C/ 45	SC 45.2.1.7.5	P 40	L 14	# 1	C/ 124	SC	124.8.1	P 115	L 8	# 3
Hajducze	nia, Marek	Charter Com	munications		Nicholl, Sł	nawn		AMD		
Comment	Туре Е	Comment Status A		(bucket1)	Comment	Туре	т	Comment Status A		test pattern (bucket1
list us KR4.	es "." instead of "," 800GBASE-KR8"	' in edited list "100GBASE-ł	KR1, 200GBASE	-KR2, 400GBASE-	The Pattern column for the Wavelength row contains text "Square wave, 3, 4, 5, 6, or valid 400GBASE-R signal, or 800GBASER signal". Currently, it seems that the word valid is apply and patter the 400CBASE D signal.					
Suggeste	dRemedy									
Chan 12	ge "." to "," before r	newly added entry. Same o	n line 19. The sa	me applies to Table 45-	Suggested Propo	se "Squ	ay uare wave	, 3, 4, 5, 6, or valid 400GBA	SE-R signal, o	r valid 800GBASER
Response	9	Response Status C			signal	".				
ACCE	EPT.				Simila "Avera	ir comm age opti	nent for ro ical power	ws pertaining to "Side mode " parameter.	suppression ra	atio" parameter and to
C/ 173	SC 173.4.2.1	P 232	L 15	# 2	Response			Response Status C		
Nicholl, S	hawn	AMD			ACCE	PT IN F	PRINCIPL	E.		
Comment In 173 incon	<i>Type</i> T 3.4.2.1 "32:8 PMA sistent with referen	ised which is	Change to "Square wave, 3, 4, 5, 6, or valid 400GBASE-R or 800GBASE-R signal". Implement with editorial license. See comment #94.							
Suggeste	dRemedy				C/ 171	SC	171.3	P 192	L 15	# 4
Propo	ose to replace "con carries two PCSI s	tain" with "carries", so the s	sentence reads ". carries" emphasi	each of the 8 output zes that each lane is	Nicholl, Sh	nawn		AMD		
carryi	ng a stream of bits		ournee ompride		Comment	Туре	TR	Comment Status A		(bucket1
Propo	ose to make the sa	me change in 173.4.2.2 "8:	32 PMA bit-level	multiplexing".	Figure in the	transm	"Function it path of t	al block diagram for the PHY he PHY 800GXS and likewis	800GXS" sho se shows "Flov	ws "Flow <n> Rx" labels v <n> Tx" labels in the</n></n>
Response	9	Response Status C			receiv	e path.	I his intro	duces confusion.		
ACCE	EPT IN PRINCIPLE				Suggestee	dRemed	dy			
Modif "The carrie i = 16 PCSL PCSL	y the paragraphs ir multiplexing functions to PCSLs from to 31, and the con- us in the first group us in the second group.	n 173.4.2.1 and 173.4.2.2 b on has an additional constra PMA client lanes $i = 0$ to 19 tents of each output lane a , preceded and followed by oup, in an alternating fashic	pased on the follo aint that each of t 5 and two PCSLs re two bits, one f two bits, one fro on."	wing: he 8 output lanes s from PMA client lanes rom each of the two m each of the two	Propose one of the following solutions: * Update the diagram. In the transmit path of the PHY 800GXS (i.e. direction from PM to 800GMII), use labels "Flow 0 Tx" and "Flow 1 Tx". In the receive path of the PHY 800GXS (i.e. direction from 800GMII to PMA), use labels "Flow 0 Rx" and "Flow 1 Rx". The problem with this proposal is that it contradicts the PICS tables (which for example indicate that the "171.8.4.1 Transmit function" of the 800GXS includes a 64B/66B to 256B/257B transcoder).					(i.e. direction from PMA 'e path of the PHY Rx" and "Flow 1 Rx". as (which for example, udes a 64B/66B to eplace "Flow 0 Tx" with

Implement with editorial license.

"Flow 1 Rx" with "Flow 1". If this solution is chosen, propose to apply similar solution to Figure 172-2 "Functional block diagram". * Remove the diagram. Since the diagram is effectively an inverted replica of Figure 172-2 "Functional block diagram", rely on the text (in the same manner that 118.1.2

"Flow 0". Replace "Flow 1 Tx" with "Flow 1". Replace "Flow 0 Rx" with "Flow 0". Replace

"200GXS/400GXS Sublayer" was able to rely on text without a new diagram).

Response

Response Status W

ACCEPT IN PRINCIPLE. Resolve using the response to comment #5.

Comment ID 4

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C/ 172	SC 172.1	.5	P 204	L 14	# 5	C/ 162	SC	162.14.4.2		P 139	L 52	# 7
Nicholl, Sh	awn		AMD			Lusted, Ke	nt		Ir	tel Corpora	tion	
Comment	Type TR	Comment St	tatus A		(bucket1)	Comment	Гуре	TR	Comment Sta	atus A		(bucket1)
Figure Currer "Flow may c	172.1.5 "Fund htly, the diagr <n> Rx" labe ause confusi</n>	nctional block diagra ram shows "Flow <n els in the receive pat on.</n 	am" contains > Tx" labels h. When/If tl	a functional diag in the transmit p his diagram is re	gram of the 800G PCS. ath and likewise shows -used for 800GXS it	The PI 2022, I due to includi	CS tab nas an the ad ng Tab	ble for "PMD incorrect re Idition of the ble 162-10a.	control function ference to the new item (h) in	n" the base relevant sub n 3df 162.6.	document, as a oclause for the tr 11 and the new :	mended by Std 802.3ck- aining pattern entries sub-clause 162.8.11.1,
Suggested	Remedy					Suggested	Reme	dy				
Propos Tx" with Replace block (se to update th "Flow 0". ce "Flow 1 R: diagram for ti	the diagram. Remo Replace "Flow 1 Tx" x" with "Flow 1". Se he PHY 800GXS" in	ove the Tx/Rx with "Flow 1 e similar con sub-clause	t in the dotted and ". Replace "Floon nment against Fi 171.3 and apply	ea. Replace "Flow 0 w 0 Rx" with "Flow 0". gure 171-2 "Functional consistent solution.	Update For Ite - updat - updat	e 162.1 m 'PC2 e the s e value	14.4.2 PMD 2': subclause to e/comment	Control Function be 162.8.11.1 to reference Ta	on PICS iter	ns as follows: a	
Response		Response St	atus W			Eor Ito		2'-				
ACCE	PT IN PRINC	CIPLE.				- updat	the s	s. subclause to	be 162.8.11.1			
Remo	ve the "Tx" a	nd "Rx" from the lab	els inside the	e dotted boxes ir	r Fig 172-2 and in Fig	Response			Response Sta	tus W		
Impler	nent with edi	torial license.				ACCEI	PT IN I	PRINCIPLE				
C/ 173	SC 173.4	.2.1	P 232	L 7	# 6	Add 16 sugges	2.14.4 sted re	1.2 from the medy.	base documer	it and amen	d table items PC	2 and PC3 per the
Nicholl, Sh	awn	,	AMD			CI 163	50	162 12 / 2		D119	/ 52	# 0
Comment	Type TR	Comment Si	tatus A		bit muxing		30	103.13.4.2		F 140	L 32	# 0
In 173 multip	.4 "Functions lexing" and s	s within the PMA" th ays to "see 173.4.2	e text referer .1". However	nces the undefine , the word "restri	ed term "restricted bit- cted" does not appear	Comment	пt Гуре	TR	Ir Comment Sta	atus A	lion	(bucket1)
in 173	.4.2.1 "32:8 F	PMA bit-level multip	lexing".			The PI	CS tab	ble for "PMD	control functio	on" the base	document, as a	mended by Std 802.3ck-
Suggested Propos	<i>Remedy</i> se to update	the text in 173.4.2.1	"32:8 PMA I	bit-level multiple:	king". Replace "The	due to	the ad	Idition of the	new item (h) in	n 3df 162.6.	11 and the new	sub-clause 162.8.11.1,
multip	lexing functio	n has an additional	constraint	" with "This restr	icted bit-multiplexing	Suggested	Reme	dv				
functio	on has an ado	ditional constraint	"			Undate	163 1		Control Functio	on PICS iter	ns as follows:	
Simila	rly, propose t	to update the text in	173.4.2.2 "8	:32 PMA bit-leve	I multiplexing".	For Ite	m 'PC2	2':				
Replac multip	ce "The multi lexing functio	plexing function has on has an additional	s an additiona constraint	al constraint" \ "	vith "This restricted bit-	- updat - updat	e the s e valu	subclause to e/comment	be 162.8.11.1 to reference Ta	able 162-10	a	
Likewi "The 4	se, propose PCSLs rece	to update the text in eived on an input lar	173.4.2.3 "8 le shall be ma	:8 PMA bit-level apped" with "7	multiplexing". Replace	For Ite - updat	m 'PC: e the s	3': subclause to	be 162.8.11.1			
multip	lexing functio	on has an additional	constraint th	at the 4 PCSLs i	eceived on an input	Response			Response Sta	tus W		
lane s	nali be mapp	ea"	,			ACCEI	PT IN I	PRINCIPLE				
Response		Add 16	3.13.4	1.2 from the	base documer	it and amen	d table items PC	2 and PC3 per the				
ACCE	PT IN PRINC	JIPLE.				sugges	sted re	medy.				
Impler https:/	ment the cha /www.ieee80	nges on slide 38 of 2.org/3/df/public/23	the following _0523/brown	presentation wit _3df_03c_23052	h editorial license: 23.pdf							
	technical rec	quired ER/editorial	required GR	general required	T/technical E/editorial G/	general	11/000	catiofied 74	withdrawn	Comm	ent ID 8	Page 2 of 28

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

2023-05-25 12:08:38 P

C/ 93A	SC 93A.1	P 245	L 54	# 9	CI 45	SC 45.2.5.16	a P81	L 49	# 11		
Lusted, Ke	ent	Intel Corpora	tion		Ewen, Joh	n	Independent				
Comment	Type TR	Comment Status A		(bucket1)	Comment	Туре Е	Comment Status A		(bucket1)		
Table ameno	93A "Physical L ded by Std 802.	ayer specificiations that empl 3ck-2022, does not contain er	oy COM" in the ntries for the new	base document, as v 800GbE rates.	Begini definir	ning of sentence	refers to registers 4.300 to 4 0 to 5.302	.302; however,	the subclause is		
Suggested	dRemedy				Suggested	Remedy					
Updat 800GA	e the table to in AUI-8 C2C (Ann	clude the following Physical L ex 120F) Table 120F-8	ayer references	and Parameter values:	Change 4.300 - 4.302 to 5.300 - 5.302 respectively in first sentence of second sub-clause paragraph.						
800GE	BASE-KR8 (Cla	use 163) Table 163-11			Response		Response Status C				
Response		Response Status W			ACCE	PT.					
ACCE Add A	PT IN PRINCIP	LE. 9 draft.			C/ 124	SC 124.7.3	P110	L 16	# 12		
In 93A	A.1 add the instr	uction "Change Table 93A–2	(as amended by	802.3ck-2022) as	Stassar, P	eter	Huawei				
follows	s (some unmod	fied rows not shown):"	t row for 400CA	II 4 C2C (Appay 120E)	Comment	Type TR	Comment Status R		penalties		
Impler Cl 169 Laubach, I Comment "(See the sta measu 31B.2 Suggestee Cross Proposed	Ment with editor SC 169.4 Mark Type E 31B.2 for the de andard. Clause ured in units of p dRemedy -reference to wh Response	P 177 P 177 IEEE Member Comment Status D efinition of pause_quanta.)". I 31B.2 defines "pause_time" of pause_quanta," "pause_quanta here pause_quanta is actually Response Status C	L 40 r / Self see this referen only and that "Th anta" is defined a defined?	# 10 withdrawn ce is many places in re pause_time is somewhere else, not	3.5 dE 3.5 dE The di potent config Becau discre for MF Suggested In Tab alloca Furthe preset	As whereas for 40 s, whereas for 40 farence of 0.3 d ially suffering a 1 uration compare use it was agreed te reflectances a P penalty can be dRemedy the 124-8, in the of tion for penalties ermore change T intation will be pro-	OG-DR4-2 and 800G-DR8-2 B seems to originate from the higher MPI penalty due to lard d to a DR4/DR8 configuration (during the TF phase) to use s shown in in-force Table 12 assumed for DR4/DR8 and columns for 400GBASE-DR4 from 3.8 dB to 3.5 dB. x min power from x to y and ovided for the comment resol	it is 3.8 dB. e FR4 spec in C ger individual re n. e the same list of 4-13, also the sa DR4-2/DR8-2. -2 and 800GBA Rx sensitivity fro ution meeting	Clause 151, which is flections in an FR4 of requirements for ame (lower) allocation SE-DR8-2, change the om a to b. A supporting		
PROP	POSED REJECT	T.			REJE	CT.	Response Status C				
This c	comment was W	ITHDRAWN by the commenter	er.		The fo https:/	llowing presenta /www.ieee802.or	tion was reviewed by the cor g/3/df/public/23_0523/stassa	nment resolution ar_3df_01_2305	n group: 23.pdf		
					Basec appea	l on further discu red to be incomp	ssion, the information preser lete.	nted in stassar_3	3df_01_230523		
					There	was no consens	us to make a change at this	time.			
					The co future	ommenter is invit draft.	ed to prepare a more comple	ete proposal for	the review against a		

fault signaling

C/ 171	SC 171.4	P 193	L 42	# 13
Ran, Adee		Cisco		
Comment Tv	pe T	Comment Status A		fault signaling

т The standard should be explicit about what happens in a PHY connected to an 800GMII

Extender when there is no valid input signal.

The precedence is set in 802.3cw: D2.1 states (in 155.2.6.7.2) that the 400GBASE-ZR PCS sends local fault ordered sets to the 400GMII when there is no signal; this means the PHY XS transmits these local fault over the 400GAUI-n toward the DTE XS. There is no provision for "shutting down" the PHY XS output, so the 400GAUI-n in an Extender is never silent.

The behavior of the 800GMII extender should be the same as that of the 400GMII extender as described above.

Note that this behavior is different from existing optical modules that are connected with any AUI-C2M to a PCS (as part of the PHY, not an extender), where it is common to squelch the module electrical output (aka disable the AUI's transmitter) when there is no optical input (PMD:IS SIGNAL indication is not ok); that is indicated to by PCS via PMA:IS_SIGNAL.indication on its adjacent PMA. That would not be compliant behavior when the AUI is within a 800GMII Extender.

The different behavior required from Extender modules may not be obvious and should be mentioned.

Note: if the task force wants to allow squelching the Extender's AUI, it may require more significant changes; as an alternative, an editor's note can be added to capture that intent until a detailed proposal is presented

(such as "Editor's note: the behavior of the Extender when there is no input signal from the PHY is to be determined").

SuggestedRemedy

Add the following paragraph at the end of 171.4:

NOTE-link fault signaling generated by the PHY (see 170.3 and 81.3.4) is transmitted to the RS through the 800GMII Extender. Therefore, the electrical interface used within the 800GMII Extender sends valid PHY 800GXS data regardless of the link state of the PHY below the 800GMII.

Response

Response Status C

ACCEPT IN PRINCIPLE.

The following presentations were reviewed by the comment resolution group: https://www.ieee802.org/3/df/public/23 0523/ran 3df 01a 230523.pdf https://www.ieee802.org/3/df/public/23_0523/ran_3df_02_230523.pdf

Implement the changes on slides 4 to 13 of ran_3df_02_230523 with some exceptions and additions as follows:

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

For the squelch conditions change "by disabling some or all output lanes" to "by disabling one ore more output lanes". Specify that the PHY XS:IS SIGNAL indication may be updated based on the detection of link fault = LOCAL FAULT detected according to the state diagram in 81.3.4.2. Implement with editorial license.

See straw poll #2 captured in the response to comment #14.

Straw poll #3 (directional)

I support adding text explaining how local faults are used to signal upstream faults. Yes: 26 No: 4 NMI: 6 Abstain: 8

Straw poll #4 (directional)

I support allowing modules that include a PHY XS to squelch the output in addition to sending local faults. Yes: 19 No: 5 NMI: 9 Abstain: 11

Comment ID 13

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C/ 173	SC 173.4.8.3	P 23	36	L 19	#	14
Ran, Adee		Cisco				
Comment Ty	pe T	Comment Status	Α			fault signaling

"Otherwise the SIL reports the signal status as FAIL"

In the case of 8:8 PMA, this FAIL status typically indicates that data is not being received on all 8 input lanes (inst:IS_UNITDATA_0:7.indication). When this happens, the data on the output lanes (PMA:IS_UNITDATA_0:7.indication) cannot be determined from the standard. Apparently it is unspecified, but it isn't stated explicitly.

In optical modules (a common implementation of PMAs similar to this one), the typical behavior is to turn off the electrical output of the AUI-C2M; but this functionality is not specified in the standard, and there is no specification of "output disabled" in 120G.3.2. It can be argued that this common behavior is non-compliant.

With no specification of behavior in this condition, the signal status is not conveyed to the PMA client (host ASIC) in a specified and consistent manner. Moreover, SerDes designers cannot assume what signal appears on the AUI when there is no input, and that is a repeating source of confusion, often leading to bad design or unnecessary over-design.

We need to specify the AUI behavior when signal status is FAIL such that the PMA client can detect this situation. Based on existing module behavior, it is suggested to state that a PMA with a physically instantiated interface disables the transmitters on all lanes of that interface when signal status is FAIL on the other interface, for some minimum time. The PMA client can infer the status by detecting that its input signal corresponds to a disabled transmitter. This requires adding the missing "output disabled" mode in the module output characteristics (120G.3.2).

A possible alternative is to allow the PMA to transmit the PRBS31Q test pattern (120.5.11.2.2), if implemented, instead of disabling the transmitter. The PMA client can then infer the link status by detecting that its input corresponds to a PRBS31Q test pattern. This would not require adding "output disabled" mode, but it is likely not the existing behavior, and would be more disruptive.

Note that this isn't just an 802.3df problem (ambiguity of the module output is a longstanding issue), but since we are defining a new PMA it is a good opportunity to close this gap.

SuggestedRemedy

Add the following paragraph at the end of 173.4.8.3:

"When the signal status is FAIL, an 8:8 PMA shall disable the output on all lanes of its physically instantiated service interface for a minimum time of 50 ms."

Add 120G.3.2 to the draft. Change the first sentence from

"The module output shall meet the specifications given in Table 120G–3"

to

"When the module output is enabled, it shall meet the specifications given in Table

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

120G–3. When the module output is disabled, the Differential peak-to-peak output voltage shall be less than 35 mV."<paragraph break>

Change the title of Table 120G-3 to "Module output characteristics in enabled state at TP4"

Response	Response Status	С
ACCEPT IN PRINCIPLE		

Resolve using the response to comment #13.

Straw I supp Yes: 1 No: 10 NMI:5 Absta	poll #2 ort add 7) in: 12	2 (directiona ding a squel	l) ch feature to the P	MA ou	tput.		
C/ 120	SC	120.5.11.2	Ps	98	L 13	# 15	
Ran, Adee	;		Cisco	C			
Comment	Туре	т	Comment Status	Α			(bucket1)
"All te are de This s	st patte fined v hould	erns specifie without prec also include	ed in 120.5.11.2.1, oding." 120.5.11.2.a (PRE	120.5. 3S9Q 1	11.2.2, 120.5.1 test pattern add	1.2.3, and 120.5 led in 802.3ck).	.11.2.4
Suggestee	dReme	edy					
Add 1	20.5.1	1.2.a.					
Response ACCE	PT.		Response Status	С			

Comment ID 15

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0/43	SC 45.2.1.135	P 45	L 29	# 16	C/ 45	SC 45.2.3.2	5	P 60	L 1	# 17		
Ran, Adee		Cisco			Slavick, Je	ff	I	Broadcom				
Comment T	ype TR	Comment Status A		TX EQ register (bucket2)	Comment	Type TR	Comment St	atus A		(bucket		
Register used for Gb/s pe taps and	rs 1.500 through r transmitter equa r lane (defined in d specific sets of	1.515 and 1.516 through 1 lization (local and remote) Annex 120B or 120D resp tap values (or ratios) with r	.531 are mappe with AUI-C2C in ectively). The tr relatively coarse	d to variables that are nterfaces at 25 or 50 ansmit equalizer has 3 steps.	Listing the number of PCS lanes for each PCS type in Clause 45 just adds duplication of information provided in the actual PCS clause. This text is likely to get stale or not updated as new rates or PCS configurations are added. SuggestedRemedy							
For 100	Gb/s per lane AL	JI-C2C, the transmitter equ	alization is con	trolled by a different set	Remo	ve the last para	graph that begins	with Clause	82			
of variat incompa step siz subclau	bles, as defined ir atible with those of e. The mapping of ses of 120F.	n 120F.3.1.7 and 120F.3.2 f Annex 120B/120D - the t f these variables to MDIO	.6. The variable transmit equalize registers is also	es are different from and er has 5 taps and finer e specified in these	Response ACCE [Edito	PT. 's note: change	Response St	<i>atus</i> W /0 to 60/1]				
Therefo	re. Registers 1.50	00 through 1.531 should be	e made specific	to the AUI-C2C at 25 or	C/ 45	SC 45.2.3.2	5.1	P 60	L 14	# 18		
50 Gb/s	per lane.		F		Slavick, Je	ff	1	Broadcom				
This sho this proj	ould have been do ect, it should be o	one in 802.3ck, but if the s done correctly.	ubclauses of cla	use 45 are modified by	<i>Comment</i> Includ provid	<i>Type</i> TR ng the PCS rat e the clauses th	<i>Comment</i> Si e when defining v nose given variab	atus A which variable le and the cla	e is extraneous in ause numbers.	<i>(bucket)</i> (bucket) (bucket)		
If the su	If the suggested remedy is not within scope then, as an alternative, these subclauses of clause 45 should be deleted from 802.3df, since they are irrelevant for 800GAUI-n and thu out of scope.					Remedy						
clause 4 out of so	15 should be dele cope.	ted from 802.3df, since the	ey are irrelevant	for 800GAUI-n and thus	Chang (see 8	e the last sente	ence to read "This	bit reflects t	he state of am_l	ock[0] or amps_lock[0]		
clause 4 out of so S <i>uggested</i> R	15 should be dele cope. Remedy	ted from 802.3df, since the	ey are irrelevant	for 800GAUI-n and thus	Chang (see 8	e the last sente 2.2.19.2.2, 119	ence to read "This .2.6.2.2, or 172.2	bit reflects t .6.2.2)."	he state of am_l	ock[0] or amps_lock[0]		
clause 4 out of so SuggestedR In the tit 400GAL 16, and	45 should be dele cope. Remedy the and body text of JI-n, and 800GAU 400GAUI-8". App	ted from 802.3df, since the of 45.2.1.135, change "500 JI-n" to "50GAUI-n, 100GA oly the same change in the	GAUI-n, 100GAU UI-2, 200GAUI- title of Table 45	for 800GAUI-n and thus JI-2, 200GAUI-n, and 8, 200GAUI-4, 400GAUI- 5-107.	Chang (see 8 <i>Response</i> ACCE Chang 119.2.	e the last sente 2.2.19.2.2, 119 PT IN PRINCIF e to: "This bit ro 5.2.2 and 172.2	ence to read "This .2.6.2.2, or 172.2 <i>Response St</i> PLE. eflects the state of .6.2.2)."	bit reflects t .6.2.2)." atus W of am_lock[0]	he state of am_l (see 82.2.19.2.2	ock[0] or amps_lock[0] 2) or amps_lock[0] (see		
clause 2 out of so SuggestedR In the tit 400GAU 16, and Apply si	45 should be dele cope. Remedy tle and body text of JI-n, and 800GAL 400GAUI-8". App milarly in 45.2.1. ²	ted from 802.3df, since the of 45.2.1.135, change "500 JI-n" to "50GAUI-n, 100GA oly the same change in the 136, 45.2.1.137 (including [*]	GAUI-n, 100GAU UI-2, 200GAUI- title of Table 45 Table 45-108), a	for 800GAUI-n and thus JI-2, 200GAUI-n, and 8, 200GAUI-4, 400GAUI- 5-107. and 45.2.1.138.	Chang (see 8 <i>Response</i> ACCE Chang 119.2. [Editor	e the last sente 2.2.19.2.2, 119 PT IN PRINCIF e to: "This bit r 6.2.2 and 172.2 's note: change	ence to read "This .2.6.2.2, or 172.2 <i>Response St</i> PLE. eflects the state of 2.6.2.2)." ed page/line from	bit reflects t .6.2.2)." atus W of am_lock[0] 0/0 to 60/14]	he state of am_I (see 82.2.19.2.2	ock[0] or amps_lock[0] 2) or amps_lock[0] (see		
clause 2 out of so SuggestedR In the tit 400GAL 16, and Apply si Response	45 should be dele cope. Remedy de and body text of JI-n, and 800GAL 400GAUI-8". App milarly in 45.2.1.1	ted from 802.3df, since the of 45.2.1.135, change "500 II-n" to "50GAUI-n, 100GA Ily the same change in the 136, 45.2.1.137 (including ' Response Status W	GAUI-n, 100GAU UI-2, 200GAUI- title of Table 45 Table 45-108), a	for 800GAUI-n and thus JI-2, 200GAUI-n, and 8, 200GAUI-4, 400GAUI- 5-107. and 45.2.1.138.	Chang (see 8 Response ACCE Chang 119.2. [Editoo	e the last sente 2.2.19.2.2, 119 PT IN PRINCIF e to: "This bit m 6.2.2 and 172.2 's note: change SC 45.2.3.4	ence to read "This .2.6.2.2, or 172.2 <i>Response St</i> PLE. effects the state of 2.6.2.2)." ed page/line from 8a	bit reflects t .6.2.2)." atus W of am_lock[0] 0/0 to 60/14] P 62	he state of am_I (see 82.2.19.2.2 <i>L</i> 43	ock[0] or amps_lock[0] 2) or amps_lock[0] (see # 19		
clause 2 out of so SuggestedR In the tit 400GAL 16, and Apply si Response ACCEP	45 should be dele cope. Remedy Ile and body text of JI-n, and 800GAU 400GAUI-8". App milarly in 45.2.1.1 T IN PRINCIPLE.	ted from 802.3df, since the of 45.2.1.135, change "500 JI-n" to "50GAUI-n, 100GA Jly the same change in the I36, 45.2.1.137 (including Response Status W	GAUI-n, 100GAU UI-2, 200GAUI- title of Table 45 Table 45-108), a	for 800GAUI-n and thus JI-2, 200GAUI-n, and 8, 200GAUI-4, 400GAUI- 5-107. and 45.2.1.138.	Chang (see 8 <i>Response</i> ACCE Chang 119.2. [Editor <i>Cl</i> 45 Slavick, Je	e the last sente 2.2.19.2.2, 119 PT IN PRINCIF e to: "This bit m 5.2.2 and 172.2 's note: change SC 45.2.3.4 ff	ence to read "This .2.6.2.2, or 172.2 <i>Response St</i> PLE. effects the state of 2.6.2.2)." d page/line from 8a	bit reflects t .6.2.2)." atus W of am_lock[0] 0/0 to 60/14] P 62 Broadcom	he state of am_I (see 82.2.19.2.2 <i>L</i> 43	ock[0] or amps_lock[0] 2) or amps_lock[0] (see # <u>19</u>		
clause 2 out of so SuggestedR In the tit 400GAL 16, and Apply si Response ACCEP Some o	45 should be dele cope. Remedy de and body text of JI-n, and 800GAU 400GAUI-8". App milarly in 45.2.1.1 T IN PRINCIPLE. f the changes pro	ted from 802.3df, since the of 45.2.1.135, change "500 JI-n" to "50GAUI-n, 100GA oly the same change in the 136, 45.2.1.137 (including Response Status W	GAUI-n, 100GAUU-2, 200GAUI-2, 200	for 800GAUI-n and thus JI-2, 200GAUI-n, and 8, 200GAUI-4, 400GAUI- 5-107. and 45.2.1.138.	Chang (see 8 Response ACCE Chang 119.2. [Editoo C/ 45 Slavick, Je Comment	e the last sente 2.2.19.2.2, 119 PT IN PRINCIF e to: "This bit r 6.2.2 and 172.2 's note: change SC 45.2.3.4 ff Type TR	ence to read "This .2.6.2.2, or 172.2 <i>Response St</i> PLE. effects the state of .6.2.2)." d page/line from 8a	bit reflects t .6.2.2)." atus W of am_lock[0] 0/0 to 60/14] <i>P</i> 62 Broadcom atus A	he state of am_I (see 82.2.19.2.2 <i>L</i> 43	ock[0] or amps_lock[0] 2) or amps_lock[0] (see # <u>19</u> <i>(bucket</i>		
clause 2 out of so SuggestedF In the tit 400GAL 16, and Apply si Response ACCEP Some o project.	45 should be dele cope. Remedy de and body text of JI-n, and 800GAU 400GAUI-8". App milarly in 45.2.1. T IN PRINCIPLE. f the changes pro However, some of	ted from 802.3df, since the of 45.2.1.135, change "500 JI-n" to "50GAUI-n, 100GA oly the same change in the 136, 45.2.1.137 (including ' <i>Response Status</i> W posed in the suggested re changes are warranted.	GAUI-n, 100GAUU-2, 200GAUI-2, 200GAUI-2 title of Table 45 Table 45-108), a	for 800GAUI-n and thus JI-2, 200GAUI-n, and 8, 200GAUI-4, 400GAUI- 5-107. and 45.2.1.138. ithin the scope of this	Chang (see 8 Response ACCE Chang 119.2. [Editoo C/ 45 Slavick, Je Comment The cl counter	e the last sente 2.2.19.2.2, 119 PT IN PRINCIF e to: "This bit r 6.2.2 and 172.2 's note: change SC 45.2.3.4 ff Type TR ause 45 registe r exists is funct	ence to read "This .2.6.2.2, or 172.2 <i>Response St</i> PLE. efflects the state of .6.2.2)." d page/line from 8a <i>Comment St</i> rs are containers tional Clause dep	bit reflects t .6.2.2)." atus W of am_lock[0] 0/0 to 60/14] P 62 Broadcom atus A for informatic endency not	he state of am_I (see 82.2.19.2.2 <i>L</i> 43 on the other clau a Clause 45 dep	ock[0] or amps_lock[0] 2) or amps_lock[0] (see # <u>19</u> <i>(bucket</i> uses have. Whether a bendency.		
clause 2 out of so SuggestedF In the tit 400GAL 16, and Apply si Response ACCEP Some o project. Delete t from the	45 should be dele cope. Remedy (le and body text of JI-n, and 800GAU 400GAUI-8". App milarly in 45.2.1. T IN PRINCIPLE. If the changes pro However, some of he changes to the 802.3df draft.	ted from 802.3df, since the of 45.2.1.135, change "500 JI-n" to "50GAUI-n, 100GA oly the same change in the 136, 45.2.1.137 (including ' <i>Response Status</i> W posed in the suggested re changes are warranted. e 45.2.1.135, 45.2.1.136, 4	GAUI-n, 100GAUU-2, 200GAUI-2 title of Table 45 Table 45-108), a medy are not w	for 800GAUI-n and thus JI-2, 200GAUI-n, and 8, 200GAUI-4, 400GAUI- 5-107. and 45.2.1.138. ithin the scope of this 45.2.1.138 subclauses	Chang (see 8 Response ACCE Chang 119.2. [Editoo C/ 45 Slavick, Je Comment The cl counte Suggested	e the last sente 2.2.19.2.2, 119 PT IN PRINCIF e to: "This bit r 5.2.2 and 172.2 's note: change SC 45.2.3.4 ff Type TR ause 45 registe r exists is funct Remedy	ence to read "This .2.6.2.2, or 172.2 <i>Response St</i> PLE. efflects the state of .6.2.2)." d page/line from 8a <i>Comment St</i> rs are containers tional Clause dep	bit reflects t .6.2.2)." atus W of am_lock[0] 0/0 to 60/14] P 62 Broadcom atus A for informatic endency not	he state of am_I (see 82.2.19.2.2 <i>L</i> 43 on the other clau a Clause 45 dep	ock[0] or amps_lock[0] 2) or amps_lock[0] (see # <u>19</u> <i>(bucket</i> uses have. Whether a bendency.		
clause 2 out of so SuggestedR In the tit 400GAU 16, and Apply si Response ACCEP Some o project. Delete t from the Other ch	45 should be dele cope. Remedy Ile and body text of J-n, and 800GAU 400GAUI-8". App milarly in 45.2.1. T IN PRINCIPLE. If the changes pro However, some of he changes to the 802.3df draft. nanges may be a	ted from 802.3df, since the of 45.2.1.135, change "500 JI-n" to "50GAUI-n, 100GA oly the same change in the 136, 45.2.1.137 (including ' <i>Response Status</i> W oposed in the suggested re changes are warranted. e 45.2.1.135, 45.2.1.136, 4 ddressed through the 802.	GAUI-n, 100GAU UI-2, 200GAUI- title of Table 45 Table 45-108), a medy are not w 5.2.1.137, and 3 maintenance	for 800GAUI-n and thus JI-2, 200GAUI-n, and 8, 200GAUI-4, 400GAUI- 5-107. and 45.2.1.138. ithin the scope of this 45.2.1.138 subclauses process.	Chang (see 8 Response ACCE Chang 119.2. [Editou Cl 45 Slavick, Je Comment The cl counte Suggested Remo Response	e the last sente 2.2.19.2.2, 119 PT IN PRINCIF e to: "This bit r 5.2.2 and 172.2 's note: change SC 45.2.3.4 ff Type TR ause 45 registe r exists is funct Remedy ve the word "op	ence to read "This .2.6.2.2, or 172.2 <i>Response St</i> PLE. effects the state of .6.2.2)." d page/line from 8a <i>Comment St</i> rs are containers ional Clause dep tional" in the sect <i>Response St</i>	bit reflects t .6.2.2)." atus W of am_lock[0] 0/0 to 60/14] P 62 Broadcom atus A for information endency not ond sentence atus W	he state of am_I (see 82.2.19.2.2 <i>L</i> 43 on the other clau a Clause 45 dep	ock[0] or amps_lock[0] 2) or amps_lock[0] (see # <u>19</u> <i>(bucket</i> uses have. Whether a bendency.		

Comment ID 19

C/ 45	SC 45.2.4.15	P 68	L 36	# 20	C/ 45	SC 45.2.4.16a	P 71	L 45	# 23
Slavick, Je	eff	Broadcom			Slavick, Je	ff	Broadcom		
Comment	Type TR	Comment Status A		(bucket1)	Comment	Type TR	Comment Status A		(bucket2)
Includ provid	ling the PCS rate le the clauses tho	when defining which variable i se given variable and the clau	s extraneous i se numbers.	nformation. Just	The cla counte	ause 45 registers r exists is functio	are containers for information nal Clause dependency not a	on the other clau a Clause 45 dep	uses have. Whether a pendency.
Suggestee	dRemedy				Suggestea	Remedy			
Chang	ge the last senten	ce to read "This bit reflects the	e state of amps	s_lock[0] (see	Remov	ve the word "optic	nal" in the second sentence		
119.2	.6.2.2, or 172.2.6.	2.2)."			Response		Response Status W		
Response		Response Status W			ACCE	PT.			
ACCE Chane Make	PT IN PRINCIPL ge to: "This bit ref similar change in	E. ects the state of amps_lock[0 45.2.5.15.1] (see 119.2.6.	2.2 and 172.2.6.2.2)."	[Editor	's note: changed	page/line from 0/0 to 71/45]		
					C/ 1	SC 1.4.148i	P 31	L 44	# 24
[Edito	r's note: changed	page/line from 0/0 to 60/1]			Slavick, Je	ff	Broadcom		
C/ 45	SC 45.2.4.15	P 68	L 47	# 21	Comment	Type TR	Comment Status R		(bucket1)
Slavick, Je	eff	Broadcom			lsn't it	a 800GMII interfa	ce between the RS and eith	er a PCS or Ext	ender and an Extender
Comment	Type TR	Comment Status A		(bucket2)	and a		ion only lists RS to PCS.		
Listing	g the number of P	CS lanes for each PCS type in	n Clause 45 jus	t adds duplication of	Suggested	Remedy			
inform updat	nation provided in ed as new rates o	the actual PCS clause. This r PCS configurations are adde	text is likely to ed.	get stale or not	I he in Interfa	terface used betw ce Extender Subl	een the Reconciliation Subl ayer (XS) and the Physical C	ayer (RS), Med Coding Sublayer	ia Independent · (PCS) for 800 Gb/s
Suggestee	dRemedy				Response		Posponso Status M		
Remo	we the last parage	aph that begins with Clause 1	19		REIE	T	Response Status W		
Response	,	Response Status W			The 80	00GMII is indeed	an interface between the RS	and the PCS.	The 800GMII extender,
ACCE	PT.				as its r	name implies, ext	ends the reach of the 800GN	VII to a PCS that	t is not colocated with
[Edito	r's note: changed	page/line from 0/0 to 68/47]				NU/NO.			
Cl 45	SC 45.2.5.16	a P 81	L 45	# 22					
Slavick, Je	eff	Broadcom							
Comment	Type TR	Comment Status A		(bucket2)					
The c count	lause 45 registers er exists is functio	are containers for information nal Clause dependency not a	the other clau Clause 45 dep	ses have. Whether a endency.					
Suggestee	dRemedy								
Remo	ve the word "option	onal" in the second sentence							
Response ACCE	PT.	Response Status W							
[Edito	r's note: changed	page/line from 0/0 to 81/45]							

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 24

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C/ 45	SC 45.2.1.135.1	P 45	L 48	# 25	C/ 45	SC	45.2.1.135.3	P 46	L 3	# 27	
Slavick, J	eff	Broadcom			Slavick, Je	eff		Broadcom			
Comment With t	<i>Type</i> TR <i>Comme</i> he deletions the paragraph ralue of this bit indicates the	ent Status A now reads a bit str value of the varia	angely and n ble Request_	TX EQ register (bucket2) eeds some word smithing. flag in the lane 0 receiver	Comment The v	<i>Type</i> alue of t	TR C these indicates	<i>Comment Status</i> A is the value is an odd phra	ase	TX EQ register (bucket2)	
in the chip c chip la not pr	receive direction (see 120B evice is issuing a request to ane 0 transmitter in the recei esent in the package, then t	.3.2 and 120D.3.2 change the remo ive direction. If a la he value returned	.3). This indic te transmitter ane 0 receive for this bit sh	ates whether the chip-to- equalization in the chip-to- r in the receive direction is ould be zero."	Repla Repla the" w	ce "The ith "The	ay e value of these ese its indicate Re	e bits indicates the value the state of the Request	of the varia ted_eq_cm1	ble Requested_eq_cm1 in variable of the"	
Suggester Make	IRemedy it so the old paragraph is a t	full cross out text a	and replaced	with the following	ACCE Resol	PT IN F	PRINCIPLE. g the response	e to comment #16.			
"This	bit indicates the state of the	Request_flag vari	able of the la	ne 0 receiver in the	C/ 45	SC	45.2.1.135.2	P 46	L 3	# 28	
receiv a regi	e direction (see 120B.3.2 ar	nd 120D.3.2.3). W er equalization of t	hen read as a he transmitte	a one, the device is issuing r driving lane 0 in the	Slavick, Je	eff		Broadcom			
receiv	e direction. If a lane 0 receiv	ver in the receive of	direction is no	t present in the package,	Comment	Туре	TR C	Comment Status A		TX EQ register (bucket2)	
then t Response	ne value returned for this bit <i>Respons</i>	should be zero." se Status W			We're this te	reques xt supp	sting the transn oorts lane rever	nitter that is driving this g sal between ends of the	iven receive C2C link or	er to be changed. Not sure not.	
ACCE	PT IN PRINCIPLE.				Suggestee	dRemed	dy				
Resol	ve using the response to co	mment #16.			Replace "for the transmitter equalization in the chip-to-chip lane 0 transmitter in the receive						
Cl 45	SC 45.2.1.135.2	P 46	L 3	# 26	directi in the Make	on." wit receive the san	th "for the trans direction." ne change in 4	smitter equalization of the	e transmittei	r driving the lane 0 receiver	
Comment		ant Status A		TX EO register (bucket2)	Response	!	Re	esponse Status W			
The v	alue of these indicates the v	alue is an odd phr	ase		ACCE Resol	PT IN F	PRINCIPLE. g the response	• to comment #16.			
Suggeste	lRemedy				0			D 12	1.00	" [==	
Repla	ce "The value of these bits i ith "These its indicate the st	ndicates the value	of the variab	le Requested_eq_c1 in priable of the"	C/ 45	. 50	45.2.1.135.4	P 46	L 22	# 29	
Response	Response	$\mathbf{x} = \mathbf{x} + \mathbf{x} + \mathbf{y} + $			Slavick, Je	ett T		Broadcom			
ACCE	PT IN PRINCIPI F				Comment	I ype	IR C	comment Status A	roccium N	IX EQ register (bucket2)	
Resol	ve using the response to co	mment #16.			lane r	eversal	between ends	of the C2C link or not.	receiver. N	iot sure this text supports	
					Suggestee	dRemed	dy				
					Repla	ce "beir	ng used in lane	e 0 of the transmitter in the	ne receive d	irection"	
					"being Make	used b the san	by the transmiti ne chang in 45	ter driving the lane 0 rece 5.2.1.135.5	eiver in the r	receive direction."	
					Response		Re	esponse Status W			
					ACCE Resol	PT IN F	PRINCIPLE. g the response	to comment #16.			

C/ 45	SC 45.2.3.25	P 60	L 1	# 30	C/ 172	SC 172.2.1	P 205	L 19	# 33		
Slavick, J	leff	Broadcom			Huber, Tor	n	Nokia				
Comment	t Type TR	Comment Status A		(bucket2)	Comment	Туре Е	Comment Status A		(bucket1)		
The s first p PCS	second paragraph paragraph provides and states the uni	is not necessary and just ma s references to all the necess used lanes for thinner PCS's	ake for more wo sary registers fo are to to return	rk in the future. The r the maximal width 0.	The word block is overloaded in this paragraph, which discusses 66-, 257-, and 5140-bit blocks, and also uses 'block' to refer to the processes (called functional blocks) in Figure 172-2.						
Suggeste	edRemedy				SuggestedRemedy						
Remo Remo Remo	ove the last parage ove the last parage ove the last parage	raph of 45.2.3.25 raph of 45.2.4.15 raph of 45.2.5.15			In the second sentence, change "encode and rate matching block" to "encode and rate matching functional block" or "encode and rate matching process".						
Response ACCI	e EPT.	Response Status W			ACCE ACCE Chang To: "fu	PT IN PRINCIP e from: "block ir nction shown in	Response Status C LE. 1 Figure 172–2." Fig 172-2".				
C/ 1	SC 1.4.461	P 32	L 18	# 31	C/ 172	SC 172.2.1	P 205	L 33	# 34		
Huber, To	om	Nokia			Huber, Tor	n	Nokia				
Commen	t Type E	Comment Status A			Comment	Tvpe E	Comment Status A		(bucket1)		
The t	ext has a comma	splice			The se	entences descrit	ping AM lock, reordering, dest	kewing could be	written more clearly.		
Suggeste	edRemedy				Suggester	IRemedy	0 , 0,	0	,		
Chan PCS lanes	nge "the PCS dis lanes." to "the F s."	tributes data to multiple logic PCS distributes data to multip	al lanes, these ble logical lanes	logical lanes are called that are called PCS	Chang It attai	le ns alignment ma	arker lock based on the comm	non marker (CM)) portion that is		
Response	е	Response Status C			period lanes	ically transmittee	d on every PCS lane. After ali	gnment markers	are found on all PCS		
ACCI	EPT IN PRINCIPL	E.			then re	eordered, reorde	red and deskewed, and the a	lign_status flag	is set		
The r	proposed change i	s an improvement to the wor	dina		to It attai	ns alignment ma	arker lock based on the comm	on marker (CM)) portion of the		
ine p	oroposed enange i		ung.		alignm	ent markers that	t are periodically transmitted	on every PCS la	ine and identifies		
Imple	ement the suggest	ed remedy with editorial licer	nse.		individ	ual PCS lanes u	ising the unique marker portic	on (UM) or the al	ignment makers. The		
C/ 171	SC 171.8.4.3	P 201	L 8	# 32	Response			the aligh_status	nag is set		
Huber, To	om	Nokia			ACCE	PT IN PRINCIP	F.				
Comment It is n same	<i>t Type</i> E not clear why the c e as what is in clau	Comment Status A oding rules PICS items jump ise 118, which numbers then	from C6 to C9; n sequentially.	<i>(bucket1)</i> the set of items is the	ACCEPT IN PRINCIPLE. Change from: "It attains alignment marker lock based on the common marker (CM) portion that is periodically transmitted on every PCS lane. After alignment markers are found on all PCS lanes, the individual PCS lanes are identified using the unique marker portion (UM)						
Suggeste	edRemedy				To: "It	en reordered an attains alignme	a deskewed, and the aligh_st	atus nag is set common marker	(CM) portion of the		
Chan	ige the numbering	of C9 through C11 to C7 thr	ough C9, respe	ctively.	alignment markers that are periodically transmitted on every PCS lane and identifies						
Response ACCI	e EPT.	Response Status C			PCS lanes are then reordered and deskewed, and the align_status flag is set."						

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C/ 172	SC 172.2.4.1.1	P 206	L 29	# 35	C/ 172	SC 172.2	5.8.1	P 212	L 10	# 37	
Huber, To	m	Nokia			Huber, Tor	n		Nokia			
Comment	Туре Е	Comment Status A		PCS (bucket2)	Comment	Туре Е	Comm	ent Status A		PCS (bucket2	
Per th have s	e style guide, a cla some separation b	ause should not have a sing etween the general descript	le subclause. It tion and this new	is however useful to v stateless encoder.	Per the style guide, a clause should not have a single subclause. It is however useful to have some separation between the general description and this new stateless encoder.						
Suggested	Remedy				Suggested	Remedy					
One o level 5 descri refere	ption would be to r b heading immedia ption' and renumb nce at line 15 wou	make 172.2.4.1.1 a level-4 l tely after 172.2.4.1 with an er the existing 172.2.4.1.1 t ld also need to be updated.	heading. The ot innocuous title I o 172.2.4.1.2.	her would be insert a ke 'Process n either case, the cross-	One op level 5 descrip referer	otion would b heading imm otion' and ren nce at line 3 v	e to make 17 lediately afte umber the ex vould also ne	2.2.5.8.1 a level-4 r 172.2.5.8 with an tisting 172.2.5.8.1 t ed to be updated.	heading. The oth innocuous title lik o 172.2.5.8.2. In	ner would be insert a ke 'Process either case, the cross-	
Response		Response Status C			Response		Respor	nse Status C			
ACCE	PT IN PRINCIPLE	L.			ACCE	PT IN PRINC	IPLE.				
Impler https:/ Impler	ment the changes //www.ieee802.org ment with editorial	on slide 34 in the following /3/df/public/23_0523/brown license.	presentation: _3df_03b_23052	23.pdf	Implen https:// Implen	nent the char /www.ieee802 nent with edit	ges on slide 2.org/3/df/put orial license.	35 in the following blic/23_0523/brown	presentation: _3df_03b_23052	3.pdf	
C/ 172	SC 172.2.4.9	P 210	L 48	# 36	C/ 172	SC 172.2	6.3	P 214	L 15	# 38	
Huber, To	m	Nokia			Huber, Tor	n		Nokia			
Comment	Туре т	Comment Status A		(bucket1)	Comment	Туре Е	Comm	ent Status R		(bucket1	
It's mo Idle ch Suggested	ore clear to say the naracters (which th IRemedy	e test pattern is the result of e PCS will then turn into blo	the MII being a ocks, etc.).	continuous stream of	It appe figure separa descrit	ears that the o 119-3 has be ately for each be the except	only differenc en split into t flow. It woul ions.	e between figure 1 wo parts because t d be helpful if that y	19-3 and figures he part shown in was more clear in	172-5 and 172-6 is that figure 172-6 is done the bullet points that	
Chang	e the last sentend	e of the first paragraph fron	n PCS when the ir	put to the PCS at the	Suggested	IRemedy					
800GI	All is a control blo	ck with all idle characters.			Chang	e:					
То		and the second			— The	PCS synchr	onization pro	cess is depicted in	Figure 172-5 and	d Figure 172–6,	
I ne so 800Gl	VIII is a contiuous s	pattern is the output of the i stream of idle characters.	PCS when the Ir	iput to the PCS at the	instead — The	a of in Figure monitor for t	119–13. hree conseci	utive uncorrectable	FEC codewords	(see Figure 172–6) is	
Response		Response Status C			done ir	ndependently	within each	flow.			
ACCE	PT IN PRINCIPLE	, 			10: — The	PCS synchr	onization pro	cess is depicted in	Figure 172-5 and	d Figure 172–6. which	
The te	ext incorrect refers vement, but should	to a "control block" at the 8 be more specifically referr	00GMII. The su	ggested remedy is an ol characters".	are de three c within	rived by splitt consecutive u each flow.	ing Figure 11 ncorrectable	9–13 into two parts FEC codewords (s	ee Figure 172–6)	te that the monitor for is done independently	
Chang "The s	je: crambled idle test	pattern is the output of the	PCS when the	input to the PCS at the	Response		Respor	nse Status C			
800GI	VIII is a control blo	ck with all idle characters."			REJEC	CT.					
To: "The e	crambled idle tost	nattern is the output of the	PCS when the	nout to the PCS at the	The ter	xt in 172.2.6.	3 is listing the	e exceptions to the	state diagrams in	119.2.6.3. The draft	
800GI	All is composed of	nly of idle control characters	S."		draft.	Incarry Correc	t as written.	The suggested fell	ieuy uues nut aut		

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 38

PCS (bucket2)

(bucket1)

C/ 172	SC 172.7.4.	3 P 222	L 21	# 39	C/ 124	SC 124.5.4	P 106	L 10	# 42
Huber, To	om	Nokia			Schreiner	, Stephan	Rosenberger	Hochfrequenzte	chnik GmbH & Co. KG
Comment	t Type E	Comment Status A		(bucket1)	Comment	Туре Е	Comment Status A		(bucket1)
lt app relate renun	bears that Items ad rules, which a mbered.	C7-C9 are omitted here becau re not relevant to 800G - but th	use in clause 119 he remaining iten	they are used for EEE- as should have been	Missir Suggeste	ng Bracket 3x"(dRemedy	" but only 2x")"		
Suggeste	dRemedy				Insert	Bracket at the	End of Line 11		
Chan	ge the numberin	g of C9 through C11 to C7 thr	rough C9, respec	tively.	Response)	Response Status C		
Response	Э	Response Status C			ACCE	:PT.			
ACCE Imple	EPT IN PRINCIP	PLE. sted remedy in 172.7.4.3 and	171.8.4.3 with ed	itorial license.	C/ 171 Brown M	SC 171.6	P 194 Huawei	L 26	# 43
C/ 173	SC 173.6.5	P 241	L 15	# 40	Comment		Comment Status A		(bucket1)
Huber. To	om	Nokia			The F	MA above the	PMD may not be an 800GBAS	E-R PMA (per C	lause 173) and the
Comment	t Type E	Comment Status A		(bucket1)	PMA	may not have 8	lanes.		
The s	status column sh	ould be reformatted so the ite	ms are not spillin	g over lines	Suggeste	dRemedy			
Suaaeste	dRemedv				For th	e PMA immed	ately above the PMD change "	PMA (32:8)" to "	PMA".
Refor	mat so that the i	tems are not split across lines	6		Response)	Response Status C		
Response	9	Response Status C			ACCE	EPT.			
ACCE Imple	EPT IN PRINCIP	LE. sted remedy with editorial lice	nse.		C/ 171	SC 171.1	P 189	L 11	# 44
CI 4	SC 442	P 33	/ 32	# 41	Brown, Ma	att Tana F			(1
Schreiner	Stephan	Posenberger			Comment	<i>Type</i> E	Comment Status A		(bucket1)
Comment			riochirequenzied	(hucket1)	by de	finition 800GAL	JI-n is a physical instantiations	so a bit superflu	OUS.
in mir	FrameSize for 2	2.5 GB/s. 5 GB/s is a line bi	reak after 512 bit	s, which might be	Suggeste	dRemedy			
cause	ed by a different	column width		,gg	Chan	ge "The 800GN	III Extender is composed of a I	DTE 800GXS at	the RS end, and a PHY
Suggeste Inreas	d <i>Remedy</i> se width of colur	nn to match the size of the oth	ner columns from	the MAC data rate	800G PMA To	XS at the PHY sublayers."	end with a physical instantiation	n of 800GAUI-n	between two adjacent
Response ACCE	e EPT.	Response Status C			"The 800G Align	800GMII Exten XS at the PHY definition in 1.4	der is composed of a DTE 800 end with one or two 800GAUI- .184j.	GXS at the RS e n between."	nd, and a PHY
					Response		Response Status C		
					ACCE	:P1.			

C/ 124	SC 124 12 4	P124	/ 11	# 45	C/ 171	SC	171 6	P194	/ 35	# 48
Brown Ma	ott	, 124 Huawei	211	<i>"</i> 45	Brown Ma	att	171.0	Huawei	2 3 3	# 40
Comment In 124	<i>Type</i> E .12.4.3a/b/c the F	Comment Status A PICS item nicknames DR1 a	nd DR2 are repeate	<i>(bucket1)</i> d. Also, the status	Comment No su	<i>Type</i> ch thing	E as "800	Comment Status A Gb/s Extender Sublayer". Se	e 171.1.	(bucket1)
variab Suggestec In 124 In 124 - chan - upda	le is not defined a <i>IRemedy</i> .12.3 create statu .12.4.3, 124.12.4 ge the item labels te the status with	and a different variable will ne us lable (like "*MD") for each .3a, 124.12.4.3b, and 124.12 s such that they are unique the new status variables	eed to be defined fo PMD type. 2.4.3c	r each PMD type.	Suggestee Chang Response ACCE	dRemec ge "800 PT.	ly Gb/s EX	TENDER SUBLAYER" to "80 Response Status C	0GMII EXTEND	PER SUBLAYER"
Response		Response Status C ⊏			C/ 173	SC	173.1	P 226	L 26	# 49
Impler	ment proposed re	E. medy with editorial license.			Comment	Type	E	Comment Status A		(bucket1)
C/ 173A	SC 173A	P 276	L 28	# 46	NO SU	cn thing	as "800	GD/S Extender Sublayer". Se	e 171.1.	
Brown, Ma Comment No suc	ntt <i>Type</i> E ch thing as "800 (d <i>Remedv</i>	Huawei <i>Comment Status</i> A Gb/s Extender Sublayer". Se	e 171.1.	(bucket1)	Suggested Chang Response ACCE	dRemec ge "800 P PT.	ly Gb/s EX	TENDER SUBLAYER" to "80 Response Status C	0GMII EXTEND	ER SUBLAYER"
Chang Also ir	ge "800 Gb/s EXT n Figure 173-4, pa	ENDER SUBLAYER" to "80 age 277, line 31.	0GMII EXTENDER	SUBLAYER"	C/ FM	SC	FM	P1	L 29	# 50
Response	0	Response Status C			Grow, Rob	pert		Self		-
ACCE	PT. SC 1.4.184k	P 32	L1	# 47	Comment Both o with th	<i>Type</i> cx and c ne year	E z were a 2023.	Comment Status A pproved during the March SA	SB meeting and	(bucket1) should be referenced
Brown. Ma	att	Huawei			Suggestee	dRemed	ly			
Comment	Type E	Comment Status A		(bucket1)	Repla	ce "202	x" with "2	2023" here and on page 12.		
No su	ch thing as "800 (Gb/s Extender Sublayer". Se	e 171.1.	· · · · ·	Response)		Response Status C		
Suggested Chang Also ir	<i>lRemedy</i> ge "800 Gb/s Exte n 1.5, page 32, lir	ender Sublayer" to "800GMII le 32	Extender Sublayer"		ACCE	PT.				
Response ACCE	PT.	Response Status C								

C/ FM	SC FM	P 4	L 21	# 51	C/ FM	SC FM	P 12	L 47	# 54
Grow, Robe	ert	Self			Dudek, M	ike	Marvell		
<i>Comment</i> This is	Type E not the current	Comment Status A front matter.		(bucket1)	Comment IEEE	<i>Type</i> E Std 802.3-2022	Comment Status A has been published		(bucket1)
Suggested Replac	<i>Remedy</i> e with current f	ront matter.			<i>Suggeste</i> Chan	<i>dRemedy</i> ge 202x to 2022	1		
Response ACCEF Align fr	PT IN PRINCIP	Response Status C LE. latest 802.3 FrameMaker te	mplate.		Response ACCE	e PT.	Response Status C		
C/ FM	SC FM	P8	/ 24	# 52	C/ 1	SC 1.3	P 30	L 40	# 55
Grow Robe	ert	Self			Dudek, M	ike	Marvell		
Comment	Гуре Е	Comment Status A		(bucket1)	Comment "One	<i>Type</i> E fibre rows" is str	Comment Status A range.		
The W	G ballot group i	s now known, please fill in s	o that names can	be reviewed.	Suggeste	dRemedy			
Suggested Per co	<i>Remedy</i> mment.				Check its title	k the reference a	and correct to "One fibre row"	unless the refere	nce does have this in
Response		Response Status C			Response	9	Response Status C		
ACCE	PT.				ACCE	EPT IN PRINCIF	PLE.		
C/ FM	SC FM	P 12	L 37	# 53	The n	ormative referen	nce does not meet the IEEE a	vailability require	ments. An alternate
Grow, Robe	ert	Self							
Comment T	Type E	Comment Status A		(bucket1)	Also,	the text must be	e updated to remove the flat-in	iterface connecto	r per comment #95.
I his is was ch Std 80	not the self des anged when the 2 3cz-2023 is a	e original project was split ac	2 draft. The end ling P802.3dh.	Publication of IEEE	Imple	ment the change	es in slides 8 to 10 in brown_3	3df_03b_230523	with editorial license.
	Romody				C/ 1	SC 1.4.184	h P31	L 37	# 56
"for opt	tical automotive	Ethernet using graded-inde	x glass optical fibe	er."	Dudek, M	ike	Marvell		
Response		Response Status C	- <u>-</u>		<i>Comment</i> The e	<i>Type</i> E ditors note has	Comment Status A served its purpose		(bucket1)
Impler	nent with editori	al license.			Suggeste delete	dRemedy e the editors note	e		
					Response	9	Response Status C		
					ACCE [Edito	EPT. or's note: Change	ed page from 33 to 31]		

C/ 45	SC 45.2.1.13	5.1 <i>P</i> 48	L 44	# 57	C/ 173	SC 173.3	P 2	27	L 26	# 60
Dudek, Mi	ke	Marvell			Maguire, V	/alerie	Сорр	eropolis		
Comment 800G/ used.	<i>Type</i> E AUI-16 is not bein There is no nee	Comment Status A g defined in this amendmen d to make changes to these	nt and therefore 1 e sections?	TX EQ register (bucket2) 20D and 120B are not	Comment Use a Suggester	<i>Type</i> E non-breaking :	Comment Status space between figures	A and abbrev	viations	(bucket1)
Suggested Remo chang and m	<i>Remedy</i> ve the changes to es. (If 800GAUI ake appropriate o	e sections 45.2.1.135.1 to 4 16 is to be included in this changes (including Title cha	5.2.1.135.7 and o amendment then nges)	other equivalent bring in Annex 120D	Use a Response ACCE	non-breaking	space between "53.125 Response Status	5" and "GBd C	j".	
Response		Response Status C			CI 30	SC 30.5.1.	1.2 P3	5	L 14	# 61
Resol	ve using the response	E. onse to comment #16.			D'Ambros	ia, John	Futur	ewei, US Si	ubsidiary of H	Huawei
Cl 167 Dudek, Mi Comment The of Suggested Chang	SC 167.10.3.4 ke <i>Type</i> T otion B uses the a <i>IRemedy</i> ge Figure 167-9 to	4 P 165 Marvell Comment Status A angled interface which is de	L 14 picted in Figure 1	# <u>58</u> <i>(bucket1)</i> 67-10 not Figure 167-9	Comment 800G With t discus Suggester Chan 800G as spr	Type E BASE-SR8 he introduction ssing MMF -as dRemedy ge BASE-R PCS/F ecified in Claus	Comment Status of WDM technology o a lane may be either a PMA over 8-lane multin e 167	A ver MMF, th wavelength node fiber P	ne term "lane n or a fiber. PMD with read	optical lanes " is ambigous when ch up to at least 100 m
Response ACCE	PT.	Response Status C			to 800G reach	BASE-R PCS/F up to at least 1	PMA over 8 wavelength 00 m as specified in C	ns distribute Clause 167	d over 8 muli	ti-mode fibres PMD with
C/ 167	SC 167.11.4.	6 <i>P</i> 168	L 35	# 59	Make	s changes thro	ughout document as ap	opropriate w	vith editorial l	cense
Dudek, Mi <i>Comment</i> OC17	ke <i>Type E</i> appears to be ide	Marvell Comment Status R entical to OC16 except in th	e status column.	(bucket1)	Response ACCE		Response Status PLE.	C		
Suggested Label	<i>IRemedy</i> one of these with	Option A and one with Opt	ion B		Resol	ve using the re		0.		
Response REJE While angleo angleo	CT. they may look sir fiber interfaces. f. This aligns with	Response Status C nilar, OC16 applies to flat fi "!AFI" in OC16 means not n OC8 and OC9 of 167.11.4	ber interfaces an angled or flat an I.6 of IEEE Std 8	d OC17 applies to d "AFI" in OC17 means 02.3db-2022.						

C/ 30	SC 30.5.1.1.2	P 35	L 16	# 62	C/ 116	SC 116.1.3	P 95	L 41	# 64
D'Ambros	a, John	Futurewei, US	S Subsidiary of I	luawei	D'Ambros	ia, John	Futurewei,	US Subsidiary of	Huawei
Comment	Type E	Comment Status A		optical lanes	Comment	Туре Е	Comment Status A		optical lanes
800G With t discus	BASE-VR8 he introduction of ssing MMF -as a la	WDM technology over MMF ane may be either a waveler	⁼ , the term "lane ngth or a fiber.	' is ambigous when	400G The te or a fi	BASE-DR4-2 erm "lane" is an ber.	nbigous when discussing SN	/IF -as a lane may	y be either a wavelength
Suggeste	dRemedy				Suggeste	dRemedy			
Chan 800G as sp	ge BASE-R PCS/PM ecified in Clause 1	A over 8-lane multimode fibe	er PMD with rea	ch up to at least 50 m	Chang 400 G mode	ge description to b/s PHY using 4 fibres, with read	o: 400GBASE-R encoding ove ch up to at least 2 km (see C	er 4 wavelengths o Clause124)	distributed over 4 single-
800G	BASE-R PCS/PM	A over 8 wavelengths distrib	outed over 8 mul	i-mode fibres PMD with	Make	s changes throu	ighout document as appropri	iate with editorial	Icense
reach	up to at least 50	m as specified in Clause 167	7		Response	9	Response Status C		
Make	s changes through	nout document as appropriat	te with editorial I	cense	ACCE	PT IN PRINCIP	PLE.		
Response		Response Status C			Resol	ve using the res	sponse to comment #73.		
ACCE		L .			C/ 0	SC 0	P 99	L 36	# 65
Resol	ve using the respo	onse to comment #73.			D'Ambros	ia, John	Futurewei,	US Subsidiary of	Huawei
C/ 116	SC 116.1.3	P 95	L 38	# 63	Comment	Type ER	Comment Status A	-	figure labels
D'Ambros Comment	ia, John <i>Type</i> E	Futurewei, US Comment Status A	S Subsidiary of I	luawei optical lanes	400G PCS a PCA a	bE will have mu and PMA associ and 400GBASE	Itiple PCSs and PMAs with t iated with 400GBASE-R PM -R PMA, respectively.	he introduction of Ds has been rena	400GBASE-ZR. The amed to 400GBASE-R
400G	BASE-DR4	igous when discussing SME		ha aithar a wayalangth	Suggeste	dRemedy			
or a fi	ber.			be entier a wavelength	Chang to 400	ge all instances)GBASE-R PMD	in text and figures of PCS a Ds to "400GBASE-R PCS" a	nd PMA in the do nd "400GBASE-F	cument that are relevant ₹ PMA"
Suggeste	dRemedy				Response)	Response Status C		
400 C	b/s PHY using 40	0GBASE-R encoding over	4 wavelengths d	istributed over 4 single-	ACCE	EPT IN PRINCIP	PLE.		
mode	nores, with reach				Imple	ment the sugges	sted remedy with editorial.		
Make	s changes through	nout document as appropriat	te with editorial I	cense	[Edito	r's note: change	ed Clause/Subcl from 124/12	24.1 to 0/01	
Response	1	Response Status C			[Lano	ronoto: onange			
ACCE	PT IN PRINCIPL	E.							
Resol	ve using the respo	onse to comment #73.							

C/ 0	SC O	P 99	L 13	# 66	C/ 00	SC 0	P 22	25	L	# 68
D'Ambrosi	ia, John	Futurewei, U	S Subsidiary of H	luawei	D'Ambros	ia, John	Future	wei, US Su	ubsidiary o	f Huawei
Comment	Type ER	Comment Status D		figure labels	Comment	Type TR	Comment Status	Α		PMA AUI
Given 10km, be diff there v	progress of 8000 , it is assumed the fferent than the P will be multiple P	G in IEEE P802.3dj with the at there will be a PCS relate CS for other 800GBASE-R I CSs and PMAs at 800G.	creation of a sing d to coherent op PMDs. Therefore	gle lambda solution at ical signaling that will e, it is anticipiated that	As no and o in the PMA	ted in Tables 1 ptical PHY type extender. This 8:8	69-2 and 169-3, 800G / es, which means you co s means you would PM/	AUI variants uld have an A (32:8) and	s are option 800GAU d PMA (8:3	nal for both 800G copper I-8 in the PHY as well as 32) to support AUIs - not
Suggestee	dRemedy				Outronate			o) is called		
Modify editori Modify editori	y "PCS" to be "80 ial license. y "PMA" to be "80 ial license	0GBASE-R PCS" throughou 0GBASE-R PMA" througho	it document in al ut document in a	I text and figures with II text and figures with	Suggeste The s 800G	tatements rega AUIs which ma	arding the 32:8 and 8:32 ay not just be in the Exte	PMAs shore	uld reflect rrently stat	being present to support ed.
Proposed	Response	Boononoo Statua 7			Response	9	Response Status	С		
	CT	Response Status Z			ACCE	EPT IN PRINCI	PLE.			
This c	comment was WI	THDRAWN by the comment	er.		Imple https:	ment the chang //www.ieee802	ges on slide 40 of the fo .org/3/df/public/23_0523	llowing pres 3/brown_3d	sentation v f_03c_230	vith editorial license: 523.pdf
[Edito	r's note: changed	Clause/Subcl from 124/124	.1 to 0/0]							
C/ 171	SC 171.1	P 190	L 22	# 67						
D'Ambrosi	ia, John	Futurewei, U	S Subsidiary of H	luawei						
Comment The de not pa	<i>Type</i> TR efinition of the OS art of the Physical	Comment Status A SI Physical Layer is incorrec Layer	t as shown in Fig	<i>(bucket1)</i> 171-1. The medium is						
Suggested modify	dRemedy y Fig 171-1 to sho	ow the Physical Layer bottor	n border at the b	ottom of the MDI						
Response ACCE	, EPT.	Response Status W								

C/ 173	SC 173.4.11	P 236	L 31	# 69		C/ FM	SC FM		P 8	L 12	# 71
D'Ambrosia	, John	Futurewei, U	S Subsidiary of I	Huawei		D'Ambrosi	a, John	F	- uturewei,	US Subsidiary of	Huawei
Comment 7 800GA definint Suggestedl	<i>Type</i> ER UI-8 has been de ion uses "physic Remedy	Comment Status A escribed elsewhere as an el al instantiation" - use consis	ectrical interface tent language	ו e in 163.1, but the	wording	Comment Task F Suggested	Type ER Force Leadersh IRemedy	Comment St hip not fully recogr	tatus A nized		(bucket1)
Change	e description of 8	00GAUI elsewhere from ele	ctrical interface	to physical instan	itiation	"Mark	Nowell, IEEE F	P802.3df Task For	rce Vice Ch	nair"	
Response ACCEF	PT IN PRINCIPLI	Response Status C E.				to Mark I Force	Nowell, IEEE P Chair	802.3df Task For	ce Vice Cha	air, IEEE P802.3c	げ "Optics"Sub-task
Clause The con interfac 121, 12 Howeve a given	173 only uses "p mmenter is corre e" and "physical 2, 123,124, etc) er, which of the t situation appea	ohysical instantiation" when ict in that some clauses (eg instantiation" when referring only use "electrical interface wo terms is used ("physica is to be based on the conter	referencing 800 1. 116 and 118) to the AUI, and " when referring instantiation" o t of the text, ar	GAUI. use both "electrica d some clauses (e g to the AUI. r "electrical interfa nd would appear to	al e.g. ace") in o be	2. Ado Kent L Mark 0 <i>Response</i> ACCE Impler	I usted, IEEE P Gustlin, IEEE F PT IN PRINCII nent with edito	802.3df "Electrica '8023df "Architect <i>Response St</i> PLE. rial license.	l" Sub-task ure and Lo atus W	Force Chair gic" Sub-task For	ce Chair
It would electric In 1.4.1 "800 Gi service used fo	e and reasonabl d be helpful to the al interfaces. 84h change: b/s Attachment L interface to exte r chip-to-chip or	e based on the specific con e reader to indicate in the 80 Jnit Interface (800GAUI-n): nd the connection between chip-to-module interfaces."	text. 00GAUI-n defint A physical instat 800 Gb/s capat	ion that these are ntiation of the PM/ ole PMAs over n la	A anes,	C/ FM D'Ambrosi Comment Memb Suggested Add W	SC FM a, John <i>Type</i> E ers of WG Ball <i>IRemedy</i> /G Balloting Lis	I Comment St ot not added st	P 8 Futurewei, F <i>tatus</i> A	L 42 US Subsidiary of	# <u>72</u> Huawei <i>(bucket1)</i>
"800 Gl service used fo	b/s Attachment L interface to exte r chip-to-chip or	Init Interface (800GAUI-n): nd the connection between chip-to-module electrical int	A physical insta 800 Gb/s capat erfaces."	ntiation of the PMA ble PMAs over n la	A anes,	Response ACCE	PT.	Response St	atus C		
C/ 120G	SC 120G.1	P 255	L 14	# 70							
D'Ambrosia	i, John	Futurewei, U	Subsidiary of I	Huawei							
Comment 7 The MI sublaye	<i>Type</i> ER I's, PCS Sublaye ers Romody	Comment Status D ors, and AUI's are all disting	uished by data r	wit ates except the Pf	thdrawn MA						
Disting	temedy uish PMA sublav	ers with reference to data ra	ite								
Proposed F PROPC	Response DSED REJECT.	Response Status C									

This comment was WITHDRAWN by the commenter.

C/ 1	SC 1.4.135a	P 30	L 49	# 73	C/ 1	SC 1.4.184k	D P 31	L 6	# 74
D'Ambro	sia, John	Futurewei, US	S Subsidiary of H	luawei	D'Ambros	sia, John	Future	wei, US Subsidiary	of Huawei
Commen 4000 The t or a f	<i>t Type</i> E BBASE-DR4-2 term "lane" is ambig fiber.	Comment Status A	-as a lane may	optical lanes be either a wavelength	Commen 800C The t or a f	<i>t Type</i> E BBASE-DR8 term "lane" is arr fiber.	Comment Status	A ng SMF -as a lane n	optical lanes
Suggeste	edRemedy				Suggeste	edRemedy			
Char "IEEI level least to IEEE level fibes	nge E 802.3 Physical La pulse amplitude mo 2 km. (See IEEE S 802.3 Physical Lay pulse amplitude mo , with reach up to at	yer specification for 400 Gl odulation over four lanes of td 802.3, Clause 124.)" rer specification for 400 Gb odulation over four wavelen least 2 km. (See IEEE Sto	b/s using 400GB single-mode fibe /s using 400GBA gths distributed of 802.3, Clause 1	ASE-R encoding and 4- r, with reach up to at ASE-R encoding and 4- over 4 single-mode 24.)	Char "IEEI level least to IEEE level fibers	nge E 802.3 Physical pulse amplitude 500 m. (See IEE 802.3 Physical I pulse amplitude s with reaches up	Layer specification for modulation over eight I E Std 802.3, Clause 12 Layer specification for 8 modulation over eight 1 to at least 500 m. (Se	800 Gb/s using 800 lanes of single-mod 24.)" 800 Gb/s using 8000 wavelengths distibut e IEEE Std 802.3, C	GBASE-R encoding and 4- e fiber, with reach up to at GBASE-R encoding and 4- ted over 8 single-mode Clause 124.)
Respons	е	Response Status C			Respons	е	Response Status	с	
ACC	EPT IN PRINCIPLE				ACC	EPT IN PRINCIP	LE.		
Imple	ement the changes	on slides 14, 15, 19 of the f	following present	ation with editorial	Resc	olve using the res	ponse to comment #73	3.	
https	://www.ieee802.org/ pt add "in each direc	/3/df/public/23_0523/brown ction" after "single-mode fik	_3df_03c_23052 pers" and "multim	3.pdf node fibers".	C/ 1 D'Ambros	SC 1.4.1840 sia, John	P 31 Future	L L 10 wei, US Subsidiary	# 75 of Huawei
Strav I sup A: ov B: ov C: no	v poll #6 (direction) port using the follow ver four single-mode ver four single-mode o change	ving form for definitions of F fibers fibers in each direction	PMDs with parall	el fiber.	Commen 800G The t or a f	<i>t Type</i> E BBASE-DR8-2 term "lane" is am fiber.	Comment Status	A ng SMF -as a lane n	optical lanes
Absta A: 9,	ain: B: 17, C: 5, Abstair	n: 10			Char "IEEI level least to IEEE level fibers	earemedy nge E 802.3 Physical pulse amplitude 500 m. (See IEE E 802.3 Physical I pulse amplitude s with reaches up	Layer specification for modulation over eight l E Std 802.3, Clause 1: Layer specification for 8 modulation over eight v to at least 2 km. (See	800 Gb/s using 800 lanes of single-mode 24.)" 800 Gb/s using 8000 wavelengths distibut IEEE Std 802.3, Cli	GBASE-R encoding and 4- e fiber, with reach up to at GBASE-R encoding and 4- ted over 8 single-mode ause 124.)
					Respons ACC	e EPT IN PRINCIP	Response Status LE.	С	
					Resc	olve using the res	ponse to comment #73	3.	

C/ 1	SC 1.4.184f	P 31	L 20	# 76	C/ 30	SC 30.5.1.1.2	P 34	L 51	# 78
D'Ambro	sia, John	Futurewei, US	S Subsidiary of H	luawei	D'Ambros	sia, John	Futurewei,	US Subsidiary o	f Huawei
Commer	nt Type E	Comment Status A		optical lanes	Comment	t Type E	Comment Status A		optical lanes
8000 With discu	BASE-SR8 the introduction of W ussing MMF -as a lar	VDM technology over MMF he may be either a waveler	⁻ , the term "lane" ngth or a fiber.	' is ambigous when	400G The te or a fi	BASE-DR4 erm "lane" is ambi iber.	gous when discussing SM	MF -as a lane ma	ay be either a wavelength
Suggest	edRemedy				Suggeste	dRemedy			
Chai "IEE level leasi to IEEE	nge E 802.3 Physical Lay pulse amplitude mod 100 m. (See IEEE S E 802.3 Physical Laya	ver specification for 800 Gl dulation over eight lanes o Std 802.3, Clause 167.)" er specification for 800 Gb	o/s using 800GB f multimode fibe /s using 800GB/	ASE-R encoding and 4- r, with reach up to at ASE-R encoding and 4-	Chan 400G m as to 400G with r	ge BASE-R PCS/PMA specified in Clause BASE-R PCS/PMA reach up to at least	A over 4-lane single-mode 2 124 A over 4 wavelengths dist 500 m as specified in Cla	e fiber PMD with ributed over 4 sin ause 124	reach up to at least 500 ngle-mode fibres PMD
fiber	s, with reach up to at	least 100 m. (See IEEE S	Std 802.3, Clause	e 167.)	Response	9	Response Status C		
Respons	e	Response Status C			ACCE	EPT IN PRINCIPLE			
ACC	EPT IN PRINCIPLE.				Reso	lve using the respo	onse to comment #73.		
Reso	olve using the respon	se to comment #73.			C/ 30	SC 30.5.1.1.2	P 35	L 8	# 79
C/ 1	SC 1.4.184a	P 31	L 24	# 77	D'Ambros	sia, John	Futurewei,	US Subsidiary o	fHuawei
D'Ambro	sia. John	Futurewei, US	S Subsidiary of F	luawei	Comment	t Type E	Comment Status A		optical lanes
Commer 8000	<i>at Type</i> E BBASE-VR8	Comment Status A		optical lanes	800G The te or a fi	BASE-DR8 erm "lane" is ambi iber.	gous when discussing SM	MF -as a lane ma	ay be either a wavelength
With	the introduction of W	VDM technology over MMF	-, the term "lane"	' is ambigous when	Suggeste	dRemedy			
Suggest Chai "IEE level leasi to	edRemedy nge E 802.3 Physical Lay pulse amplitude mod 50 m. (See IEEE St	ver specification for 800 Gł dulation over eight lanes o d 802.3, Clause 167.)"	b/s using 800GB f multimode fibe	ASE-R encoding and 4- r, with reach up to at	Chan 800G m as to 800G with r	ge iBASE-R PCS/PM/ specified in Clause iBASE-R PCS/PM/ reach up to at least	A over 8-lane single-mode 2 124 A over 8 wavelengths dist 500 m as specified in Cla	e fiber PMD with ributed over 8 sin ause 124	reach up to at least 500 ngle-mode fibres PMD
IEEE	802.3 Physical Laye	er specification for 800 Gb	/s using 800GB/	ASE-R encoding and 4-	Make	es changes through	out document as appropr	iate with editoria	license
fiber	s, with reach up to a	t least 50 m. (See IEEE Si	td 802.3, Clause	167.)	Response	9	Response Status C		
Respons	е	Response Status C			ACCE	EPT IN PRINCIPLE			
ACC	EPT IN PRINCIPLE.				Reso	lve using the respo	onse to comment #73.		
Res	olve using the respon	se to comment #73.							

CI 30	SC 30.5.1.1.2	P 35	L 10	# 80	C/ 169	SC	169.4	P 177	L 27	# 82	
D'Ambros	a, John	Futurewei, US	S Subsidiary of H	luawei	Maki, Jeffe	ry		Juniper Netwo	orks		
Comment	Type E Cor	mment Status A		optical lanes	Comment	Туре	т	Comment Status A		delay	(CC) י
800G The te or a fi	BASE-DR8-2 erm "lane" is ambigous ber.	when discussing SMF	-as a lane may	be either a wavelength	The su and 20 the ob-	im of th).48 ns served	ne sublaye for 800G delay of t	er delays of 92.16 ns for 800G BASE-VR8/SR8/DR8/DR8-2 I wo PMA stages and the PMD	BASE-R PMA PMD is 112.64 The concern i	(up to four PMA stands, which is less that state these sublayed ave of about 50% a	iges) an ers re
Suggester	dRemedy				seen fe	or optic	al module	es (two PMA stages + PMD).	. LACESSIVE UEI		ie -
Chang 800G	ge BASE-R PCS/PMA over	8-lane single-mode fi	ber PMD with re	ach up to at least 2 km	Suggested	Remed	ly		(h	la se a statione	
as spe to	ecified in Clause 124				Increa	se Dela	ay values	for PIMA and PIMD to align wit	in prevalent imp	iementation.	
800G	BASE-R PCS/PMA over	8 wavelengths distrib	uted over 8 sing	le-mode fibres PDwith	Response			Response Status C			
reach	up to at least 2 km as s	pecified in Clause 124	1		ACCE	PINH	PRINCIPL	.E.			
Make	s changes throughout do	ocument as appropriat	te with editorial lo	cense	The sp PMA a	ecifica	tion of de D may be	lay for the PMA is rather amb	iguous and the	delay specified for t	the
Response	Res	oonse Status C			1 100 1 0			official of their freedood by to pe	in practical i	inplomentatione.	
ACCE	PT IN PRINCIPLE.				The fo	llowing	presenta	tion was reviewed by the task	force:	Diadf	
Resol	ve using the response to	o comment #73.			nups.//	www.ie	eeo02.01	g/3/di/public/23_0523/maki_3	ul_01a_23052	s.pui	
C/ 169	SC 169.5	P 180	12	# 81	Chang	e "PMA PMA	A stages"	to "instances of the PMA sub finition to be per instance of the	ayer"	R PMA sublaver	
Li Mike		Intel			There	may be	up to for	ir instances of the 800GBASE	E-R PMA subla	er within a Physica	I
Comment	Type TR Cor	nment Status A		skew (CC)	Layer	(PHY +		r) to each instance of the 800GE		ublayor to 46.08 pc	(72
The s in lag	kew numbers in this tab ging skew spec for 8000	le 169-5 no longer rep GE which needs to be	sent the technol changed.	ogy in reality, resulting	pause Chang	quanta e the a	l). Ilocation	of optical 800GBASE-* PMD t	to 40.96 ns (64	pause quanta).	(12
Suggestee	dRemedy				Add no	ote that	if sublay	ers cannot be measured sepa	rately then the	total delay is bound	by
See s Archit	lide 10 of li_3df_01_042 ecture and logic ad hoc'	3 (presenation made : '. Also inserted.	at the April 26, 2	023 "802.3df	Also, F Impler	PICS ite	ems for de	elay in Clause 173 is missing. Il license.	Add PICS item	ı.	
Response	Res	oonse Status C									
ACCE	PT IN PRINCIPLE.										
The for https://	bllowing presentation wa //www.ieee802.org/3/df/p	s reviewed by the tasl public/23_0523/li_3df_	k force: _01_230523.pdf								
Chang	ge the skew limits accor	ding to slide 10 in li_3	df_01_230523.								
Imple	ment with editorial licens	se.									

Comment ID 82

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bit muxing



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

The multiplexing rules in this section (along with the multiplexing rules in 173.4.2.1 and 173.4.2.1) were updated based on comment #27 against D1.1 and supporting presentation "https://www.ieee802.org/3/df/public/23_01/0130/ran_3df_01b_230130.pdf".

As captued in slide 3 of ran_3df_01b_230130 the motivation of the proposed change was to avoid the situation "where one of two flows always gets the LSB of the PAM4 symbols"

The changes to the mutiplexing rules for PMA 32:8 (173.4.2.1) and PMA 8:32 (173.4.2.2) achieve this goal.

However the change to the mutiplexing rules for the PMA 8:8 (173.4.3) goes one step futher than the changes to the PMA 32:8 and PMA 8:32. This additional restriction is unnecessary (as the situation this step is trying to avoid can be caused by both the PMA 32:8 and PMA 8:32 anyway), and it any may make some existing 100G PAM4 retimer implementions non-compliant.

The additional step is the requirement that "the Gray mapped

PAM4 symbol sequence on the output lane is identical to the Gray mapped PAM4 symbol sequence on the input lane" This means the PAM4 output must be MSB/LSB aligned to the PAM4 input. It is not clear that this would always be the case, and is something that is not required for the 400GbE generation of PAM4 retimer chips. It is also not fully consistent with the description of the PAM4 Encoding described in 173.4.7.1 (which essentially references the PAM4 encoding rules from Clause 120, which do not require PAM4 outputs to be MSB/LSB aligned to PAM4 inputs).

This step is not required in order to meant the intent captured in slide 3 of ran_3df_01b_230130.pdf.

If the PAM4 input is decoded to a serial bit stream, then in order to meet the intent of ran_3df_01b_230130.pdf, the only rquirement is that the bit stream be sent in the same order (no rearrangement of bits) to the PAM4 output encoder. The output encoder just has to take two bits at a time and encode into a PAM4 symbol (consistent with the description in 173.4.7.1). There is no need for the PAM4 encoder to be MSB/LSB aligned to the bit stream coming from the PAM4 receiver.

It should also be noted that this section only describes the bit level mutipexing functions of a serial bit stream (in keeping with Figure 173-5), and the PAM4 decoding and encoding rules are described in a different section (173.4.7.1).

SuggestedRemedy

Change from:

"The 4 PCSLs received on an input lane shall be mapped to an output lane such that the Gray mapped PAM4 symbol sequence on the output lane is identical to the Gray mapped PAM4 symbol sequence on the input lane, except for possible swapping of each bit pair

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

(see 173.4.7.1)." to:

"The 4 PCSLs received on an input lane shall be mapped to an output lane such that the order of PCSLs is maintained from input lane to output lane, except for possible swapping of each bit pair (see 173.4.7.1)."

Proposed Response Response Status Z

REJECT.

This comment was WITHDRAWN by the commenter.

C/ 124	SC 124.5.4	P 106	L 10	# 84
Dawe, Piers		Nvidia		
Comment Ty	pe TR	Comment Status R		launch power

The same modules will be capable of any of 100GBASE-DR, 400GBASE-DR4, 800GBASE-DR8, 100GBASE-FR1, 400GBASE-DR4-2, 800GBASE-DR8-2. Nominal nearlycompliance for a virtually unusable 0.2 dB on an unimportant spec would make the market more complicated and add procedural cost.

SuggestedRemedy

In the longer term, the average launch power (min) for 100GBASE-FR1 should be increased from -3.1 to -2.9 dBm to bring it in line with 100GBASE-DR/400GBASE-DR4. In the meantime: add a recommendation that the SIGNAL_DETECT power criterion for 800GBASE-DR8, 400GBASE-DR4-2 and 800GBASE-DR8-2 (which is: >= average receive power, each lane (min) in Table 124-7) should be -7.1 dBm.

In practice, module implementers will set it lower than this anyway. See other comments for Tx and Rx specs, and for interoperability text.

Response Response Status W

REJECT.

The fact that modules meet several compatible specifications simultaneously is a choice of the implementer, not a requirement from the standard.

The suggested remedy refers to a modification of 100GBASE-FR1 which is outside the scope of this project.

Furthermore insufficient justification is provided why the proposed remedy is an improvement of the draft.

The following presentation was reviewed by the comment resolution group: https://www.ieee802.org/3/df/public/23_0523/dawe_3df_01_230523.pdf

Comment ID 84

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C/ 124	SC	124.7.1		P108	L 23	# 85	C/ 124	SC	124.11a.1	P 122	L 21	# 86
Dawe, Pie	ers		Nv	idia			Dawe, Pier	rs		Nvidia		
Comment	Туре	TR	Comment Stat	us R		launch power	Comment	Туре	TR	Comment Status R		average power
The minimum OMA for 400GBASE-DR4-2 and 800GBASE-DR8-2 is 0.7 dB higher than for 400GBASE-DR4/100GBASE-DR and 800GBASE-DR8, so setting the average launch power 0.2 dB lower is not helpful. Any transmitter with an extinction ratio lower than 9.8 dB, which is very high, will exceed the 400GBASE-DR4 limit anyway. Modules will be made multi-compliant for convenience in interoperability and breakout - let us document that. There is a minor benefit in improving the clearance between Rx min power and Tx off max power, which should be very wide to accomodate better-than-worst receivers and intentional signal detect hysteresis. SuggestedRemedy Change Average launch power, each lane (min) from -3.1 to -2.9 dBm Change Average receive power, each lane (min) from -7.1 to -6.9 dBm. See another commen for interoperability text.							We ha power DR4 in Suggested Having 400GE averag 400GE	ive a ni is grea Table <i>IRemed</i> g made BASE-E ge powe BASE-E	uisance exa ater than or 124-6" tha dy the minim DR4 (see a er is greate DR4 in Tabl	ception "provided that t equal to the value for ave t adds procedural cost for um 400GBASE-DR4-2 tra nother comment), delete ' r than or equal to the value e 124-6."	he 400GBASE-DF erage launch power r no technical ben- ansmitter average 'and the 400GBAS ie for average laur	R4-2 transmitter average er (min) for 400GBASE- efit. power the same as for SE-DR4-2 transmitter nch power (min) for
Suggester	dRemed	dy					Similar	rly in 1	24.11a.2.			
Chanç	ge Avera	age launcl	n power, each lan	e (min) from	ı -3.1 to -2.9 dBr	n	Response			Response Status W		
Chanç	ge Aver	age receiv	e power, each lar	ne (min) from	ก -7.1 to -6.9 dB	m.	REJEC	CT.				
Response		commente	Response Stat				See re	sponse	e to comme	ent #85.		
REJE	CT.		nesponse olan	10			Since	comme	ent #85 was	s rejected this comment is	s no longer releva	nt.
REJECT. There is a historical background why the minimum average power does not seem consistent across PMD types. This is related to the assumption of an extinction ratio of 10					es not seem extinction ratio of 10	The fol https://	llowing /www.ie) presentati eee802.org	on was reviewed by the c /3/df/public/23_0523/daw	omment resolutior e_3df_01_230523	n group: 8.pdf	
(and 8	300GBA	SE-DR8),	while for the 400	GBASE-DR	4-2 and 800GB/	SE-DR8-2 the	C/ 124	SC	124.12.2	P 123	L 42	# 87
extinc	tion rati	io is assun	ned to be infinity.				Dawe, Pier	rs		Nvidia		
There 124.1	is no in 1a.1 an	nteroperati d 124.11a	on issue. The req .2.	uirements fo	or interoperation	are provided in	Comment Missin	<i>Туре</i> g 124. ⁻	E 12.3 Major	Comment Status A capabilities/options		(bucket1)
The fc https:/	ollowing //www.ie	presentat eee802.org	ion was reviewed g/3/df/public/23_0	by the comr 523/dawe_3	ment resolution 3df_01_230523.j	group: odf	<i>Suggested</i> Add m	IRemed ajor op	<i>dy</i> ptions for th	e four PMD types		
							Response ACCEI	PT IN I	PRINCIPLE	Response Status C		

C/ 124	SC 124.12.4.1	P 124	L 3	# 88	C/ 124	SC ·	124.12.4.4	P 125	L 21	# 91		
Dawe, Pier	rs	Nvidia			Dawe, Pier	ſS		Nvidia				
Comment	Туре Е	Comment Status A		(bucket1)	Comment	Туре	Е	Comment Status A		(bucket1)		
F1 Co	mpatible with 400	GBASE-R PCS and PMA			The sta	atus of	OM9 to ON	112 should depend on the maj	jor option for	PMD type		
Suggested	Remedy				Suggested	Remed	'y					
Modify	to include 800G				Per co	mment						
Response		Response Status C			Response			Response Status C				
ACCE	PT IN PRINCIPLE	E.			ACCE	PT IN F	RINCIPLE					
Impler	ment proposed rer	nedy with editorial license			Resolv	ve using	the respor	nse to comment #45.				
C/ 124	SC 124.12.4.3	a P 124	L 11	# 89	C/ 124	SC ·	124.12.4.	P 125	L 35	# 92		
Dawe, Pier	rs	Nvidia			Dawe, Pier	ſS		Nvidia				
Comment	Туре Е	Comment Status A		(bucket1)	Comment	Туре	Е	Comment Status A		(bucket1)		
Presu adjust	mably the "status" ed to the PMD typ	criterion in each of these fou e major options. Also, they o	r tables in 124 ould be comb	4.12.4.3X will be ined as one table in one	Need F and the	PICS fo ere is a	r the 800G n interface	MDIs because the IEC conne performance spec.	ector reference	e is different to 400G,		
subcla	use: "400GBASE	-DR4-2 transmitter meets spe	ecifications in"	and so on.	SuggestedRemedy							
Suggested	Remedy				Per co	mment	-					
Per co	omment				Response			Response Status C				
Response		Response Status C			ACCEI	PT IN F	RINCIPLE	,				
ACCE	PT IN PRINCIPLE				Implen	nent pro	posed rem	edy with editorial license				
Resol	/e the comment u	sing the response to commer	11 #45		C/ 167	SC ·	167.1.1	P 151	L 40	# 93		
C/ 124	SC 124.12.4.4	P 125	L 1	# 90	Dawe. Pier	rs		Nvidia				
Dawe, Pier	rs	Nvidia			Comment	Tvpe	Е	Comment Status R		(bucket1)		
Comment	Туре Е	Comment Status R		(bucket1)	Clause	e 173 ar	nd then Cla	use 172		()		
This s	ubclause title "Op	tical measurement methods"	represents the	e obsolete thinking that	Sugaested	Remed	'v					
we spe	ecity testing, which	n we don't; we specify parame	eter limits and	explain what the	Could	be simr	olified to: Cl	ause 173 then Clause 172				
away f	from this in Clause	e 52, where this subclause wa	as called "Opti	ical measurement	Pesnonse							
require	ements", matching	52.9. But 124.8 is called "D	efinition of opt	tical parameters and	REIEC	т						
measu	irement methods"				The wo	ording is	s consisten	t with multiple similar subclau	ises from IEE	E Std 802.3-2022		
Suggested	Remedy				includi	ng 122.	1.1, 124.1.	1 and 151.1.1.		<i>.</i>		
metho	je "Optical measu ds".	rement methods" to "Optical	parameters ar	nd measurement	The pr	oposed	change do	es not improve accuracy or cl	larity of the dr	aft.		
Response		Response Status C										
REJE This tit	CT. tle is consistent w	ith similar clauses, e.g. Claus	e 151. The tit	le of this subclause is								

also consistent with the PICS items listed in the table.

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 93

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C/ 167	SC 167.8.1	P 159	L 9	# 94	C/ 167	SC	167.10.3.4	P 165	L1	# 95	
Dawe. Pie	rs	Nvidia			Dawe. Pie	s		Nvidia			
<i>Comment</i> For th is tran One c table 6 We ca 3, 4, 5 100GI to 3, 4, 5	<i>Type</i> T e transmitter, we smitting, which d ould assume it m entry has become an simplify: 5, 6, or valid 100G BASE-SR1, 200G	Comment Status A aren't talking about an optica oes not depend on V vs. S. teans the same as compliant e very long. BASE-VR1, 200GBASE-VR BASE-SR2, 400GBASE-SR E-R1, 200GBASE-R2, 400G	test pattern (bucket1) e pattern the transmitter what "valid" means. e it adds nothing. This -VR4, 800GBASE-VR8, SE-SR8 signal 00GBASE-R8 signal	Comment Type TR Comment Status A A dual-row 24-position connector was recommended for 100GBASE-SR10, long ago. 400GBASE-SR8 has two options: a dual-row twelve-fiber interface (although different positions are used) and a single-row sixteen-fiber interface. Since then, the sixteen-fiber approach has become established. With the higher bandwidth for 800GBASE-SR8 vs. 400GBASE-SR8, the advantage of a single-row angled connector is more important. SuggestedRemedy Delete Option A, the dual-row 24-position non-angled connector.							
Surpri 100GI	Surprisingly, we have not used the term "800GBASE-R8" although in Section 6 we have 100GBASE-R10 and 100GBASE-R4. Such names will be useful for describing PMAs and					FICS	accordingly	Response Status C			
AUIs, Suggestee Chang 3, 4, 5 100Gl to 3, 4, 5 Simila For St compl Define	increasingly so a <i>IRemedy</i> je: , 6, or valid 100G BASE-SR1, 200G 5, 6, or 100GBAS rly for Average of ressed receiver s iance anyway, by 100GBASE-R1	s we work on 200G/lane in F BBASE-VR1, 200GBASE-VR BBASE-SR2, 400GBASE-SR E-R1, 200GBASE-R2, 400G ptical power. sensitivity, just delete "valid". definition. 200GBASE-R2, 400GBASE	2802.3dj. 2, 400GBASE 4, or 800GBA BASE-R4, 800 The SRS sig	-VR4, 800GBASE-VR8, SE-SR8 signal 0GBASE-R8, signal nal is on the edge of non- SE-R8 in the PMA	ACCE This is https:/ and D https:/ and in option Based conne Remo	PT IN F sue wa /www.ie 1.1 com /www.ie both ca on the ctor. // conn	PRINCIPLE: s previous a see802.org/ iment #115 see802.org/a ases the tas straw poll #	addressed in D1.0 commer 3/df/comments/D1p0/8023 3/df/comments/D1p1/8023 k force decided to retain th 1 (below) there is stronger	It #146, Jf_D1p0_comr Jf_D1p1_comr le dual-row, tw support for rei 10.3.4.	ments_final_clause.pdf, ments_final_clause.pdf, elve fiber connector moval of option A	
clause	es or introductory	clauses 80, 116, 169. Response Status C	-R4, 600GBA		Impler	nent wit	th editorial I	icense.	0.0.1		
ACCE The w In Tab "or val 100GI to "or val	PT IN PRINCIPL ording should be ble 167-11 change lid 100GBASE-VI BASE-SR1, 200G lid 100GBASE-R,	E. improved. Use similar word e R1, 200GBASE-VR2, 400GB BASE-SR2, 400GBASE-SR , 200GBASE-R, 400GBASE-	ing as Table 1 BASE-VR4, 80 4, or 800GBA R, or 800GBA	24-10. 0GBASE-VR8, SE-SR8 signal" SE-R signal"	Straw I supp Yes: 1 No: 11 Abstai	poll #1 ort remo 9 n: 24	oval of the o	option A dual-row 24-positio	on non-angled	connector from the draft.	

C/ 169	SC 169.5	P 180	L 9	# 96	C/ 171	SC 17	71.2	P 190	L 46	# 99		
Dawe, Pie	rs	Nvidia			Dawe, Pier	rs		Nvidia				
Comment	Type TR	Comment Status A		skew (CC)	Comment	Туре	TR	Comment Status A		(bucket2)		
As dis slow b Also th future that do	cussed, the Ske by modern stand hey were heavily 200G/lane-base besn't apply in th	w and Skew Variation limits v ards, and CWDM over 40 km r sandbagged. It is important d Ethernet is not locked into his case.	vere based on a which is not go to sort this out f decisions made	digital clock rate that is ng to happen for 800G. or 800G so that the long ago for technology	I don't see any the modification to the FEC degrade signaling in 171.5. It might be different to the 400GBASE-R PCS, but here we are comparing it to the 800GBASE-R PCS. I thought we sorted this out last time. SuggestedRemedy							
Suggested	dRemedy				Delete	"With the	e moaiti	ed FEC degrade signaling de	rined in 171.5"			
Contin some	nue the investiga of the padding.	tion, revise the numbers acco	ording to relevar	t technology, take out	Response Response Status W ACCEPT IN PRINCIPLE.							
Response		Response Status U			Implor	nont tha	chango	s on slide 26 in the following r	vice ontation.			
ACCE	PT IN PRINCIP	LE.			https://	/www.iee nent with	e802.or editoria	rg/3/df/public/23_0523/brown_ al license.	_3df_03b_2305	23.pdf		
Resolv	ve using the resp	conse to comment #81.			CL 472	SC 47	70.0	Dage	14	# 100		
C/ 169	SC 169.5	P 180	L 31	# 97	C/ 172	30 17	12.2	P 205	<i>L</i> 1	# 100		
Dawe, Pie	rs	Nvidia			Commont	Tuno	ED			(huckot1)		
Comment Table	<i>Type</i> E layout	Comment Status R		(bucket1)	This ti "Physi	tle "Physi cal Codir	ical Coo ng Subla	ding Sublayer (PCS)" is as go ayer (PCS), type 800GBASE-	od as the same R" which can't l	as the main clause title pe right.		
Suggested	dRemedy				Suggested	IRemedy						
Adjust	t column widths				Chang	e this to	"Functio	ons within the PCS", change '	172.2.1 to "Ove	rview of functions within		
Response		Response Status C			the PC	S", "Fun	ctions a	and processes within the PCS	" or similar.			
REJE	CT.				Response			Response Status W				
There The co	are no apparent omment does no	t issues with the layout of Tab of provide sufficient justification	le 169-6. In to make any o	hanges to the draft.	ACCE Chang title of	PT IN PF le title of 172 2 1 f	RINCIPL 172.2 fi to "Ove	LE. rom "Physical Coding Sublaye rview"	er (PCS)" to "PC	CS functions". Change		
Cl 170	SC 170.4.4.2	2 <i>P</i> 187	L 3	# 98								
Dawe, Pie	rs	Nvidia										
Comment Broker	<i>Type</i> E n variable name	Comment Status A		(bucket1)								
Suggested	dRemedy											
Make	second column	slightly wider										
Response ACCE	PT.	Response Status C										

C/ 172	SC 172.2.3	3 F	206	L 1	# 101	C/ 172	SC 172.	2.4.1.1	P 206	L 44	# 103				
Dawe, Pier	ſS	Nvi	dia			Dawe, Pier	S		Nvidia						
Comment	Туре Е	Comment Statu	is R		(bucket1)	Comment	Туре Т	Co	omment Status R		(bucket2)				
Same	topic, very sho	ort subclauses				If it's C	K to combi	ne criteria	in the second column it	t's OK in the thir	d column				
Suggested	lRemedy					Suggested	Remedy								
Make 172.2.3, 172.2.2.1, or remove this subheading and change the title of 172.2.2 to " 66- bit blocks and the 64B/66B code" or similar							Combine rows 3 and 4, combine rows 5 and 6								
				Response		Re	sponse Status C								
REJEC	ст	Response Statu	ა ს			REJEC	CT.								
The sub-clauses 172.2.2 and 172.2.3 are consistent with the subclauses in Clause 119, where 119.2.2 is "Use of blocks" and 119.2.3 is "64B/66B code". In this case, maintaining consistency with Clause 119 is beneficial for readers, while a short subclause does not impact readability of the clause. The proposed change does not improve the clarity or accuracy of the draft.							The same change was suggested in D1.1 comment #20. At that time there was no consensus to make the change. (https://www.ieee802.org/3/df/comments/D1p1/8023df_D1p1_comments_final_id.pdf). The table is correct as written. The comment does not provide any new justification to								
C/ 173	SC 173.4.3	3.1 <i>F</i>	233	L 26	# 102	Suppor	t ale bugge		<i></i>						
Dawe, Pier	ſS	Nvi	dia			There	is no conse	ensus to ma	ake the proposed chang	ges.					
Comment On furt share t Suggested Per co	<i>Type</i> T ther investigat this limit, as is <i>Remedy</i> mment	Comment Statu ion: this must be outp made clear for the re	is A out not gen eceive dire	erate. If there a ction.	(bucket1) are multiple PMAs they										
Response		Response Statu	° C												
ACCEI In chec this co becaus lanes a PMA it Chang "shall o to: "shall p This ch	PT IN PRINCI cking with sim ntext, includin se the skew be at the input of self. the from: generate no mo- produce no mo- hange makes	PLE. ilar subclauess in Cla g "produce" and "deli etween lanes at the o the PMA and any add ore than 29 ns of Ske the wording consisten	use 120 a ver". "prod utput of a ditional ske ew between w between t with 120	number of diffe luce" is probably PMA is a combi ew that is interna n PCSLs toward DCSLs toward .5.3.1.	rent terms are used in the better term , nation of skew between ally generated by the I the 800GAUI-8" the 800GAUI-8"										

C/ 172	SC 172.2.4.4	P 208	L7	# 104	C/ 172	SC 1	72.2.4.4	P 207	L 20	# 106			
Dawe, Pie	ers	Nvidia			Dawe, Pie	rs		Nvidia					
Comment	Type ER	Comment Status A			Comment	Туре	Е	Comment Status R		(bucket2)			
This t	able is very hard	to use. The next is split over	er two pages		Instead of 0 to 31, t might be better to number the lanes 0.0 to 0.15, 1.0 to 1.15								
Suggeste	dRemedy				Suggestee	Remedy	,						
Make	the headings line	e up with the ~columns, e.g.	by inserting spa	aces.	Per comment Response Response Status C								
Comb are ur	oine the two tables	s, adjusting the text on the p ading rows or another colun	previous page.	The PCS lane numbers									
used.					REJECT.								
Use ti	ne orphan rows p	roperty to ensure the table i	s not split.		The c	ause cle	arlv differ	entiates between PCS lane	s 0 through 15 a	as belonging to flow 0			
Response		Response Status C			and 16 through 31 to flow 1. The draft is technically correct as written. The suggested								
The c	omment resolutio	-⊏. on group reviewed the follow	ing presentatior	1:	remed	ly does n	ot improv	ve the accuracy or clarity of	the draft.				
https:/	//www.ieee802.or	g/3/df/public/23_0523/dawe	_3df_02_23052	3.pdf	There is no consensus to make the proposed changes.								
Imple	ment slide 11 of				C/ 173	SC 1	73.4	P 229	L 7	# 107			
https:/	//www.ieee802.or	g/3/df/public/23_0523/dawe	_3df_02_23052	3.pdf except having two	Dawe, Pie	rs		Nvidia					
lables			ni with editoria		Comment	Туре	т	Comment Status R		figure			
Straw	Poll #5 (direction	nal)			The grouping into two flows of 16 lanes each is significant to the PMA (although the lane numbers are not). SuggestedRemedy								
l supp	ort reformatting t	he alignment marker tables	into properly ali	gned columns.									
Yes: 7 No: 7	17				Instead of one group of 32 input lanes, show two groups of 16, consistent with the PCS figures. Similarly in Figure 173-4.								
Absta	in: 10				Response			Response Status C					
C/ 172	SC 172.2.4.4	P 207	L 27	# 105	REJE	CT.							
Dawe, Pie	ers	Nvidia			A sim	lar comn	nent (#87	7 against D1.1) was address	sed in task force	e review			
Comment	Type ER	Comment Status A			(https	//www.ie	ee802.or	g/3/df/comments/D1p1/802	3df_D1p1_comr	ments_final_id.pdf). That			
Pleas	e don't make wor	k for your readers			"REJECT. There are 32 PCS lanes represented by PMA:IS_UNITDATA 0:31. Figure 172-2								
Suggeste	dRemedy				shows	shows the two groups, one from 0:15 and the other from 16.31, to show how the lanes from							
Add a the tw	n informative NO	I E saying what is common t is the same in 400G.	among these la	nes, what is the same for	lanes	in this PI	MA diagra	am is not helpful. Since the	PMA is connect	ed directly to the PCS			
Response)	Response Status C			(coloc	ated), the	e lane nu	mbers are known by the PM	IA.There is no c	consensus to make the			
, ACCE	EPT IN PRINCIPL	.E.			ρισρο	seu chan	yes						
Add a	paragraph simila	ar to the fourth paragraph in	119.2.4.4 provid	ding some context on the	No new additional justification is provided in this new comment. After discussion there was no consensus to make the proposed change.								
alignn	nent marker conte	ent. Implement with editoria	al license.	-									

Comment ID 107

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Cl 173	SC 173.4	P 23	1 <i>l</i>	L 42	# 108					
Dawe, Piers		Nvidia								
Comment Ty	rpe T	Comment Status	Α			SIL				
An IC implementing a 8:8 PMA is likely to have signal detect ability in both directions.										
SuggestedR	emedy									
Show an optional SIL on the Tx side, that looks at PMA:IS_UNITDATA_0:7.request (there may be no PMA:IS_SIGNAL primitive). Add MDIO register.										
Response		Response Status	с							
ACCEPT	ACCEPT IN PRINCIPLE.									
Resolve	Resolve using the response to comment #13.									
[Editor's	note: changed li	ine from 231 to 42]								

Comment ID 108

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