C/ 116 SC 116 P92 L40 # 445 C/ 176 SC 176.2 P196 L 53 # 472 Simms, William **NVIDIA** Slavick, Jeff Broadcom Comment Type Comment Type Comment Status D (editorial) Ε Comment Status D (editorial) spacing of text on line 40 is different than spacing of the same text in lin 38 Is respectively necessary here? X is just a list of different rates. SuggestedRemedy SuggestedRemedy make spacing the same remoe the ", repsectively" Proposed Response Response Status W Proposed Response Response Status W PROPOSED ACCEPT IN PRINCIPLE. PROPOSED ACCEPT IN PRINCIPLE. Implement with editorial license and discretion. Implement with editorial license and discretion. C/ 119 # 470 C/ 176 SC 176.2 # 473 SC 119.2.5.8 P112 L 27 P197 L3 Slavick, Jeff Slavick, Jeff Broadcom Broadcom Comment Type E Comment Status D (editorial) Comment Type E Comment Status D (editorial) Extranious "either" Is respectively necessary here? X is just a list of different rates. SuggestedRemedy SuggestedRemedy remove the word "either" remoe the ", repsectively" Proposed Response Proposed Response Response Status W Response Status W PROPOSED ACCEPT IN PRINCIPLE. PROPOSED ACCEPT IN PRINCIPLE. Implement with editorial license and discretion Implement with editorial license and discretion. SC 176.2 P196 # 471 L 35 C/ 176 L 46 C/ 176 SC 176.5.1.1 P200 # 479 Slavick, Jeff Broadcom Slavick, Jeff Broadcom Comment Type E Comment Status D Comment Type E Comment Status D (editorial) (editorial) Is respectively necessary here? X is just a list of different rates. test pattern generate is overlapping with the IS SIGNAL regust line in Figure 176-2 SuggestedRemedy SuggestedRemedy remoe the ", repsectively," Move "test pattern genrate" to not overlap with the inst.IS_SIGNAL.request/indication line Same in Figure 176-9,10,13,14,15,19,20,24,25,26 Proposed Response Response Status W Proposed Response Response Status W PROPOSED ACCEPT IN PRINCIPLE. PROPOSED ACCEPT IN PRINCIPLE. Implement with editorial license and discretion. Implement with editorial license and discretion.

C/ 176 SC 176.5.1.1 P200 L35 # 478 C/ 176 SC 176.5.1.6.5 P208 L9 # 483 Slavick, Jeff Slavick, Jeff Broadcom Broadcom Comment Type Ε Comment Status D (editorial) Comment Type Ε Comment Status D (editorial) test pattern generate is overlapping with the IS SIGNAL regust line in Figure 176-2 I think it's best if the Start of the counter is the last thing in the Box SuggestedRemedy SuggestedRemedy Move "test pattern genrate" to not overlap with the inst.IS SIGNAL.request line Move "Start symbol_pair_lock_counter_demux" to be the last thing in Same in Figure 176-9,10,13,14,15,19,20,24,25,26 LOSS_OF_SYMBOL_PAIR_LOCK box Proposed Response Proposed Response Response Status W Response Status W PROPOSED ACCEPT IN PRINCIPLE. PROPOSED ACCEPT IN PRINCIPLE. Implement with editorial license and discretion. Implement with editorial license and discretion. C/ 176 SC 176.5.1.3.5 P203 1 25 # 476 C/ 176 SC 176.5.2 P208 / 40 # 601 Slavick, Jeff Broadcom de Koos, Andras Microchip Technology Comment Type E Comment Status D Comment Type E Comment Status D (editorial) (editorial) It's a multiplexor or a multiplexing function Is specifying the 1:8 SM-PMA really necessary? Apart from the layers it attaches to and the labels on the interfaces, it is identical to the 8:1 PMA. Same thing for 16:2 vs 2:16 for SuggestedRemedy 400G. 32:4 vs 4:32 for 800G. and 16:8 vs 8:16 for 1.6T. add the word function after multiplexing Alternately, could SM-PMAs be specified unidirectionally, rather than specifying transmit and receive? So 8:1 would only specify the PCS-PMD direction, and 1:8 would specify the Proposed Response Response Status W PMD-PCS direction. PROPOSED ACCEPT IN PRINCIPLE. Having so many sub-clauses that just point to other sub-clauses is an easy way to cause Implement with editorial license and discretion. confusion. SuggestedRemedy C/ 176 SC 176.5.1.5 P205 L 20 # 484 Consider specifying the 1:8 and 8:1 (and equivalent SM-PMAs for other rates) together. Slavick, Jeff Broadcom Proposed Response Response Status W Comment Type E Comment Status D (editorial) PROPOSED ACCEPT IN PRINCIPLE. Detailed functions and state diagrams has no content Implement with editorial license and discretion. SuggestedRemedy C/ 176 SC 176.6 P213 **L1** # 600 Change 176.5.1.6 to be a sub-heading of 176.5.1.5 (4th tier I think). de Koos, Andras Microchip Technology Proposed Response Response Status W Comment Type E Comment Status D PROPOSED ACCEPT IN PRINCIPLE. (editorial) Implement with editorial license and discretion. Would it not be possible to merge Clause 176.5 and 176.6? They are 95% similar, so repeating everything is hardly necessary. Even the figures for 200GBASE-R SM-PMA (Figure 176û3, Figure 176û4, Figure 176û5) have a general form with a variable number of PCSLs that are suitable for 400GBASE-R SuggestedRemedy Consider merging subclauses 176.5 and 176.6 Proposed Response Response Status W PROPOSED ACCEPT IN PRINCIPLE.

Implement with editorial license and discretion.

C/ 176 SC 176.6.1 P213 L4 # 602 de Koos, Andras Microchip Technology Comment Type E Comment Status D (editorial) Clauses 176.6, 176.7 and 176.8 are missing the 'overview' sub-clauses (with tables) that exist in Clause 176.5 (e.g. 176.5.1.1). The equivalent content is there but is placed directly in each PMA sub-clause (e.g. 176.6.1) SuggestedRemedy Structure the subclauses consistently between 200GBASE-R and 400GBASE-R, 800GBASE-R. 1.6TBASE-R. Proposed Response Response Status W PROPOSED ACCEPT IN PRINCIPLE. Implement with editorial license and discretion. C/ 176 SC 176.7.1 P221 L 20 # 379 Maniloff, Eric Ciena Comment Status D Comment Type Ε (editorial) Table 176-7 Includes two references to 400GBASE-R, these should be replaced with 800GBASE-R SuggestedRemedy Replace the text "400GBASE-R" with "800GBASE-R" in Table 176-7. Proposed Response Response Status W PROPOSED ACCEPT IN PRINCIPLE. Implement with editorial license and discretion. C/ 176 SC 176.8.1.1 P231 L14 # 480 Slavick, Jeff Broadcom Comment Status D Comment Type Ε (editorial) test pattern check is overalpping with IS_SIGNAL.request

SuggestedRemedy

Move "test pattern check" to no overlap with PMA.IS_SIGNAL.reguest in Figure 176-21

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Implement with editorial license and discretion.

 CI 176A
 SC 176A
 P548
 L6
 # 196

 Ran, Adee
 Cisco

 Comment Type
 ER
 Comment Status
 D
 (editorial)

The annex title includes "Control function and start-up protocol", while in the subclauses and text there are alternative terms such as "interface control function", "Start-up protocol", and "training" (176A.9).

This mega-function requires nomenclature to describe it. It would be good to have an acronym-friendly name so that it can be included in tables of other clauses (e.g. Table 116-3, Table 179-1).

SuggestedRemedy

A presentation with proposed nomenclature is planned.

Proposed Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

The following presentation was reviewed by the 802.3dj task force at the May Interim meeting:

https://www.ieee802.org/3/dj/public/24_05/law_3dj_01_2405.pdf

May Interim Straw poll # has the following results:

Straw Poll #4

The nomenclature that I prefer for function defined in Annex 176A is:

A. "Inter-sublayer link training" (ILT or ISLT)

B. "Sublink training" (SLT)

Results (all): A: 81, B: 5

See:

https://www.ieee802.org/3/di/public/24 05/motions 3di 2405.pdf

Update the draft such that references to the link training function (AKA control function) use the following name and acronym instead:

"inter-sublayer link training"

"ILT".

Implement with editorial license.

[Editor's note: The comment type was change from ER to T as it was deemed somewhat technical.]

C/ 176A SC 176A P555 L 29 # 446 Simms, William **NVIDIA** Comment Type Comment Status D (editorial) 3 states of Coefficient select echo are undefined SuggestedRemedy note in table 176A-3 that 010, 011, 100 are undefined/invalid Proposed Response Response Status W PROPOSED ACCEPT IN PRINCIPLE. Implement with editorial license and discretion. C/ 176A SC 176A.2 P548 L 24 # 198 Ran. Adee Cisco Comment Type ER Comment Status D (editorial)

"tx symbol and rx symbol variables" do not appear in this annex. They are in fact parameters of the service interface primitives of the sublayer that implements the control function.

SuggestedRemedy

Tie the text defining the symbols to the service interface of the sublayer.

Comment Status D

Proposed Response Response Status W PROPOSED ACCEPT IN PRINCIPLE. Implement with editorial license and discretion.

SC 176A.4.1+ C/ 176A P555 L 46 # 447 Simms, William **NVIDIA**

Comment Type E (editorial) Should the status field name be uniquified? The field name in the text of the table and text sections below the table do not clearly identify text as a field.

SuggestedRemedy

Change Receiver ready to RECEIVER READY or at maybe receiver ready and use the same in the text below the table 176A-3- Status field structure. Pertains to all field names.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Implement with editorial license and discretion.

C/ 176A SC 176A.6.4 P558 L 21 # 565

Law, David HPF

> Ε Comment Status D (editorial)

176A.6.4 says that 'The variables coef_req, coef_sts, and k are defined in 176A.10.3.1.', however, 176A.10.3.1 'Variables' uses all lowercase for the coef sts values (e.g., updated, coefficient at limit and equalization limit) and coef_reg (e.g, decrement, increment) whereas 176A.10.3.1 uses all uppercase for the coef_sts values (e.g., UPDATED, COEFFICIENT AT LIMIT AND EQUALIZATION LIMIT) and coef reg (e.g., DECREMENT, INCREMENT).

SuggestedRemedy

Comment Type

The formatting of the variable values defined in 176A.10.3.1 'Variables' and used in 176A.6.4 should match.

Proposed Response Response Status W PROPOSED ACCEPT IN PRINCIPLE.

Implement with editorial license and discretion.

C/ 176A SC 176A.6.4 P558 L46 # 568

Law. David HPF

Comment Type Ε Comment Status D (editorial)

Change 'coef sts = COEFFICENT AT LIMIT' (COEFFICIENT misspelt) to read 'COEFFICIENT AT LIMIT'

SuggestedRemedy

See comment.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Implement with editorial license and discretion.

C/ 176A SC 176A.6.4 P558 L 54 # 448

Simms, William **NVIDIA**

Comment Type Comment Status D

It took me longer than usual to realize the algorithm continues on page 559

SuggestedRemedy

Maybe put a '---continued---' at the last line of page 558. Disregard if this is inconsistent with IEEE style

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Implement with editorial license and discretion.

(editorial)

C/ 176A SC 176A.9 P560 L19 # 197 C/ 176D SC 176D.3.3 P598 Cisco Simms, William **NVIDIA** Ran, Adee Comment Type ER Comment Status D (editorial) Comment Type Ε Comment Status D The "Segment by segment training" seems to be an introductory subclause that explains Where does the value for SNDR of 32.5dB come from? the purpose of the whole thing. SuggestedRemedy No change suggested, looking for source material It would help readers if this introduction is placed at the beginning of the annex. The current introduction in 176A.1 seems too brief. Proposed Response Response Status W SuggestedRemedy PROPOSED ACCEPT IN PRINCIPLE. Move 176A.9 and its subclauses into 176A.1 (with some hierarchy) or after it. Implement with editorial license and discretion. Rephrase the text as necessary to make it a good introduction to the control function (e.g., C/ 177 SC 177.4.6.1 P255

explain what "RTS" stands for).

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.
Implement with editorial license and discretion.

C/ 176A SC 176A.10.4 P570 L9 # 557
Law. David HPE

Comment Type E Comment Status D

(editorial)

Subclause 176A.10.1 'State diagram conventions' says that 'The notation used in the state diagrams follows the conventions of 21.5.'. Subclause 21.5.3 'State transitions' says 'The following terms are valid transition qualifiers:' and item d) says 'An unconditional transition: UCT'. As a result, it is not necessary to expand UCT on it's first use in Annex 176A.

SuggestedRemedy

Change the text 'UCT (unconditional transition)' to read 'UCT'.

Proposed Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Implement with editorial license and discretion.

Cl 176A SC 176A-6 P568 L21 # 449

Simms, William NVIDIA

Comment Type ER Comment Status D (editorial)

Figure 176A-6 has an extraneous < in the name 'local tf lock<*'

SuggestedRemedy

change to 'local_tf_lock*'

Proposed Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Implement with editorial license and discretion.

"Frame Alignment Sequence" instead. SuggestedRemedy

Comment Type E

Ramesh, Sridhar

Pad Frame Alignment Sequence

Proposed Response Response Status W

"Pad frame sequence" naming does not convey

purpose in alignment. Suggest to call this field

PROPOSED ACCEPT IN PRINCIPLE.

Implement with editorial license and discretion.

Cl 177 SC 177.6.3 P262 L8 # 491

Maxlinear Inc.

Comment Status D

L16

L 25

450

174

(editorial)

(editorial)

Slavick, Jeff Broadcom

Comment Type E Comment Status D (editorial)

In Figure 177-8 the wrong character is showing up for the <= symbol

SuggestedRemedy

Fix <= symbol in Figure 177-8

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Implement with editorial license and discretion.

C/ 178	SC 178	P 270	L17	# 23	C/ 179B SC 179B	P 670	L	# 25
Liu, Cathy Broadcom					Liu, Cathy	Broadcom		
Comment Type E Comment Status D (editorial) Table 178-4 "120F-1.6TGAUI-16 C2C'				Comment Type E Figure 179B-1 figure i	Comment Status D s not showing completely in my	y PDF file	(editorial)	
Suggested change	dRemedy e to "120F-1.6TA	AUI-16 C2C'			SuggestedRemedy			
Proposed Response Response Status W PROPOSED ACCEPT IN PRINCIPLE. Implement with editorial license and discretion.				Proposed Response Response Status W PROPOSED ACCEPT IN PRINCIPLE. Implement with editorial license and discretion.				
C/ 179A	SC 179A	P 664	L	# 24	C/ 179B SC 179B	P 672	L	# 26
Liu, Cathy		Broadcom			Liu, Cathy	Broadcom		
Comment Type E Comment Status D (editorial) Figure 179A-1 and figure 179A-2 are not showing completely in my PDF file				Comment Type E Figure 179B-2 figure i	Comment Status D s not showing completely in my	y PDF file	(editorial)	
Suggested	lRemedy				SuggestedRemedy			
Proposed Response Response Status W PROPOSED ACCEPT IN PRINCIPLE. Implement with editorial license and discretion.				Proposed Response Response Status W PROPOSED ACCEPT IN PRINCIPLE. Implement with editorial license and discretion.				
C/ 179A	SC 179A.7	P 668	L 9	# 393	C/ 179C SC 179C.1	P 682	L 38	# 394
Kocsis, Sa	am	Amphenol			Kocsis, Sam	Amphenol		
Comment "TP0 a	Type E and TP5"	Comment Status D		(editorial)	Comment Type E "QSFP-DD800"	Comment Status D		(editorial)
SuggestedRemedy Change to "TP0d and TP5d"				SuggestedRemedy Change to "QSFP-DD	01600"			
Proposed Response Response Status W PROPOSED ACCEPT IN PRINCIPLE. Implement with editorial license and discretion.					•	Response Status W T IN PRINCIPLE. ial license and discretion. ed subclause to 179C.1]		

Cl 184 SC 184.6.5 P463 L6 # 558
Law, David HPE

Comment Type E Comment Status D

(editorial)

The variable 'alignnment_status' used in the LOSS_OF_ALIGNMENT and ALIGNMENT_ACQUIRED states is misspelt.

SuggestedRemedy

Suggest that 'alignnment_status' should read 'alignment_status'.

Proposed Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Implement with editorial license and discretion.