a some for the rea nes them all, tigh ightening this lir	main tap at 0.8 would be unh ceiver. The over/under-shoot itening this limit will make no nit will be helpful.	nealthily over-em spec may catch difference. If it o	nphasised and n many such signals. If doesn't catch all of
Chang	e "GHz and at free	quencies" to "GHz. At frequ	encies", here ar	id in 168.7.10.	Suaaested	e Remedv	·		
Proposed	Response	Response Status W			Change	e 0.8 to 0.85			
PROP Resolv	PROPOSED ACCEPT IN PRINCIPLE. Resolve using response to comment #74.					Response	Response Status W		
C/ 168	SC 168.7.5.3	P38	L 53	# 187	0.8 is f	ollowing clause	140.		
Dawe, Pier	rs	Nvidia			See co	omment #74.			
Comment	Туре Т	Comment Status D		consistency_dj	C/ 168	SC 168.7.11	P <b>40</b>	L 53	# 191
More e	exceptions				Dawe, Pier	S	Nvidia		
Suggestea	Remedy				Comment 7	Туре Т	Comment Status D		consistency
The sig	gnaling rate of the n specified for TDE	test pattern generator is as ECQ in Table 168–10.	given in Table	168-6 and uses a test	In prac these c	tice, RIN is not days, but with th	measured with the optical pov e scope method described in	wer meter metho P802.3di 180.9.	od described in 52.9.6 11 (and T&M vendor's

eter method described in 52.9.6 these days, but with the scope method described in P802.3dj 180.9.11 (and T&M vendor's literature). This has the advantage that RIN can be calculated as a by-product of a TECQ measurement.

#### SuggestedRemedy

As this project is ahead of P802.3dj, replace the contents of 168.7.11 with a copy of 180.9.11, adjusting for the optical return loss(es) and reference Rx bandwidth of this clause.

In Table 168-10, change "Square wave" to "4 or 6".

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE. See comment #94.

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 U/unsatisfied Z/withdrawn SORT ORDER: Comment ID

Comment ID 191

consistency\_dj

consistency CL140

Proposed Response

PROPOSED ACCEPT IN PRINCIPLE.

Resolve using response to comment #74.

There are no interfering optical lanes and therefore the delay requirement of at least 31 UI between test pattern on one lane and any other lane, as specified in 121.8.5.1, is redundant. [Stated above - The combination of the O/E converter and the oscilloscope has a 3 dB bandwidth of approximately 26.5625 GHz with a fourth-order Bessel-Thomson response to at least 1.3 × 53.125 GHz. At frequencies above 1.3 × 53.125 GHz the response should not exceed -20 dB. Compensation may be made for any deviation from an ideal fourthorder Bessel-Thomson response.]

The normalized noise power density spectrum, N(f) in Equation (121-9), is equivalent to white noise filtered by a fourth-order Bessel-Thomson response filter with a 3 dB bandwidth

of 26.5625 GHz.

Response Status W

C/ 168	SC 168.7.12	P <b>41</b>	L <b>8</b>	# 192	C/ 168	SC 168.7.12	P <b>41</b>	L <b>40</b>	# 195
Dawe, Pie	rs	Nvidia			Dawe, Pier	rs	Nvidia		
Comment This fig	<i>Type</i> <b>E</b> gure is a bitmap;	Comment Status <b>D</b> grey and unclear		ref_receiver	Comment Units s	<i>Type</i> <b>E</b> should be uprigh	<i>Comment Status</i> <b>D</b> t not italic		ref_receiver
Suggested Insert	dRemedy the figure the pro	per way so it appears as a "	vector graphic" ir	the pdf;	Suggested Per co	<i>Remedy</i> mment			
Use bl Make	lack font; the axes black				Proposed	Response	Response Status W		
Proposed	Response	Response Status W			PROP See co	OSED ACCEPT	IN PRINCIPLE.		
See co	omment #111.	IN PRINCIPLE.			C/ 168	SC 168.7.13	P <b>42</b>	L <b>38</b>	# 196
C/ 168	SC 168.7.12	P <b>41</b>	L9	# 193	Dawe, Pier	ſS	Nvidia		
Dawe Pie	rs	Nvidia	-		Comment	Туре Е	Comment Status D		consistency_dj
Comment y axis	<i>Type</i> <b>E</b> can be optimised	Comment Status D		ref_receiver	In this confor signal, suppos	section we have mance signal, op input signal, sig sed to use the sa	e: conformance test signal, signal, test signal, signal, stressed reconstruction of the signal, and stressed receiver construction and for a thing, every test and stressed receiver test.	nal being transn eiver conforman nformance input me (style quide	nitted, received ce test signal, test signal. We are 10.1.1 Homogeneity).
Suggested	Remedy	(18 to 0) to (15 to 3)			Suggested	IRemedy	0, ,		0,000
Dranaaad					Try to	clean this up, as	much as is reasonable.		
Proposed PROP See co	POSED ACCEPT	Response Status <b>w</b> IN PRINCIPLE.			Proposed PROP	Response OSED ACCEPT	Response Status W		
C/ 168	SC 168.7.12	P <b>41</b>	L37	# 194		00 / 00 = / 0			" [10]
Dawe, Pie	rs	Nvidia			C/ 168	SC 168.7.13	P42	L <b>39</b>	# 197
Comment	Туре Е	Comment Status D		ref_receiver	Dawe, Pier	rs T T			·
100GE	BASE-BR10				Comment "SRS"	is not explained	. It is used only three times.		consistency_aj
Suggested	Remedy				Suggested	IRemedy	· ···· · ···· · · · · · · · · · · · ·		
100GE	BASE-BRIU				Spell it	t out each time			
Proposed	Kesponse	Response Status W			Proposed I	Response	Response Status W		
See co	omment #111.	IN PRINCIPLE.			PROP	OSED ACCEPT treatment in 802	IN PRINCIPLE. 2.3dj.		

C/ 168	SC 168.7.13	P <b>42</b>	L <b>42</b>	# 198	C/ 168	SC 168.7.13.3	P43	L <b>41</b>	# 202		
Dawe, Piers		Nvidia			Dawe, Piers		Nvidia				
Comment	Туре Т	Comment Status D		new	Comment Type E		Comment Status X		consistency_d		
This s text to in Fig	ays "The reflectar tell the reader wh 168-7	nce of the optical link should t nat to do, and unlike the TDE	be at its maximu CQ setup, there	m level" but there is no is no optical reflector	From the style guide: The word may is used to indicate a course of action permissible within the limits of the standard (may equals is permitted to).						
Suggester	Remedy				SuggestedRemedy Change "under-stressed may result" to "under-stressed could result" or "under-stressed might result" Proposed Response Response Status W						
Explai	in this fully or dele	te the sentence.									
Proposed	Response	Response Status W									
PROF Consi	POSED ACCEPT der revising figure	N PRINCIPLE. 168-7.			PROP See co	OSED ACCEPT I omment #79.	N PRINCIPLE.				
C/ 168	SC 168.7.13	P <b>42</b>	L <b>44</b>	# 199	C/ 168	SC 168.9	P <b>45</b>	L <b>26</b>	# 205		
Dawe, Pie	rs	Nvidia			Dawe, Pier	rs	Nvidia				
Comment	Туре Т	Comment Status D		quick review	Comment	Туре <b>т</b>	Comment Status D		consistency_CL140		
Add te crosst measu Proposed PROF Impleu See c	ext saying that the talk should be ope ured. The same g <i>Response</i> POSED ACCEPT ment suggested re omment #79.	PMD's transmitter and any o rational when stressed sensi- oes for transmitter measuren <i>Response Status</i> <b>W</b> N PRINCIPLE. emedy with editorial license.	ther circuitry tha ivity (and regula nents such as T	It could cause ar sensitivity) is ECQ and TDECQ.	Calcul 1260 of Suggested Chang 10.4). Proposed PROP Keep of	ating the channel or 6.02 dB at 1303 <i>IRemedy</i> le 6.3 to 6 (or 6.1) <i>Response</i> OSED REJECT. consistent with LR	<ul> <li>a. Change the budget for 10</li> <li><i>Response Status</i> W</li> <li>RPMDs in previous clauses.</li> </ul>	model, it's 6.00	dB at 1310 nm 6.20 at		
C/ 168	SC 168.7.13.	B P <b>43</b>	L33	# 201	CL 469	SC 468 0	DAE	/ 26	# 200		
Dawe, Pie	rs	Nvidia			C/ 100	30 100.9	F 45	L 30	# 206		
Comment Type         E         Comment Status         D         consistency_dj           Now that we have a definition of TECQ, this can be done directly         Consistency_dj         Consistency_dj						rs <i>Type</i> <b>T</b> ives the dispersion	NVIGIA Comment Status D	irection only	bucket(quick review)		
SuggestedRemedy Change "is measured according to 168.7.5, except that the test fiber is not used" to "is measured according to 168.7.6"						SuggestedRemedy Add two more rows for the dispersion ranges for the downstream direction.					
Proposed PROF See c	Response POSED ACCEPT omment #79.	Response Status W N PRINCIPLE.			Proposed PROP The di (This i	Response OSED REJECT. spersion covers b s simplification.)	Response Status <b>W</b> oth directions.				

C/ 168	SC	168.10	P <b>46</b>	L <b>26</b>	# 210	C/ 168	SC	168.11	P <b>47</b>	L39	# 212	
Dawe, Pier	rs		Nvidia			Dawe, Pier	s		Nvidia			
Comment TypeEComment StatusDbucket_EZ(quick review)may not support operation 10 km for 100GBASE-BR10, 20 km for 100GBASE-BR20 or 40			Comment Type         T         Comment Status         D         interoperation           This needs some text to introduce the table, which should also address interoperability, or									
km for 100GBASE-BR40. SuggestedRemedy						not, with 100GBASE-BR10. Presumably the mixed link has to stay within the chromatic dispersion limits of the shorter-reach PMD.						
may no 40 km	ot supp for 10	oort operati 0GBASE-B	on *at* 10 km for 100GBASE R40.	-BR10, 20 k	m for 100GBASE-BR20 or	Suggested Somet	<i>Remec</i> hing lik	<i>dy</i> ke:				
Proposed I PROP	Respo OSED	nse ACCEPT.	Response Status W			168.11 The 10 an eng 100GE	Intero 0GBA jineeree ASE-B	peration b SE-BR20 d link) pro	etween 100GBASE-BRx PMI and 100GBASE-BR40 PMDs vided that the fiber optic cabli	Ds can interope ng (channel)	erate with each other (over characteristics for the maximum and	
C/ 168	SC	168.11	P <b>47</b>	L 39	# 211	minim	um cha	innel inser	tion loss values, which are give	ven in Table	168-15 for the two link	
Dawe, Pier	rs		Nvidia			direction Interor	ons sep peration	parately. A between	ttenuators may be used to ac 100GBASE-BR10 and 100G	hieve the rea	quired losses. or 100GBASE-BR40 is	
Comment	Туре	Е	Comment Status D		interoperation	not recommended (or whatever the case is).						
"168.1 materia	1 Req al e.g.	uirements f in 151 doe	or interoperation between 100 sn't say "Requirements for".	)GBASE-BF	Rx PMDs" other similar	Proposed PROP	Respor	nse REJECT	Response Status W			
Suggested Delete	Reme Requ	<i>dy</i> uirements fo	or" here and in the table title.			See co	ommen	t #130.				
Proposed	Respo	nse	Response Status W			C/ 168	SC	168.5.1	P <b>30</b>	L <b>38</b>	# 216	
PROP						Dudek, Mił	ke		Marvell			
Change the subclause title of 168.11 into: "Interoperation between 100GBASE-BRx PMDs".						Comment Type       E       Comment Status       X       bucket_EZ(quick review)         poor English.       SuggestedRemedy       Delete the "be" in "are not typically be accessible"						
Change the table title of Table 168–15 into: "Channel characteristics for interoperation between 100GBASE-BR20 and 100GBASE- BR40". Add additional row to specify the maximum distance in Table 168-15.												
					Proposed Response Response Status W PROPOSED ACCEPT. Meintenance required for Clouce 160							

C/ 168	SC 168.6	P32	L <b>40</b>	# 217	C/ 168	SC	168.11	P <b>47</b>	L <b>47</b>	# 219	
Dudek, Mik	æ	Marvell			Dudek, Mike			Marvell			
Comment T	Type <b>TR</b>	Comment Status D		interoperation	Comment	Туре	TR	Comment Status D		interoperation	
The sta 100GB 100GB addition includir for inte output signal o	atement is made BASE-BR10 and BASE-BR10 and nal requirements ng the addition o rr-operation betw power for 100GE detect "fail" level	that the 100GBASE-DR40 P 100GBASE-BR20 provided th 100GBASE-BR20 are met, h for interoperation between 1 f minimum losses. Section 1 een 100GBASE-BR40 and 1 BASE-BR40 in the off state is of -20dBm.	MD will interope ne channel requ owever section 00GBASE-BR4 68.11 doesn't ir 00GBASE-10 ar -15dBm which	rate with the irements for 168.11 includes 0 and 100GBASE-20 include minimum losses ind the minimum Tx s greater than the	There is only one fiber between the BR20 and BR40 PMD's so there can't be different loss specs for the two directions. To be compliant in both directions it appears that the loss between BR20 and BR40 would have to be min 8.3dB and max 10dB which is a very small range but could be specified. SuggestedRemedy Collapse the two rows in Table 168-15 into one row. With min loss of 8.3dB and max loss of 10dB						
Suggested	Remedy				Proposed Response Response Status W PROPOSED ACCEPT IN PRINCIPLE. See comment #130.						
add "e table fo 168.11	except that the ch or the inter-opera	nannel losses are specified in tion between 100GBASE-BR	section 168.11 40 and 100GBA	'. Add an appropriate SE-BR10 to section							
Proposed F	Response	Response Status W			C/ 168	SC	168.9	P <b>45</b>	L <b>30</b>	# 271	
PROP	OSED ACCEPT	IN PRINCIPLE.			Maniloff, E	ric		Ciena			
See co	omment #130.				Comment	Туре	т	Comment Status D		consistency_dj	
C/ 168	SC 168.7.12	P41	L	# 218	It appears that a statistical analysis is being used to arrive at the chromatic dispersion values, as documented in G.652 Appendix I. The document should clarify the approach used to arrive at the CD values. 802.3dj currently includes the following text: "The dispersion specifications are based on the statistical link design methodology documented						
Dudek, Mik	(e	Marvell									
Comment T	Туре Т	Comment Status X		ref_receiver	in In In I I I I I I I I I I I I I I I I						
In Figu be dele	re 168-6 "meets	equation constraints" needs	to be below all t	he lines or it needs to	ITU-T REC G.652, Appendix I." SuggestedRemedy						
	Remedy										
Fix it	Reflecty				Add a disper	footnot sion va	e to the C lues.	D values in Table168-12 ind	icating the metho	od used to calculate the	
Proposed Response Response Status W PROPOSED ACCEPT. See comment #111.						Proposed Response Response Status W PROPOSED ACCEPT IN PRINCIPLE. Add to footnote b: "The dispersion specifications are based on the statistical link design methodology documented in ITU-T REC G.652, Appendix I.".					