C/ 1	SC 1.4	P 20	L14	# 137	C/ 1	SC 1.4	P 20	L 25	# 136
Hajducze	nia, Marek	Charter Com	municatio		Hajducze	enia, Marek	Charter Comr	nunicatio	
Commen	t Туре Т	Comment Status A			Commen	t Type T	Comment Status A		
Missi	ng definition of E	EPON (as an architecture, to n	natch EPON defin	hitions we already have	Missi	ing 50/10G-ONU	J combination		
		landard), where we do not spe	city really ONO,		Suggeste	edRemedy			
Rena 25/10	ame all existing c G-EPON	definitions of "ONU" in 1.4 with	"EPON", e.g., 25	5/10G-ONU becomes	Inser the m upstr	t a new definitior naximum sustain eam direction (a	n of 50/10G-ONU (before 50/28 ned throughput of 50 Gb/s in do isymmetric rate).	5G-ONU): An El wnstream direc	PON ONU supporting tion and 10 Gb/s in
Кера	ace in all existing	Definitions of ONU, An EP		IN EPON architecture	Respons	е	Response Status C		
Respons	e Edt	Response Status C			ACC	EPT IN PRINCIF	PLE.		
C/ 1 Hajducze	SC 1.4	P 20 Charter Com	L 14 municatio	# [138	Inser EPO down	t a new definitior N architecture su Instream direction	n of "50/10G-EPON" (before exupporting the maximum sustair and 10 Gb/s in upstream direct	tisting definition and throughput of ction (asymmetri	of 50/25G-ONU): An of 50 Gb/s in ric rate).
Commen	t Type T	Comment Status A			C/ 1	SC 1.4	P 20	L36	# 152
Missi	ing definition for	all new PMDs (EPON speeds)) we are adding		Harstead	, Ed	Nokia		
Suggeste	edRemedy				Commen	t Type TR	Comment Status A		100G-EPON
Add	a new definition:				1000	GONUs out of so	соре		
Claus	se 141 EPON: A	n EPON architecture operating	g at a number of	different downstream	Suggeste	edRemedy			
term	collectively refer	s to 25/10G-EPON, 25/25G-E	PON, 50/10G-EF	PON, 50/25G-EPON,	Delet	te 1.4.7a, ,8a, ,9a	a, .10a (100G ONU definitions))	
and t	50/50G-EPON a	rchitectures.	with "Clause 14		Respons	e	Response Status C		
Respons		Boononoo Statuo C	i with Clause 14	TLFON	ACC	EPT.			
ACC	EPT IN PRINCIE	PIF			Char	and E to T			
100					Ondi				
Add a Nx25	a new definition: G-FPON: An FF	PON architecture operating at a	a number of diffe	rent downstream and	See	comment #134			
upstr	eam speeds, i.e	., 25G/10G, 25G/25G, 50G/10	G, 50G/25G, or 5	50G/50G. This term	C/ 1	SC 1.4	P 20	L36	# 158
colle	ctively refers to 2	25/10G-EPON, 25/25G-EPON	, 50/10G-EPON,	50/25G-EPON, and	Brown, A	lan	ADTRAN, Inc		
Repla	ace all instances	of 100G-EPON in Clause 141	l with "Nx25G-EF	PON"	Commen Motic	<i>t Type</i> T on #9 during Nov	Comment Status A v. 2017 TF meeting removed O	bjective for 100	100G-EPON G.
					Suggeste Delet	edRemedy te Definitions 1.4	I.7a, 1.4.8a, 1.4.9a, and 1.4.10	a.	
					Respons	е	Response Status C		
					ACC	EPT.			
					Char	nged type from E	to T		
					See	comment #134			
TYPE: TE COMMEN SORT OF	R/technical requi NT STATUS: D/c RDER: Clause, S	red ER/editorial required GR dispatched A/accepted R/reje Subclause, page, line	/general required ected RESPON	T/technical E/editorial G/ ISE STATUS: O/open W/w	/general /ritten C/close	ed Z/withdrawn	C/ 1 SC 1.4	4	Page 1 of 38 5/22/2018 3:40:25 P

2/1	SC 1.4	P 20	L 36	# 134	C/ 1	SC 1.4	P 21	L 8	# 171
ajduczeni	a, Marek	Charter Comm	unicatio		Kramer, G	ilen	Broadcom		
	Type T	Comment Status A		100G-EPON	Comment	<i>Type</i> T hus definition of an	Comment Status A	resulted in an u	nstream hurst from the
					ONU.	Now, with .3ca co	mbining multiple LLID trans	missions into a :	single burst, the
Remov ONU; f	ve the following from Table 2-1,	definitions: 100/25G-ONU, 100 remove three last lines coverir)/50G-ONU, 100 g 100G variatio)/100-ONU, 100G- ns	definit transr transr	ion of a Grant bec nission of one env nission (all envelo	came somewhat ambiguous. relope, but we need a term t pes that form one burst).	Under current c nat describes the	lefinition, Grant causes e entire ONU
esponse		Response Status C	-		Suggeste	dRemedy	·		
ACCER	PT.				Adopt	the following define	nitions:		
					1. Gra grant using one-to transr transr	Int: The term Grar includes one or m one or multiple G p-one corresponden nitted by that ONU nitted by that ONU	nt refers to a single transmis ore envelope allocations. Th ATE MPCPDUs, all having t ence between the grants issu J, i.e., a grant issued to an C J.	sion window allo e OLT conveys ne same StartTii ied to an ONU a NU results in a	cated to an ONU. A a grant to the ONU me values. There is ind upstream bursts single upstream burst
					2. Env A sing	velope Allocation: le GATE MPCPD	a transmission window alloc U can carry up to seven env	ated to a single elope allocation	LLID (including GLID). s
					3. Env from t alloca belony MAC. uninte	velope: an upstrea he OLT. The orde tions received in c ging to a specific I An envelope start rrupted for the nu	m transmission that corresp r of envelopes in an upstrea corresponding GATE MPCP LID (excluding GLID), i.e., t is with an Envelope Start He mber of EQs represented by	onds to an enve m burst shall ma DU(s). An envel he data or idles ader (ESH) and the EnvLength	lope allocation received atch order of envelope ope carries data sourced from a specific continues parameter.
					Response	-	Response Status C		
					ACCE	PT IN PRINCIPLI	Ξ.		
					Adopt	the following define	nitions:		
					1. Gra Claus to the values upstre upstre	Int: (copy from exi e 144, a grant incl ONU using one o s. There is one-to- eam bursts transmite am burst transmite	sting 802.3 definition) <show udes one or more envelope r multiple GATE MPCPDUs, one correspondence betwee itted by that ONU, i.e., a gra ted by that ONU.</show 	<i>i</i> the following te allocations. The all having the s in the grants iss int issued to an	ext as inserted> In OLT conveys a grant ame StartTime ued to an ONU and ONU results in a single
					2. Env A sing	velope Allocation: le GATE MPCPD	a transmission window alloc U can carry up to seven env	ated to a single elope allocation	LLID (including GLID). s.
					3. Env from t alloca belone	velope: an upstrea he OLT. The orde tions received in c ging to a specific l	m transmission that corresp r of envelopes in an upstrea corresponding GATE MPCP LID (excluding GLID), i.e., t	onds to an enve m burst matcher DU(s). An envel he data or idles	lope allocation received s the order of envelope ope carries data sourced from a specific
	to obvical requir	ad ED/aditarial required CD/a	anaral required	The chained Fladitarial C	annaral				Dogo 2 of 29

TYPE: TR/technical required ER/editorial required GR/gener	al required T/technical E/editorial G/general	C/ 1	Page 2 of 38
COMMENT STATUS: D/dispatched A/accepted R/rejected	RESPONSE STATUS: O/open W/written C/closed Z/withdrawn	SC 1.4	5/22/2018 3:40:25 PM
SORT ORDER: Clause, Subclause, page, line			

MAC. An envelope sta	irts with an Envelope Start He	ader (ESH) and c	ontinues	C/ 1	SC 1.4.13a	P 21	L 6	# 13	
		rine EnvLengin pa		Remein, D	uane	Huawei Tecl	hnologies		
Cl 1 SC 1.4.1a Remein, Duane	P 20 Huawei Techr	L 16 nologies	# 10	Comment	Type E	Comment Status D		bucket	
Comment Type E Section numbers incor	Comment Status D		bucket	Suggested	g period Remedy ter "(Envelope (Continuation Header)"			
SuggestedRemedy Align to P8023_D3p2_	SECTION1 numbering			Proposed I PROP	Response OSED ACCEPT	Response Status W			
PROPOSED ACCEPT	Response Status W			C/ 1 Remein, D	SC 1.4.15a uane	P 21 Huawei Tecl	L11 hnologies	# 14	
C/ 1 SC 1.4.7a Remein, Duane	P 20 Huawei Techi	L 36 nologies	# 11	Comment	<i>Type</i> T ion for LLID cor	Comment Status A	0		
100G-EPON stuff. We SuggestedRemedy Remove definitions for Response ACCEPT.	e are no longer planning 4 ch 100/x-ONUs (1.4.7a to 1.4.1 Response Status C	<i>ТООС-ЕРО</i> М Т.	Suggested Show a Logica an OL [–] associa where refers	tedRemedy w as update to 1.4.313 to read: ical Link Identifier (LLID): A numeric identifier assigned to a P2MP association DLT and ONU established through the Point-to-Point Emulation sublayer. Each ociation is assigned a unique LLID. The P2MP association is bound to an ONU ere a MAC would observe a private association. In {100G-EPON} a collective te rs to Physical Layer ID, Management Link ID, User Link ID, and Group Link ID					
See comment #134				Response ACCEI	PT IN PRINCIP	Response Status C LE.			
C/ 1 SC 1.4.12a Remein, Duane Comment Type E missing article "at appr SuggestedRemedy change to "at the appr Proposed Response PROPOSED ACCEPT	P21 Huawei Techi Comment Status D ropriate" opriate" Response Status W	L 3 nologies	# 12 bucket	Show a <mark Logica an OL⁻ Recon- unique observ refers Group</mark 	as update to 1.4 as changes for I Link Identifier T and ONU esta ciliation <strike: LLID. The P2M e a private asso to Physical Layo Link ID (GLID).</strike: 	I.313 to read: 802.3REV> (LLID): A numeric identifier a ablished through the Point-to ssSublayer IP association is bound to ar ociation. <insert>In Nx25G-E er ID (PLID), Management Li </insert>	assigned to a P2N -Point Emulation : Each P2MP ass n ONU DTE, whe :PON, it is also a ink ID (MLID), Us	MP association between <insert>function of the sociation is assigned a re a MAC would collective term that ser Link ID (ULID), and</insert>	

C/ 1 SC **1.4.15a**

C/ 1 SC 1.4.17a	P 21 Huawai Tach	L18	# 15	C/ 1 SC 1.4 Brown Alan	.17a	P21	L 27	# 159
Comment Type T I'm not aware of any po	Comment Status A	1.4	Table 2-1	Comment Type E Motion #9 during	Comment Nov. 2017 TF meeti	Status A	Dbjective for 100	<i>Table 2-1, 100G-EPON</i> G.
SuggestedRemedy Convert 25/10GBASE- to proper format of form IEEE 802.3 Physical La to-multipoint link over o Clause 141, Clause 14:	PR, 25GBASE-PR, 50/25GE n: ayer specifications for a xx G ne single-mode optical fiber. 2, Clause 143, and Clause 1	BASE-PR, and s b/s downstream (See IEEE Std 44).	50GBASE-PR definitions n yy Gb/s upstream point- 802.3, Table 56–1,	SuggestedRemedy Delete 100G row Response ACCEPT IN PRI See comment #1	rs from Table 2-1Pc <i>Response S</i> NCIPLE. 15	ower Budgets. Status C		
ACCEPT IN PRINCIPL Remove Table 2-1	E.			C/ 1 SC 1.4 Brown, Alan	.18a	P 21 ADTRAN, Inc	L 32 c.	# 160
Cl 1 SC 1.4.17a Hajduczenia, Marek Comment Type T Table 2-1 is missing en SuggestedRemedy Add a new row before 5	P21 Charter Comr Comment Status A htry for 50/10GBASE-PR	L19 nunicatio	# 1 <u>39</u> <i>Table 2-1</i>	Comment Type E This clause is en SuggestedRemedy Remove empty c comment to that clauses, includin Proposed Response	Comment of	Status D serve as a pla ded content. Status W	aceholder, in whi This should be c	bucket ich case add an editorial lone for all empty
Response ACCEPT IN PRINCIPL	Response Status C E.			C/ 1 SC 1.5 Remein, Duane		P 21 Huawei Tech	L 38 nnologies	# [16
See comment #15 C/ 1 SC 1.4.17a Hajduczenia, Marek Comment Type T Table 2-1 is missing en SuggestedRemedy Add a new row after 50 50GBASE-PR 2 2 Response ACCEPT IN PRINCIPL See comment #15	P21 Charter Comr <i>Comment Status</i> A Atry for 50GBASE-PR /25GBASE-PR with the follo <i>Response Status</i> C E.	L19 nunicatio wing content:	# [<u>140</u> <i>Table 2-1</i>	Comment Type E abbreviation for A SuggestedRemedy remove. Proposed Response PROPOSED AC	E Comment ABBR is not needed	Status D Status W		bucket

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

C/ 1 SC 1.5 Page 4 of 38 5/22/2018 3:40:25 PM Proposed Responses

specifications and Management Parameters for 25Gb/s, 50Gb/s, and 100Gb/s Passive Optical Networks 1:

C/ 1 SC 1.5	P 21	L 38	# 17		C/ 56	SC 5	56		P 25	L1	# 19
Remein, Duane	Huawei Techno	logies			Remein, Du	uane			Huawei Techr	nologies	
Comment Type E	Comment Status D			bucket	Comment 7	Туре	т	Comment	Status A		
Abbreviations should be	in alphabetical order				Open T and 50	Fable 56	6-1 and -PR	add entries for	25/10GBASE-	PR, 25GBASE	-PR, 50/25GBASE-PR,
SuggestedRemedy					Suggested	Remed	 /v				
sort properly					per cor	nment	y				
Proposed Response	Response Status W				Response			Response S	Status C		
PROPOSED ACCEPT.					ACCEF	PT IN P	RINCIP	PLE.			
C/ 1 SC 1.5 Brown, Alan	P 21 ADTRAN, Inc.	L 38	# 161		Use PN	MD nam	nes per	johnson_3a_3_	0518.xlsx, just	use 25G table	(leftmost).
Comment Type E	Comment Status D			bucket	C/ 141	SC 1	141		P 23	L 2	# 18
"ABBR" and "expanded	version" are not intended to b	e included in t	he draft. The do	ocument	Remein, Du	uane			Huawei Techr	nologies	
802.3-2017 already inclu	udes an appropriate introducti	on.			Comment 7	Туре	TR	Comment	Status A		100G-EPON
SuggestedRemedy					100G-E	EPON s	stuff. It c	loes not appear	we will be doir	ng 100G-EPON	l just yet.
Remove the line contain	ing the quoted text.				Suggested	Remed	'y				
Proposed Response PROPOSED ACCEPT.	Response Status W				Remov replace 50G–E	/e all ins ed by; n PON" a	stances othing (as dictat	of 100G-EPON as in this title), ' ted by context.	from the draft '25–EPON and	except in page I 50G–EPON",	e headers. May be or "25–EPON or
Cl 1 SC 1.5 Hajduczenia, Marek	P 21 Charter Commu	L 38 unicatio	# 135		Response ACCEF	PT IN P	RINCIP	Response S PLE.	Status C		
Comment Type E "ABBR expanded versio	Comment Status D n" should be removed it is left	over from ten	nplate	bucket	Replac	e all ins	stances	of "25G-EPON	50G-EPON, a	nd 100G-EPO	N" with "Nx25G-EPON"
SuggestedRemedy					Commo	ent is re	eally aga	ainst page 25, li	ne 2		
Per comment					C/ 141	SC 1	141		P 25	<i>L</i> 1	# 162
Proposed Response	Response Status W				Brown, Alai	n			ADTRAN, Inc		
PROPOSED ACCEPT.					Comment 7	Туре	т	Comment	Status A		100G-EPON
					Motion	#9 duri	ing Nov	. 2017 TF meeti	ng removed O	bjective for 100)G.
					Suggested	Remed	V				
					Renam 50G-EF	ne claus PON".	se: chan	ige "25G- EPON	I, 50G-EPON,	and 100G-EPC	DN" to "25G- EPON and
					Response			Response S	Status C		
					ACCEF	PT IN P	RINCIP	LE.			
					See co	omment	#18				
					Change	ed type	from E	to T			
TYPE: TR/technical required	ER/editorial required GR/ge	eneral required	T/technical E/	editorial G/g	jeneral				C/ 14	1	Page 5 of 38

 COMMENT STATUS: D/dispatched A/accepted R/rejected
 RESPONSE STATUS: O/open W/written C/closed Z/withdrawn
 SC 141
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 SC 141
 SC 141
 SC 141

C/ 141 SC 141 Harstead, Ed	P 25 Nokia	L1	# 173	C/ 141 Remein, Di	SC 141.1	P 25 Huawei Techno	L7	# 20
Comment Type TR Section title refers to 1 SuggestedRemedy Remove text "100G-Ef Response ACCEPT IN PRINCIPL	Comment Status A 100G EPON *PMD* PON" Response Status C LE.		100G-EPON	Comment 1 Assum Optical Suggested/ per cor Proposed F	ype E ng you will war Networks". Remedy Iment Response	Comment Status D at to use this abbreviation, add " Response Status W	(EPON") after "Eti	bucket hernet Passive
See comment #18. Changed type from E t	to T			<i>Cl</i> 141 Brown, Alar	SC 141.1	P 25 ADTRAN, Inc.	L 8	# 163
Cl 141 SC 141.1 Hajduczenia, Marek	P 25 Charter Com	L 7 municatio	# 141	Comment 7 Motion	<i>ype</i> T #9 during Nov.	Comment Status A 2017 TF meeting removed Obje	ective for 100G.	100G-EPON
Comment Type T Overview mentions 10	Comment Status A			Suggestedl Change	Re <i>medy</i> e "25, 50, or 10	0 Gb/s," to "25 or 50 Gb/s".		
SuggestedRemedy Change: operating at the line ra downstream and upstr	ate of 25, 50, or 100 Gb/s, in e ream directions.	either downstre	am or in both	Response ACCEF Change	PT. ed E to T	Response Status C		
To: operating at the line ra 10, 25, or 50 Gb/s in tł	ate of 25 or 50 Gb/s in the down	wnstream direc	tion and the line rate of	<i>Cl</i> 141 Remein, Du	SC 141.1.1	P 25 Huawei Techno	L16 logies	# 21
Response ACCEPT IN PRINCIPI	Response Status C LE.			Comment 7 Per IEE	<i>ype</i> E E Style Guide	<i>Comment Status</i> D italics font is reserved for variab	ble names.	bucket
Change: operating at the line ra downstream and upstr To:	ate of 25, 50, or 100 Gb/s, in e ream directions.	either downstre	am or in both	Suggestedi Use no Proposed F PROPC	Remedy rmal font for up Response DSED ACCEPT	stream and downstream Response Status W		
anarating at the agers	acto line rate of 25 or 50 Ch/	a in the downed	room direction and the					

operating at the aggregate line rate of 25 or 50 Gb/s in the downstream direction and the aggregate line rate of 10, 25, or 50 Gb/s in the upstream direction.

C/ 141 SC 141.1.1

					-						
C/ 141	SC 141.1.2	P 25	L 22	# 144	C/ 141	SC 141.1.3	•	P 25	L 36	# 142	
Hajduczen	ia, Marek	Charter Comm	nunicatio		Hajduczen	nia, Marek		Charter Corr	municatio		
Comment	Туре Т	Comment Status R			Comment	Туре Т	Comment	Status A			
Definit meetir	ion of medium po ng - 24dB Channe	wer budget is not consistent I Insertion loss assumed dis	with the discustance of 20km,	ssion at the last F2F not 10km	Definit	tion of PR-A po	ower budget is o	pen-ended			
Suggested	Remedy				Chan						
Chang with th ratio o To: with th	ie: le split ratio of at l f at least 1:32 and le split ratio of at l	east 1:16 and the distance c I the distance of at least 10 l east 1:16 and the distance c	f at least 20 kn km. f at least 20 kn	n or a PON with the split	PR-A power budget describes asymmetric-rate PHY for PON operating at 25 Gb/s or 50 Gb/s in the downstream direction and 10 Gb/s and above in the upstream direction, over a single SMF To:						
Response		Response Status C			downs directi	stream direction on, and 10 or 2	and 10 Gb/s in 25 Gb/s in the up	the upstream	direction, or 50	Gb/s in the downstream	
REJE	UI.				Response		Response	Status C			
The op transm	peration of the sar	ne power budget at shorter of the state is are lower.	distance is eve	n simpler, since the	ACCE	PT IN PRINCI	, PLE.				
C/ 141	SC 141.1.2	P 25 Huawei Techr	# 22	Insert	editorial note ir nce power bude	nto 141.1.3 indic gets. Current tex	ating that Gle t otherwise st	n Kramer will pro ays unchanged.	ovide a consistent way to		
			lologics	have been	C/ 141	SC 141.1.3	;	P 26	L 3	# 143	
<i>Comment</i> Missin	<i>Type</i> E g article "supports	s P2MP" (also in line 25).		bucket	Hajduczen	nia, Marek	Commont	Charter Corr	nmunicatio	Table 141.1	
Suggested suppo	IRemedy orts a P2MP"				Table rates	141-1 is missir	ng basic informa	tion on individ	ual power budge	ts and associated data	
Proposed PROP	Response OSED ACCEPT.	Response Status W			Suggested Use h	dRemedy ajduczenia_3ca	a_4_0518.pdf fo	r table structu	re and data upda	ites.	
C/ 141 Remein, D	SC 141.1.3	P 25 Huawei Techr	L 33 nologies	# 23	Response ACCE	PT IN PRINCI	Response - PLE.	Status C			
Comment "for PC	<i>Type</i> E DN" s/b plural (Als	Comment Status D so line 35)		bucket	See c	omment #141.					
Suggested "for PC	lRemedy DNs"										
Proposed PROP	Response OSED ACCEPT.	Response Status W									

C/ 141 SC 141.1.3

C/ 141	SC 14	1.1.4	P 26	L	41	# 24		C/ 141	SC	141.2	P2	28	L 6	# 25	k
Remein, D	Juane		Huawei	Technologies				Remein, D	uane		Huav	vei Techno	ologies		-
Comment	Type 1	FR Com	ment Status D)		100G-E	PON	Comment	Туре	Е	Comment Status	D			
100G- device then then the should	EPON stu es. Sugge here are n d be addeo	off. The TF need sted solution as umerous place d.	ds to make a de ssumes it is rer s in the draft th	ecision regard noved. If the at list the PMI	ling support of 5 TF decides to k D where 50/100	50/10Gb/s keep this vari BASE-PR	ant	"Such like two change point ir	PMDs a o digits e "a dig n any ca	are furthe to me tha it" to "two ase.	r distinguished by ap at indicate power bud digits" or just drop t	opending a dget as ex he whole	a digit after the su plained in 141.1.3 para, seems a bit	uffix D or U." Looks 3 quite well. Could t late to make this	
Suggested	dRemedy							Suggested	Remed	y .					
Strike	all instand	ce of 50/10G*:						Strike	para.						
рд. Lii 3 3	"50/10 C	Gb/s,"						Proposed I	Respon	se	Response Status	Z			
26 41	"50/10G	-EPON" (move	the and in list)					REJEC	CT.						
34 39 35 45	"50/10GI "50/10GI	BASE-PR20-D BASE-PR30-D	' (3 instances i ' (3 instances ir	n draft) n draft)				This co	ommen	t was WIT	THDRAWN by the co	ommenter	•		
Proposed	Response	e Resp	onse Status Z					C/ 141	SC	141.2.1.1	P2	28	L 40	# 26	-
REJE	CT.							Remein, D	uane		Huav	vei Techno	ologies		•
This c	omment w	vas WITHDRAV	VN by the com	menter.				Comment	Туре	т	Comment Status	; A			
As dis Techn single	cussed, 5 ically, thei 10G upsti	0/10G is within re is nothing tha ream channel.	the scope and at prevents ope	has not been ration of 2 do	removed in any wnstream 25G	/ way. channels and	la	Do we not. Suggested	really r Remed	need to lis	at PMD names in sec	ction titles	(e.g., {PMD_X} &	k ({NG}-type)? I think	
C/ 141	SC 14	1.2	P 27	Ľ	1	# 145		Strike '	"{PMD_	_X}", "({N	G} type)", and "{PM	ID_Y}" from	m the draft.		
Hajduczer	ia, Marek		Charter	Communicati	0			Response			Response Status	С			
Comment	Туре 1	r Com	ment Status A	L.				ACCE		RINCIPL	. C .				
Figure	e 141-1 she rt 50G onl	ows 4 x 25GMI v	l, providing 100	G connectivit	y. Per updated	objectives, w	е	Insert e	editoria	l note: im	proved text to be pro	posed by	the Nomenclatur	e Committee.	-
Suggester	iRemedv	5						C/ 141	SC	141.3	P2	26	L 3	# 153	
Chanc	ne Figure '	141-1 per haidu	iczenia 3ca 5	0518.pdf. we	re the number o	of supported		Harstead, E	Ξd		Nokia	а			
PHY i	nstances i	s shown to be	1 or 2. With the	dashed line,	it can be used p	pretty much f	or	Comment	Туре	TR	Comment Status	5 A		Table 141-1	1
any nu Simila	imber of F r figure ca	PHY instances and be used in C	supported by th lauses 142, 14	e PMD and N 3. and 144 wit	1PRS. th proper shadir	na to show		Nomina	al wave	lengths m	nissing in Table 141	-1			
specif	ic sublaye	r(s) defined in t	he given Claus	e.		.g		Suggested	Remea	У					
Response		Resp	onse Status C	;				UW0= ⁻ this rec	1270 ni dundan	n, UW1= [.] t with Tab	1300 nm, UW2=132 de 141–5 -6?	:0 nm, DW	/0=1358 nm, DW	1=1324 nm. Or, is	
ACCE	PT IN PR	INCIPLE.						Response			Response Status	С			
Updat chang	e the figur	es proposed in	hajduczenia_3	ca_5_0518.pd	df to include the	e following		ACCE	PT IN F	RINCIPL	Е.	•			
- remo - rena - OAN	ove FEC (0 me MPCP I is not opt	Clause 142) as to MPMC, cha tional	a separate sub nge abbreviatio	layer ons at the bott	tom			See co	omment	: #154					
TYPE: TR COMMEN SORT OR	/technical T STATUS DER: Clau	required ER/e S: D/dispatched use, Subclause	ditorial required A/accepted F , page, line	I GR/general R/rejected F	required T/tecl RESPONSE ST	nnical E/edit ATUS: O/ope	orial G/ge en W/writ	eneral ten C/closed	Z/with	drawn		C/ 141 SC 141	.3	Page 8 of 38 5/22/2018 3:40:	:25 PM

Proposed Responses

specifications and Management Parameters for 25Gb/s, 50Gb/s, and 100Gb/s Passive Optical Networks 1:

C/ 141	SC 141.3	P 26	L 3	# 154	C/ 141	SC 1	41.3.1	P 29	L 41	# 28
Harstead,	Ed	Nokia			Remein, D	Juane		Huawei Te	chnologies	
Comment Wave	<i>Type</i> TR lengths tolerance	Comment Status A es missing in Table 141-1		Table 141-1	<i>Comment</i> We sh	<i>Type</i> hould alig	TR In text wi	Comment Status A th the channelized PMD.		primitives
Suggested	dRemedy				Suggested	dRemedy	/			
UW0= redun	=+/-10 nm, UW1= dant with Table 1	=+/-10 nm, UW2=+/-2 nm, DW 41–5, -6?	0=+/-2 nm, D\	V1=+/-2 nm. Or, is this	Given namin	the singl g should	le channe reflect th	elized PMD interfaces wit his. Change "PMD_UNITI	h multiple PMAs th DATA." to "PMD_L	he PMD service interface JNITDATAch." and
Response ACCE	PT IN PRINCIPL	Response Status C .E.			"PMD line 40 PMD e	_SIGNAL) "Where entities" t 3D_depe	" to "PN "ch" rep to "betwe	ID_SIGNALch." and add resents the PMA Channe een the PMAch and PMD the structure of PMA)" i	the following to the el; 1 for 2." Change entities" at pg. 29 n Cl 141.3 x will be	e end of para at pg. 29 e "between the PMA and line 38. The 7 instances e dealt with in a separate
Kill co	lumns for Center	frequency in -6 and -5 tables.			comm	ents.	inding on		11 OF 141.0.X WIII DC	
C/ 141	SC 141.3	P 29	L 28	# 27	Response			Response Status C		
Remein, D	Duane	Huawei Techn	ologies		ACCE	PT IN PI	RINCIPL	E.		
Comment More	<i>Type</i> T placeholders "{N	Comment Status A G-EPON type}"		100G-EPON	Agreen name,	d on the use [i] d	scope of lesignato	suggested change. How r as shown below:	ever, rather than a	dd "ch" to the primitive
Suggested Repla	dRemedy ce 8x with "25G-	EPON and 50G-EPON"			— PM — PM	D_UNIT	DATA[i].ı DATA[i].i	request ndication		
Response ACCE	PT IN PRINCIPL	Response Status C .E.			— PM — PM	D_SIGN D_SIGN	AL[ɪ].req AL[i].indi	uest cation		
Repla	ce all instances o	of "{NG-EPON type} PMDs" wi	th "PQ-type Pl	MDs"	add th Chanr and Pl	e followii nel: 0 or 1 MD entiti	ng to the 1." Chan ies" at po	end of para at pg. 29 line ge "between the PMA an 1 29 line 38	e 40 "Where "[i]" re d PMD entities" to	presents the PMA "between the PMA[i]
C/ 141 Harstead.	SC 141.3 Ed	Р 30 Nokia	L19	# 155	C/ 141	SC 1	41.3.1.2	P 29	L 52	# 29
Comment	Type FR	Comment Status A		100G-FPON	Remein, D	Juane		Huawei Te	echnologies	
Multip	le references to	100G-EPON PMD at this line a	and following		Comment	Туре	т	Comment Status A		
Suggested	dRemedy				"Claus	se 201" s	/b Cl 142	2 (2 instances).		
Repla	ce with 25G- and	50G-EPON PMDs			Suggested	dRemedy	/			
Response	•	Response Status C			Chang	ge to: "Cl	ause 142	2" with live link to clause.		
ACCE See c	PT IN PRINCIPL	.E.			Response ACCE	PT.		Response Status C		
2250										

C/ 141 SC 141.3.1.2

C/ 141	SC 141 3 1 2	P30	/ 1	# 30	C/ 141	SC 141 3 1	3 P30	16	# 31
	00 141.0.1.2	, 50		# 50	0, 141	00 141.0.1.			# 51
Remein, I	Duane	Huawei Techn	ologies		Remein, D	uane	Huawei	echnologies	
Comment	Туре Т	Comment Status A		primitives	Comment	Гуре Т	Comment Status A		primitives
Replace "{TBD, depending on the structure of PMA}" with:				Replac	e "{TBD, deper	nding on the structure of I	PMA}" with:		

SuggestedRemedy

The semantics of the service primitive are PMD_UNITDATAch.request(tx_bit). The data conveyed by PMD_UNITDATAch.request is a continuous stream of bits. The tx_bit parameter can take one of two values: ONE or ZERO. The Clause 142 PMA continuously sends the appropriate stream of bits to the PMD for transmission on the medium, at a nominal signaling speed of 25.7812 GBd in the case of 25G–EPON or 50G-EPON OLT and ONU PMDs. The {Clause 77} PMA continuously sends the appropriate stream of bits to the PMD for transmission on the medium, at a nominal signaling speed of 25.7812 GBd in the case of 25G–EPON or 50G-EPON OLT and ONU PMDs. The {Clause 77} PMA continuously sends the appropriate stream of bits to the PMD for transmission on the medium, at a nominal signaling speed of 10.3125 GBd in the case of 25/10G–EPON ONU PMDs. Upon the receipt of this primitive, the PMD converts the specified stream of bits into the appropriate signals at the MDI.

Response Response Status C

ACCEPT IN PRINCIPLE.

Use the following text:

The semantics of the service primitive are PMD_UNITDATA[i].request(tx_bit). The data conveyed by PMD_UNITDATA[i].request is a continuous stream of bits. The tx_bit parameter can take one of two values: ONE or ZERO. The Clause 142 PMA continuously sends the appropriate stream of bits to the PMD for transmission on the medium, at a nominal signaling speed of 25.78125 GBd in the case of Nx25G-EPON OLT and ONU PMDs. The Clause 142 PMA continuously sends the appropriate stream of bits to the PMD for transmission on the medium, at a nominal signaling speed of 25.78125 GBd in the case of 10.3125 GBd in the case of 25/10G-EPON and 50/10G-EPON ONU PMDs. Upon the receipt of this primitive, the PMD converts the specified stream of bits into the appropriate signals at the MDI.

Comment Type	т	Comment Status	Α	primitives
Replace "{TBE), dependin	g on the structure	of PMA}" with:	
SuggestedRemedy	Y			
The semantics conveyed by F	s of the servers of the servers of the serverse of the servers	vice primitive are P	MD_UNITDATAch.indication(rx_bit). Th a continuous stream of bits. The rx_bit	e data

conveyed by PMD_UNITDATA.indication is a continuous stream of bits. The rx_bit parameter can take one of two values: ONE or ZERO. The PMD continuously sends a stream of bits to the Clause 142 PMA corresponding to the signals received from the MDI, at the nominal signaling speed of 25.7812 GBd in the case of 25G–EPON or 50G–EPON OLT and ONU PMDs or to the {Clause 77} PMA at the nominal signaling speed of 10.3125 GBd in the case of 10/1G–EPON OLT PMDs.

Response Response Status C

ACCEPT IN PRINCIPLE.

Use the following text

The semantics of the service primitive are PMD_UNITDATA[i].indication(rx_bit). The data conveyed by PMD_UNITDATA[i].indication is a continuous stream of bits. The rx_bit parameter can take one of two values: ONE or ZERO. The PMD continuously sends a stream of bits to the Clause 142 PMA corresponding to the signals received from the MDI, at the nominal signaling speed of 25.78125 GBd in the case of Nx25G–EPON OLT and ONU PMDs or to the Clause 142 PMA at the nominal signaling speed of 10.3125 GBd in the case of 25/10G–EPON and 50/10G–EPON OLT PMDs.

C/ 141 SC 141.3.1.3 Page 10 of 38 5/22/2018 3:40:25 PM

C/ 141 SC	C 141.3.1.4	P 30	L10	# 32	C/ 141	SC 141.3.1	.5	P30	L14	# 33
Remein, Duane		Huawei Techr	nologies		Remein, D	uane		Huawei Tech	inologies	
Comment Type	т	Comment Status A		primitives	Comment	Туре Т	Comment	Status A		primitives
Replace "{T	BD, dependi	ing on the structure of PMA	}" with:		Replac	ce "{TBD, depe	ending on the str	ucture of PMA	\}" with:	
SuggestedRem	edy				Suggested	IRemedy				
In the upstru- off the trans described in The semant tx_enable p whether the generates the this primitive	eam direction mitter accord n 142.x.x.x fo tics of the se arameter can e PMD transm his primitive e, the PMD t	n, this primitive is generated ding to the granted time. A s r the Clause 142 PCS. rvice primitive are PMD_SIC n take on one of two values: nitter is on (enabled) or off (to indicate a change in the v urns the transmitter on or of	I by the Clause 1 signal for laser or GNALch.request(ENABLE or DIS disabled). The C value of tx_enabl If as appropriate.	42 PMA to turn on and ontrol is generated as (tx_enable). The ABLE, determining lause 142 PMA e. Upon the receipt of	This pr from th PMD_S take or receive PMD_L indicate then PT	rimitive is gene ne MDI. The se SIGNALch.indi n one of two va er (OK) or not (UNITDATAch.i e a change in MD_global_se	erated by the PM emantics of the s ication(SIGNAL_ alues: OK or FAI (FAIL). When SI indication(rx_bit) the value of SIG mal_detect shall	ID to indicate t service primitiv _DETECT). Th IL, indicating w GNAL_DETEC) is undefined. :NAL_DETEC ⁻ I be continuou	he status of the s re are le SIGNAL_DETE /hether the PMD i CT = FAIL, The PMD genera T. If the MDIO intr sly set to the valu	signal being received ECT parameter can is detecting light at the ates this primitive to erface is implemented, ue of SIGNAL_DETECT.
Response ACCEPT IN		Response Status C			NOTE- PMD_U provide	—SIGNAL_DE UNITDATAch.i e sufficient ligh	IECI = OK doe indication(rx_bit) it for a SIGNAL	s not guarante) is known goo DETECT = O!	e that d. It is possible fc K indication and ૬	or a poor quality link to still not meet the

Use the following text

In the upstream direction, this primitive is generated by the Clause 142 PMA to turn on and off the transmitter according to the granted time. A signal for laser control is generated as described in {142.x.x.x} for the Clause 142 PCS.

The semantics of the service primitive are PMD_SIGNAL[i].request(tx_enable). The tx_enable parameter can take on one of two values: ENABLE or DISABLE, determining whether the PMD transmitter is on (enabled) or off (disabled). The Clause 142 PMA generates this primitive to indicate a change in the value of tx_enable. Upon the receipt of this primitive, the PMD turns the transmitter on or off as appropriate.

Response Response Status C

ACCEPT IN PRINCIPLE.

Use the following text:

This primitive is generated by the PMD to indicate the status of the signal being received from the MDI. The semantics of the service primitive are

specified bit error ratio. PMD_SIGNALch.indication(SIGNAL_DETECT) has different

characteristics for upstream and downstream links, see 141.x.x.

PMD_SIGNAL[i].indication(SIGNAL_DETECT). The SIGNAL_DETECT parameter can take on one of two values: OK or FAIL, indicating whether the PMD is detecting light at the receiver (OK) or not (FAIL). When SIGNAL_DETECT = FAIL,

PMD_UNITDATA[i].indication(rx_bit) is undefined. The PMD generates this primitive to indicate a change in the value of SIGNAL_DETECT. If the MDIO interface is implemented, then PMD_global_signal_detect shall be continuously set to the value of SIGNAL_DETECT. NOTE—SIGNAL_DETECT = OK does not guarantee that

PMD_UNITDATA[i].indication(rx_bit) is known good. It is possible for a poor quality link to provide sufficient light for a SIGNAL_DETECT = OK indication and still not meet the specified bit error ratio. PMD_SIGNAL[i].indication(SIGNAL_DETECT) has different characteristics for upstream and downstream links, see {141.x.x}.

C/ 141 SC 141.3.1.5

C/ 141 SC 141.3.2	P 30	L19	# 164	C/ 141 S	SC 141.3.4	P 30	L 41	# 35
Brown, Alan	ADTRAN, Inc.			Remein, Duan	е	Huawei Te	chnologies	
Comment Type E	Comment Status A		100G-EPON	Comment Typ	e T	Comment Status A		primitives
Motion #9 during Nov	v. 2017 TF meeting removed Obj	ective for 100G	i.	Replace "	TBD, depen	ding on the structure of PM	/IA}" with:	
SuggestedRemedy				SuggestedRer	nedy			
Change "100G-EPO	N PMDs" to "25G-EPON PMDs a	nd 50G-EPON	PMDs".	The PMD	Receive fund	ction shall convey the bits	received from the	MDI according to the
Response	Response Status C			optical spe	ecifications in	Clause 141 to the PMD s	service interface u	sing the message
ACCEPT IN PRINCI	PLE.			$rx_bit = Ol$	NE.			
Change all instances	of "100G-EPON PMD" with "PO	-type PMD"		Response		Response Status C		
				ACCEPT	N PRINCIPI	_E.		
C/ 141 SC 141.3.3 Remein, Duane	P 30 Huawei Techno	L 37 logies	# 34	Use the fo	llowing text			
Comment Type T	Comment Status A			The PMD	Receive fund	ction shall convey the bits	received from the	MDI according to the
Replace "{TBD, depe	ending on the structure of PMA}"	with:		optical spe	ecifications in	Clause 141 to the PMD s	service interface u	sing the message
SuggestedRemedy				PMD_UNI rx bit = O	NE.	ncation(rx_bit). The higher	optical power lev	ei snaii correspond to
The PMD Transmit fu message PMD_UNIT specifications in Clau according to PMD_S dark, the latter corres power level shall corr	nction shall convey the bits requ DATAch.request(tx_bit) to the N ise 141. In the upstream direction IGNAL.request(tx_enable). This sponding to the transmitter being respond to tx_bit = ONE.	lested by the Pl IDI according to n, the flow of bi implies three op in the OFF star	MD service interface o the optical ts is interrupted otical levels, 1, 0, and te. The higher optical					
Response	Response Status C							
ACCEPT IN PRINCI	PLE.							
Use the following tex	t:							
The PMD Transmit fu message PMD_UNIT specifications in Clau according to PMD_S dark, the latter corres power level shall corr	Inction shall convey the bits requ DATA[i].request(tx_bit) to the M ise 141. In the upstream directio IGNAL[i].request(tx_enable). Thi sponding to the transmitter being respond to tx_bit = ONE.	lested by the Pl DI according to n, the flow of bir s implies three in the OFF star	MD service interface the optical ts is interrupted optical levels, 1, 0, and te. The higher optical					

C/ 141 SC 141.3.4

C/ 141 SC	141.3.5.1	P30	L 47	# 36	C/ 141	SC	141.3.5.2	P31	L31	# 37
Remein, Duane		Huawei Tech	nnologies		Remein, E	Duane		Huawei To	echnologies	
Comment Type	т	Comment Status A		primitives	Comment	Туре	т	Comment Status A		Figure 141-2
Replace "{TB	BD, dependi	ng on the structure of PMA	\}" with:		We ca	an at lea	ast fix the fi	gure title		
SuggestedRemed	dy				Suggestee	dReme	dy			
The PMD Sig the PMD serv	nal Detect vice interfac	function for the continuous e, using the message	mode downstre	am signal shall report to	Chane 50G–	ge "10G EPON b	BASE–PR	and 10/1GBASE–PRX am"	block diagram" to	"25–EPON and
PMD_SIGNA PMD_SIGNA signal. The va conditions de receiver is no	Lch.indicati Lch.indicati alue of the s fined in Tab ot required to	on(SIGNAL_DETECT), wh on is intended to be an inc SIGNAL_DETECT parame ble 141-4 for 25G–EPON a o verify whether a complia	nich is signaled o dicator of the pre eter shall be gene and 50G–EPON nt 25G–EPON o	continuously. sence of the optical erated according to the PMDs. The ONU PMD r 50G–EPON signal is	Response ACCE See c	e EPT IN I commer	PRINCIPLE tt #146	Response Status C		
being receive	ed.			-	C/ 141	SC	141 3 5 2	P31	/ 37	# 38
Response		Response Status C			Remein, E	Duane	141.5.5.2	Huawei To	echnologies	# <u>50</u>
ACCEPT IN F	PRINCIPLE				Comment	Type	т	Comment Status		100G-EPON
Use the follow	wing text				100G-	-EPON	stuff. If only	y we were doing a 100G	-EPON.	1000 21 011
The PMD Sig the PMD serv PMD_SIGNA PMD_SIGNA signal. The va conditions de required to ve	nal Detect vice interfac L[i].indicatio L[i].indicatio alue of the fined in Tal erify whethe	function for the continuous e, using the message on(SIGNAL_DETECT), wh on is intended to be an ind SIGNAL_DETECT parame ole 141-4 for Nx25G–EPOI r a compliant Nx25G-EPO	a mode downstre iich is signaled c iicator of the pres ter shall be gene N PMDs. The Of N signal is being	am signal shall report to ontinuously. sence of the optical erated according to the NU PMD receiver is not g received.	Suggestee Chang Response ACCE See c	dRemed ge "100 e EPT IN I	dy G-EPON" t PRINCIPLE it #164	o "25G–EPON or 50G–l Response Status C E.	EPON" in 2 places	s in this para.
Cl 141 SC Hajduczenia, Mar	141.3.5.2 rek	P 31 Charter Com	L 1 Imunicatio	# 146	<i>Cl</i> 141 Brown, Ala	SC an	141.3.5.3	P 31 ADTRAN,	L 49 Inc.	# 165
<i>Comment Type</i> Figure 141-2	T has referer	Comment Status A loce to 10G-EPON in the titl	le	Figure 141-2	Comment Motio	<i>Type</i> n #9 du	E ring Nov. 2	Comment Status A 017 TF meeting remove	d Objective for 10	<i>100G-EPON</i> 0G.
SuggestedRemed	dy				Suggeste	dReme	dy			
Change title o	of Figure 14	1-2 to read "Clause 141 E	PON block diag	am"	Chang colum	ge "100 in.	G-EPON P	MD" to "25G-EPON PM	D" over "50G-EPC	ON PMD", stacked in
ACCEPT IN F	PRINCIPLE	Response Status C			Response ACCE	e EPT IN I	PRINCIPLE	Response Status C		
Change title of	of Figure 14	1-2 to read "Nx25G-EPON	l block diagram"		See c	ommer	it #164			
In Figure 141	-2, add "[i]"	to TP1, TP4, TP5, and TP	28.							

C/ 141 SC 141.3.5.3

C/ 141	SC 141.5.1	P 34	L 52	# 157	C/ 141	SC 141.6.2	P 39	L 3	# 40
Harstead,	Ed	Nokia			Remein, Dua	ane	Huawei Tech	nnologies	
<i>Comment</i> Value	<i>Type</i> TR for Average laune	Comment Status A ch power, each channel (min) is in wrong fiel	d (max)	Comment Ty Even me	vpe T ore placeholder	Comment Status A		100G-EPON
Suggestee Move	dRemedy "4.8" to Average	aunch power, each channela	a (min)		<i>SuggestedR</i> Change	<i>emedy</i> {PMD-types} to	o "25–EPON or 50G–EPON	n	
Response ACCE	PT.	Response Status C			Response ACCEP	T IN PRINCIPL	Response Status C E.		
Move	"4.8" to Average	aunch power, each channel	(min)		Change	all instances o	f "{PMD-types} ONU" to "Nx	25G-EPON ONU	J"
Comm	nent is on page 33	3			Change	all instances o	f "{PMD-types} OLT" to "Nx2	25G-EPON OLT	"
C/ 141 Harstead,	SC 141.5.2 Ed	P 34 Nokia	L 40	# 156	C/ 141 Hajduczenia	SC 141.7.1. , Marek	P 40 Charter Com	L 49 nmunicatio	# 147
<i>Comment</i> Missir	<i>Type</i> TR ng channel wavele	Comment Status D ength ranges in Table 141–9.	Same for Table	e 141-10, -11, -12, -13	Comment Ty Waveler	<i>ype</i> T ngths for inserti	Comment Status A	ow defined	
Suggestee	dRemedy				SuggestedR	Remedy			
Add a Proposed	s abovie. Or rem <i>Response</i>	ove (redundant with Table 14 <i>Response Status</i> W	¥1–5, -6).		Change Insertior wavelen	: n loss for SMF : aths}	fiber optic cabling (channel)	is defined at {TE	BD, NG-EPON
PROF Use th	POSED ACCEPT	IN PRINCIPLE. s: UW0=+/-10 nm, UW1=+/-	10 nm, UW2=+/-	2 nm, DW0=+/-2 nm,	To: Insertior nm. 134	n loss for SMF i 2 nm. or 1358	fiber optic cabling (channel) nm.	is defined at 127	70 nm, 1300 nm, 1320
DW1=	+/-2 nm.	,	- ,	, ,	Response	, 01 1000	Response Status C		
<i>Cl</i> 141 Remein, D	SC 141.6 Duane	P 36 Huawei Techr	L 47 nologies	# 39	ACCEP	T IN PRINCIPL	Е.		
Comment	Туре Т	Comment Status A	-	100G-EPON	Change	•			
More Suggester	placeholders.				Insertior wavelen	n loss for SMF i igths},	fiber optic cabling (channel)	is defined at {TE	BD, NG-EPON
Chang	ge first "{XXX}" to	"medium" and second to "25	-EPON or 50G-	-EPON"	To:				
Response ACCE	PT IN PRINCIPL	Response Status C E.			Insertior in Table	loss for SMF 141–5 and Tal	fiber optic cabling (channel) ble 141–6,	is defined at the	wavelengths specified
Chang	ge all instances of	"{XXX} power budget" to "Pe	Q power budget						

C/ 141 SC 141.7.1.

					-				
C/ 141	SC 141.7.2	P 41	L 3	# 148	C/ 141	SC 141.7.3	P 41	L 7	# 149
Hajduczei	nia, Marek	Charter Comn	nunicatio		Hajduczen	ia, Marek	Charter Con	nmunicatio	
Comment	Туре Т С	Comment Status A			Comment	Туре Т	Comment Status A		
Section	on on allocation for pe	nalties is TBD right now			Sectio	n on test patterns	is TBD right now		
Suggeste	dRemedy				Suggested	lRemedy			
Use the All the exceed accound noise and d transmoster special The provide the transmoster of transmoster of the transmoster of transmoster of the transmoster of the transmoster of the transmoster of the transmoster of transmoster of transmoster of the transmoster of tra	he following text derive e receiver types specif eding 1 dB to ant for total degradatio , laser chirp letuning of the central mitter types fied in Clause 141 intro- path penalty is aponent of transmitter 141-8, Tale 141-11, a 141-12 and described 51, 114,7,5,3, and 1	ed from 75.7.2: ied in Clause 141 are real ns due to reflections, inte wavelength, including ch oduce less than 1 dB of o and dispersion penalty (and 1 in 52.9.10, with the mean 14.7.5.4.	quired to tolerate ersymbol interfe romatic dispers optical path pen TDP), which is s asurement proce	e a path penalty not rence, mode partition ion penalty. All the alty over the channel. specified in Table 141-7, edure defined in	The te as des 95.8.1 patterr 82.2.1 lane te consic be use measu which is defin	st patterns used i scribed in and shown in Ta h defined in 1, is encoded by sting lerations describe ed in each urement, unless o each parameter hed.	n this clause shall be the s ble 95–9, with the exceptio Clause 108 RS-FEC for 25 d in 95.8.1.1 do not apply. therwise specified, and als	ame as those us n that pattern 5, GBASE-LR and Table 114–9 sho o lists references to be reused as	ed for 100GBASE-SR4, the scrambled idle test 25GBASE-ER. The multi- ows the test patterns to s to the subclauses in the baseline.
Response		nanoneo Statue			Response	very, the text non	Posponso Status C		
ACCE	EPT IN PRINCIPLE.				ACCE	PT IN PRINCIPLI	E.		
Remo	ove subclause 141.7.2				The te as des 88–11 specifi	st patterns used i cribed in 88.8.1 a shows the test pa ed, and also lists	n this clause shall be the s and shown in Table 88-10, atterns to be used in each references to the subclaus	ame as those us with the exceptio measurement, un es in which each	ed for 100GBASE-LR4, n of Pattern 5. Table nless otherwise n parameter is defined.
					C/ 141	SC 141.7.15.1	P 42	L 37	# 41
					Remein, D	uane	Huawei Tecl	nnologies	
					Comment	Туре Т	Comment Status A		
					Slightl the op ending	y confusing "Trec tical power in the g at the time that .	eiver_settling is denoted as receiver at TP7 reaches th"	s the time beginr e conditions spe	ning from the time that cified in 141.7.12 and
					Suggested	IRemedy			
					Prece reads the op ending	de the first time w "Treceiver_settlin tical power in the g at the moment th	ith "elapsed" and change 2 g is denoted as the elapse receiver at TP7 reaches th nat"	nd & 3rd time to d time beginning e conditions spe	moment so the phrase from the moment that cified in 141.7.12 and
					Response		Response Status C		
					ACCE	PT.			
					Туре о	changed from E to	ът		

C/ 141 SC 141.7.15.1

C/ 141 SC 141.7.15	.1 <i>P</i> 43	L 49	# 42	C/ 141 SC	C 141.8.5	P 44	L 39	# 44
Remein, Duane	Huawei Techn	ologies		Remein, Duane		Huawei	Technologies	
Comment Type T	Comment Status A			Comment Type	т	Comment Status	4	
While I realize that the	e following sentence is directly	taken from the	standard in Cl 75 it	Replace "{li	st NG-EPO	N PMDs}" with		
me what it is intended	to mean and what value it add	s to the standa	rd?	SuggestedRem	ədy			
"A non-rigorous way to	o describe this test setup would	be (using a tr	ansmitter with a known	25/10GBAS	E-PR20-D			
Ton)."				25GBASE-1 50/25GBAS	2820-D F-PR20-D			
SuggestedRemedy				50GBASE-F	PR20-D			
Strike.				25/10GBAS	E-PR30-D			
Response	Response Status C			50/25GBASE-	E-PR30-D			
ACCEPT.				50GBASE-F	PR30-D			
C/ 141 SC 141.7.15	.1 P 43	L 53	# 43	Response		Response Status	C	
Remein, Duane	Huawei Techn	ologies		ACCEPT IN	PRINCIPL	.E.		
Comment Type E	Comment Status A	-		Use PMD n	ames per jo	ohnson_3a_3_0518.xls	x, just use 25G table (leftmost).
	The very comoning (a synonym).		C/ 141 SC	C 141.9.1	P 45	L 2	# 45
SuggestedRemedy				Remein, Duane		Huawei	Technologies	
- Change to confirming				Comment Type	т	Comment Status	A	
Response	Response Status C			Why the ref	erence to C	CI 75?		
ACCEPT IN PRINCIP	LE.			SuggestedRem	edy			
Change "reassuing" to	o "assuring"			Change "Ta	ble 75B–1 ;	and Table 75B–2" to "1	FBD"	
C/ 141 SC 141.8.2	P 44	/ 9	# 166	Response		Response Status	C	
Brown, Alan	ADTRAN, Inc.	20		ACCEPT IN	PRINCIPL	.E.		
Comment Type T Motion #9 during Nov.	Comment Status A 2017 TF meeting removed Ob	jective for 100	100G-EPON G.	Change the replaced by	note to say a number o	y: NOTE—The optical s of smaller 1:n splitters	splitter presented in Fig such that a different to	gure 141–2 may be pology may be
SuggestedRemedy								
Change "100G-EPON 44/9, 44/28, 44/36	" to "25G-EPON and 50G-EPC	N" in these loo	ations (page/line):	C/ 141 SC Hajduczenia, Ma	2 141.9.3 arek	P 45 Charter	L18 Communicatio	# 150
Response	Response Status C			Comment Type	т	Comment Status	4	
ACCEPT IN PRINCIP	LE.			Nominal wa	velengths a	are missing in Table 14	1-15	
Change "100G-EPON	optical transceivers" to "Nx250	G-EPON optica	l transceivers"	SuggestedRem	ədy			
Changed type from E	to T			Add nomina columns are	l wavelengt needed	ths: 1270 nm, 1300 nm	n, 1320 nm, 1342 nm, 1	1358 nm and add
				Response ACCEPT.		Response Status (C	
TYPE: TR/technical requir	ed ER/editorial required GR/g	eneral required	T/technical E/editorial G/	general	ithdrawn		C/ 141 SC 141 9 3	Page 16 of 38

SORT ORDER: Clause, Subclause, page, line

C/ 141 SC 141.9.3	P 45	L 41	# 167	C/ 142 SC 142.2.1	P 49	L 46	# 48
Brown, Alan	ADTRAN, Inc.			Remein, Duane	Huawei Techi	nologies	
Comment Type E Motion #9 during Nov.	Comment Status A 2017 TF meeting removed Obj	ective for 100	100G-EPON G.	Comment Type T Update to Figure 142-1	Comment Status A		
SuggestedRemedy Change "100G-EPON" 45/41	to "25G-EPON or 50G-EPON'	' in these loca	tions (page/line):	SuggestedRemedy See remein_3ca_1_057	18.pdf (also available in visio)).	
Response ACCEPT IN PRINCIPL	Response Status C .E.			ACCEPT IN PRINCIPL	E.		
See comment #164				Use: remein_3ca_4_05	18.pdf	15	# 400
C/ 142 SC 142.1 Remein, Duane	P 49 Huawei Techno	L 7 logies	# 46	Hajduczenia, Marek	Charter Comr	L 5 municatio	# [133
Comment Type E Abbreviations are to be	Comment Status D e properly introduced.		bucket	Content of 142.2.2.2.1 i	is missing		
SuggestedRemedy					3 0518 pdf for text and draw	ing of the unstre	am hurst structure
Change "FEC" to "forw correction (FEC)" to "F	vard error correction (FEC)". O	n line 41 chan	ge "forward error	Proposed Response	Response Status Z		
Proposed Response	Response Status W			REJECT.			
PROPOSED ACCEPT				This comment was WIT	THDRAWN by the commenter	er.	
C/ 142 SC 142.2.1 Remein, Duane	P 49 Huawei Techno	L 31 logies	# 47	To be resubmitted agai	nst D1.1 with changes to be	discussed on th	e biweekly calls.
Comment Type E Why define an abbrevi	<i>Comment Status</i> D ation if you don't use it?		bucket				
SuggestedRemedy Change "physical codi physical" to P2MP".	ng sublayers" to "PCS" and on	line 32 chang	e "point-to-multipoint				
Proposed Response PROPOSED ACCEPT	Response Status W						

C/ 142 SC 142.2.2.2.1 Page 17 of 38 5/22/2018 3:40:26 PM

C/ 142 SC 14	42.2.2.5.1	P 53	L 38	# 128	C/ 142	SC 142.2.2.	5.2	P 54	L 49	# 129
Laubach, Mark		Broadcom Inc.			Laubach, I	Mark		Broadcom Ind	C .	
Comment Type Motion #6 from kramer_3ca_1_ updated parity "New Code" op the information matrix is the sa summarizes pe SuggestedRemedy Page 53: Line 38: change	TR Comr the March 2018 _0318.pdf as part matrix, puncturing tion on slide 9, w word size and sh ime, no changes. erformance impact	nent Status A Rosemont, IL Task F of the improved alig g, information word a hich is slightly different nortening to match sl For the May TF me to f these small adju	Force meeting, nment motion. and parity word ent than slide 6. ide 6. Note tha eting, laubach_ stments.	adopted slide 6 of However, the adopted sizes were sized for the These changes adjust t the actual parity code 3ca_1_0518.pdf	Comment In Tab both tf Suggested Page Page Page Response ACCE	<i>Type</i> TR le 142-1, a few ne original .doc> <i>IRemedy</i> 54: Line 49, Col 54: Line 51, Col 56, Line 23, Col 56, Line 32, Col PT.	Comme of the values (pdf) file an C7: change C5: change C5: change C7: change C7: change	ent Status A s have errors from d the .txt file.) "204" to "104" "01" to "-1" "235" to "135" "259" to "159" se Status C	the source mat	erial. (Verified from
Line 39: chang Line 44: chang Line 47: chang	e "264" to "200" e "16888" to "169 e "0.8484" to "0.8	952" 949"			<i>Cl</i> 142 Remein, D	SC 142.2.2.	5.2	P 57 Huawei Tech	L 6 nologies	# 49
Page 56: Line 52: chang Line 53: chang	e "264" to "200" e "0.8484" to "0.8	349"			Comment There	Type E is no reference	Comme to Figure 14	ent Status A 2-2		
Response ACCEPT.	Respo	nse Status C			Add re	eference in text.				
	40.0.0.5.4	054	10	" 101	Response		Respons	se Status C		
Laubach, Mark Comment Type In Figure 142-3 with "M-bit pari label in the figu	TR Comr 5, the circled "+" s ty" and "K-bit use ire and formula in	Broadcom Inc. ment Status A should be a mux sym r ⁿ , not to serially add the text to be clear	bol to combine I them. Also ne	"M+P-bit LDPC parity" ed to correct a box erleaved info as input	Likely line 53 Figure C/ 142	Figure 142-4 is 8 (at the end): "1 142-4" (make t SC 142.2.2.	the subject of the Codewor the Codewor the link live)	of this comment. A rd Information/Par P 57	Add the following rity Location ass	g statement on page 56, ignment is shown in # 130
to the encoder.					Laubach, I	Mark		Broadcom Ind	.	
SuggestedRemedy 1) Change "circ clarity, label the under "M-bit pa 2) Change the Interleaver" to ' De-interleaver" Corresponding 3) Change " <pi< td=""><td>, cle-+" symbol to a e bottom arrow (tl rrity" box text "Informa 'Information Bit text change Pag >" symbol to "<pi< td=""><td>a mux symbol (see or hat comes from the f tion Bit e 57, Line 19: >-1" where the</td><td>riginal submitted ar left) with "K-t</td><td>d draft word file). For bit information" aligned</td><td>Comment Should Suggested Chang Response ACCE</td><td><i>Type</i> TR d be "parity" and <i>Remedy</i> ge subscript "info PT.</td><td>Comme I not "info". o" to "parity" Respons</td><td>ent Status A</td><td></td><td></td></pi<></td></pi<>	, cle-+" symbol to a e bottom arrow (tl rrity" box text "Informa 'Information Bit text change Pag >" symbol to " <pi< td=""><td>a mux symbol (see or hat comes from the f tion Bit e 57, Line 19: >-1" where the</td><td>riginal submitted ar left) with "K-t</td><td>d draft word file). For bit information" aligned</td><td>Comment Should Suggested Chang Response ACCE</td><td><i>Type</i> TR d be "parity" and <i>Remedy</i> ge subscript "info PT.</td><td>Comme I not "info". o" to "parity" Respons</td><td>ent Status A</td><td></td><td></td></pi<>	a mux symbol (see or hat comes from the f tion Bit e 57, Line 19: >-1" where the	riginal submitted ar left) with "K-t	d draft word file). For bit information" aligned	Comment Should Suggested Chang Response ACCE	<i>Type</i> TR d be "parity" and <i>Remedy</i> ge subscript "info PT.	Comme I not "info". o" to "parity" Respons	ent Status A		
"-1" is a supers Response ACCEPT.	script. <i>Respo</i>	nse Status C								

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

C/ 142	Page
SC 142.2.2.5.3	5/22/

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C/ 142	SC 142.2.2.5.	3 P57	L 27	# 132	C/ 142	SC 142.	3.2	P 61	L 3	# 169
Laubach, N	Mark	Broadcom Inc.			Powell, Bill			Nokia		
Comment Follow Follow text ne "han_3 code v	<i>Type</i> TR ing motion #6 from eeds to be added # Bca_1_0518.pdf". ralues suitable for	Comment Status A in the November 2017 Orland to the draft. The text has been The submittred file "han_3c making available (similar to	do meeting, the en submitted in a_2_0518.txt" o the LDPC parit	Omega256 interleaver contains the binary seed y code matrix) via	Comment Ambig Suggested Propos	<i>Type</i> TF uity in differ <i>Remedy</i> ed change	to Figure	Comment Status A oder figure 142-8 (regist 142-8 in Red on Slide 3,	er output vs. Co , Section B, of p	ntrol) owell_3ca_1_0518
Suggested Add th	Remedy e draft text from "	han_3ca_1_0518.pdf" begin	ning with new s	ubclause 142.2.2.5.4.	Response ACCE	PT.	R	esponse Status C		
Response ACCEI	PT.	Response Status C			<i>Cl</i> 143 Remein, D	SC 143. uane	1	P 65 Huawei Techr	L 12 nologies	# 51
Cl 142 Remein, D Comment	SC 142.2.3 uane Type E	P 57 Huawei Techn <i>Comment Status</i> D	L 34 ologies	# 50 bucket	Comment Is this Now th MACs Suggested	<i>Type</i> T really true? at we have is 3. <i>Remedy</i>	C "It is acce PLID, ML	Comment Status A eptable for only one MAC .ID and ULIDs it would se	to be connecte eem to me that	ed to this MPRS" the minimum number of
Suggested Chang	enne an abbrevia IRemedy le "physical coding	g sublayers" to "PCS"			Strike Response	he sentend	xe. Re	esponse Status C		
Proposed I PROP	Response OSED ACCEPT.	Response Status W			AUCEI	-1.				
C/ 142 Powell, Bill	SC 142.3.1	P 61 Nokia	L 41	# 168						
Comment Ambig	<i>Type</i> TR uity in differential	Comment Status A encoder figure 142-7 (registe	er input/output	vs. Control)						
Suggested Propos	<i>IRemedy</i> sed change to Fig	ure 142-7 in Red on Slide 3,	Section A, of p	owell_3ca_1_0518						
Response ACCEI	PT IN PRINCIPLE	Response Status C								
Per co contrib	mment. Make sur	e that "PCS Gearbox" is cha	nged into "PMA	A" as marked in the						

C/ 143 SC 143.1

C/ 143	SC 143.1	P 65	L15	# 52	
Remein, I	Duane	Huawei Techi	nologies		
Comment	Type TR	Comment Status A		100G-EPON	I

100G-EPON stuff. We have decided not to pursue 100G-EPON using 4x25G. The draft still reflects our earlier thinking that we would support 4x25G as is illustrated here "This concept is expanded in this clause to allow multiple MACs to interface with up to four PHYs requiring up to four 25 Gigabit Media Independent Interfaces (25GMIIs)." The longer we put off fixing this the more difficult it will be to get it correct. I suggest we for the most part adopt a slightly ambiguous wording to the maximum number of 25GMII/PHYS we support in this standard.

SuggestedRemedy

Change from:

"This concept is expanded in this clause to allow multiple MACs to interface with up to four PHYs requiring up to four 25 Gigabit Media Independent Interfaces (25GMIIs)." to This concept is expanded in this clause to allow multiple MACs to interface with multiple PHYs requiring multiple 25 Gigabit Media Independent Interfaces (25GMIIs)."

pg. 65 Line 46 change from:

"b) The MPRS converts between the MAC serial data stream and the parallel data paths of up to four 25GMIIs servicing separate PHYs." to:

"b) The MPRS converts between the MAC serial data stream and the parallel data paths to multiple 25GMIIs servicing separate PHYs."

pg. 68 line 2 Change from:

"The 100G-EPON MPRS is defined as a set of four parallel MPRS channels in each direction." to:

"The 100G-EPON MPRS is defined as a multiple set of parallel MPRS channels in each direction."

pg. 68 line 8 Change from:

"Compliant implementations are not required to support all four MPRS channels." To: "Compliant implementations are not required to support multiple MPRS channels."

pg. 68 line 10 strike the sentence that reads:

"An implementation containing all four channels supports 25 Gb/s, 50 Gb/s, and 100 Gb/s MAC data rates."

pg. 68 line 39 change:

"(N = $\{1,2,3,4\}$) " to:

"(N = {1,2})"

pg. 70 line 53 strike the sentence that reads:

"Some ONUs may support all four MPRS channels in each direction."

pg. 71 line 37 Change from:

"Thus, a 100G-EPON system with four MPRS channels of 25 Gb/s each can achieve an instantaneous transmission rate of 25, 50, 75, or 100 Gb/s by varying, ..." To:

"Thus, a 100G-EPON system with two MPRS channels of 25 Gb/s each can achieve an

instantaneous transmission rate of 25, or 50 Gb/s by varying, ..."

pg. 74 line 50 Change from:

"In addition to the multiple PLS service interfaces (one per MAC) and up to four 25GMIIs" To:

"In addition to the multiple PLS service interfaces (one per MAC) and multiple 25GMIIs" pg. 75 line 51 Change from:

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

"However, for other 100G-EPON systems there may be one, two or four PLS service interfaces active at any given time." To: "However, for other 100G-EPON systems there may be one, or two PLS service interfaces active at any given time." pg. 85 line 3 strike "(four columns)"

Response Response Status C

ACCEPT IN PRINCIPLE.

Insert editoral note: Glen and Duane to submit a revision of the whole Clause 143 to address 100G-EPON and other issues.

C/ 143	SC 14	3.1	P 65	L18	# 53	
Remein, D	uane		Huawei 1	echnologies		
Comment It appe	<i>Type</i> I ears the a	E bbreviati	Comment Status D on "PCS" gets defined	later in the para	I.	bucket
<i>Suggested</i> Chang "Physi	<i>IRemedy</i> je "PCS" o cal Codin	on line 1 g Sublay	8 to read "Physical Coo rers (PCS)" to read "PC	ding Sublayer (F Ss".	PCS)" and on line 20	change
Proposed PROP	Response OSED AC	, CCEPT.	Response Status W			
Cl 143 Remein, D	SC 14	3.1	P 65 Huawei∃	L20	# 54	
Comment "The 1 Needs	<i>Type</i> 00G-EPC to be rep	r)N Physi hrased.	Comment Status A cal Coding Sublayers (PCS) are specif	ied to the 25GMII,	"?
Suggested Chang	<i>IRemedy</i> je to read	"The 10	0G-EPON PCSs are sp	becified to interfa	ace with the 25GMII	, ¹¹
Response ACCE	PT IN PR	INCIPLE	Response Status C			
Chang	je to read	"The Nx	25G-EPON PCSs are	specified to inte	rface with the 25GM	II,"

Cl	143
SC	143.1

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C/ 143 SC 143.2.1	P 67 Huawai Tashi	L12	# 55	C/ 143 SC 143.2.4	4.2 <i>F</i>	72 <i>L</i> 1	# 58
Comment Type E Missing article "below N SuggestedRemedy Change to "below the N	Comment Status D IAC"	lologies	bucket	Comment Type T 100G-EPON stuff. F updating to show on SuggestedRemedy	Comment Statu igure 143-6, 143-7, 14 ly two channels.	us A 43-8, 143-9, 143-10,	<i>100G-EPON</i> 143-11, 143-12, 143-15 need
Proposed Response PROPOSED ACCEPT.	Response Status W			per comment Response ACCEPT IN PRINCI	Response Statu	is C	
<i>Cl</i> 143 <i>SC</i> 143.2.2.1 Remein, Duane	P 68 Huawei Techr	L 20 nologies	# 56	See comment #52			
Comment Type T 100G-EPON stuff. Tabl	Comment Status A e 143-1 should be pruned to	two channels.	100G-EPON	Cl 143 SC 143.2.4 Remein, Duane	4.3 <i>F</i> Hua	273 L6 awei Technologies	# 59
SuggestedRemedy Remove rows DS2, DC Response ACCEPT IN PRINCIPL See comment #52	3, UC2, and UC3. <i>Response Status</i> C E.			Comment Type TR In referring to the EN But in Table 143-4 a if the ONU uses 6 bi SuggestedRemedy Change to "The num	Comment Statu NV_Tx/Rx buffers is th ind on pg. 82 line 16 E ts and the OLT only 5 ober of rows is set to 6	us D his statement; "The n EnvPam is defined a 5 well there's a proble 64," align Fig 143-8	number of rows is set to 32," s 6 bits. These should agree, em brewing. to 64 (may also reduce
Cl 143 SC 143.2.3.3 Remein, Duane Comment Type T "the ESH is discarded	P69 Huawei Techi Comment Status A	L46 nologies	# <u>57</u>	number of columns of Proposed Response REJECT. This comment was V	due to separate comn <i>Response Statu</i> NITHDRAWN by the	nent). rs Z commenter.	
SuggestedRemedy Change to "the ESH is Response ACCEPT.	processed by the MPRS and Response Status C	then discarded"					

C/ 143 SC 143.2.4.3

C/ 143 SC 143.2.4.3 P73 L28 # 60	C/ 143 SC 143.2.4.4 P73	L37 # 61
Comment Type TR Comment Status D We are inconsistent in our reference to the TX_CLK. Fig 143-10 names it TX_CLK25 and shows one per 25GMII. Table 143-2 uses TX_CLK and includes a footnote that all 25GMIIs share a common clock. Section 143.4.1.3 on pg. 78 ln. 39 clearly states that "only	Comment Type T Comment Status A Clarification. SuggestedRemedy	
one TX_CLK is required". TX_CLK[c] is defined on pg. 82 in. 46 and implies there is one TX_CLK per channel; "of the TX_CLK signal for channel c". SuggestedRemedy In Fig 143-10 pull TX_CLK25 out of the 25GMII grouping to indicate it is a common signal. When TX_CLK refers to that common signal use TX_CLK25 {(pg., In.), (73,28), (76,50), (78,39), (82,30), (82,49), (85,5), (88,38), (88,39), and ex in Table 143-2}. On pg. 82 line 48 remove "for channel c" so the definition reads: "Each TX_CLK[c] clear on	Change: "the EPAM field is extracted and its value is us to read: "the EPAM field is extracted and its value is us Response Response Status C ACCEPT.	ed as the write pointer (row index)" ed to update the write pointer (row index)"
read variable is set to True on each edge, positive and negative, of the TX_CLK25 signal."	C/ 143 SC 143.3.3.2 P101	L 44 # <u>98</u>
Proposed Response Response Status Z	Remein, Duane Huawei	rechnologies
REJECT. This comment was WITHDRAWN by the commenter.	Comment Type E Comment Status D links dead (3x 144.2.2.3 on this page, and seve elsewhere)	bucket eral on pg. 102, 112, 113 and possibly
======================================	SuggestedRemedy make live Proposed Response Response Status W PROPOSED ACCEPT.	,
Each TX_CLK[c] clear on read variable is set to True on each edge, positive and negative, of the TX_CLK signal for channel c.	C/ 143 SC 143.4.1.1.1 P77 Remein, Duane Huawei Huawei	L3 # 62
То	Comment Type TR Comment Status A 100G-EPON stuff. Table 143-2 and 143-3 shou	100G-EPON Ild be pruned to two channels.
Each TX_CLK[c] clear on read variable is set to True on each edge, positive and negative, of the TX_CLK25[c] signal for channel c.	SuggestedRemedy Remove row for 100G-EPON	
======================================	Response Response Status C ACCEPT IN PRINCIPLE.	
When TX_CLK refers to that common signal use TX_CLK25 {(pg., In.), (73,28), (76,50), (78,39), (82,30), (82,49), (85,5), (88,38), (88,39), and e.g., in Table 143-2}.	See comment #52	
Per comment, excluding changes to Fig 143-10 - please submit a suggestion on what changes need to be really made: "pull TX_CLK25 out of the 25GMII grouping to indicate it is a common signal" is not really clear in the current context.		
TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/ COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/w	general C ritten C/closed Z/withdrawn S	143 Page 22 of 38 C 143.4.1.1.1 5/22/2018 3:40:2/

SORT ORDER: Clause, Subclause, page, line

5/22/2018 3:40:26 PM

C/ 143	SC 143.4.1.2	P 78	L 4	# 63	C/ 143	SC 14	3.4.1.3	P 78	L 37	# 66
Remein, D	uane	Huawei Techno	logies		Remein, D	uane		Huawei Tech	nologies	
Comment T Incorre	<i>Type</i> T ect references to ⁻	Comment Status A Tables 143-3 & 4.			Comment It woul	<i>Type</i> E d be easie	E er on the	Comment Status D reader if we just reference	the tables rath	bucket er than the section.
Suggested	Remedy				Suggested	Remedy				
Add ne	ew table per reme	in_3ca_2_0518.pdf and refere	ence new tabl	е.	Chang	je: "143.4.	1.1" to "	Table 143-2 and Table 143	-3"	
Response ACCEI	PT IN PRINCIPLE	Response Status C			Proposed PROP	Response OSED AC	CEPT.	Response Status W		
Remov	/e "(see Table-14	3–3 and Table-143–4)"			C/ 143	SC 14	3.4.2	P 79	L15	# 67
C/ 143	SC 143.4.1.2.	1 P 78	L 11	# 64	Remein, D	uane		Huawei Tech	nologies	
Remein, D	uane	Huawei Techno	logies		Comment	Type E	=	Comment Status A		
Comment Type E Comment Status A					In Fig 143-11 Octet 0 seems to have two extra bits before bit 8 and after bit 15. Also we seem to have lost the EPAM label (TXD-Lane0 in 2nd transfer.					
More generally we need to decide if we want to follow this guideline, that variable names appear in italics. As a past editor that did adopt this guideline I found it a royal pain and would not object to not following it (I notice in the standard that few amendments do).				e, that variable names nd it a royal pain and amendments do).	SuggestedRemedy Trim the line immediately before the 8 and after the 15 so they are short and don't extent top to bottom. Add EPAM label (if using the original visio file it may be hiding behind the white box representing bits 0-5).					
Italicize	e "epam"				Response			Response Status C		
Response	o opa	Poononao Statua C			ACCE	PT.				
ACCE	PT.	Response Status C			C/ 143	SC 14	3.4.2	P 79	/ 35	# 68
					Remein, D	uane	••••=	Huawei Tech	nologies	
C/ 143 Remein, D	SC 143.4.1.2. uane	2 P78 Huawei Techno	L 21 logies	# 65	Comment Type E Comment Status A					
Comment	Type TR	Comment Status D			Wordi	ng: "transr	mission o	of the transmitting MPRS	5"	
The MI are exp	PCP does not ne pected to be in a	ed to wait "for the start of next separate transmission burst)."	FEC codewo the MPCP c	rd (for envelopes that an start a new envelope	SuggestedRemedy Change to "transmission of the envelope from the sending MPRS"					
at it's discretion. SuggestedRemedy Change to "for envelopes that are expected to be in a separate transmission bursts "				nsmission bursts."	Response ACCE	PT IN PR	INCIPLE	Response Status C		
Proposed I REJEC	Response	Response Status Z			Chang the en envelc	e "transm velope fro pe from th	ission of m the tra ne source	ansmitting MPRS to the rec e MPRS to the destination	eiving MPRS" 1 MPRS"	to "transmission of the
This co	omment was WIT	HDRAWN by the commenter.								

C/ 143 SC 143.4.2

C/ 143 SC 143.4.3	P 80	L 21	# 69	C/ 143	SC 143.4.3.3	B P 81	L14	# 72	
Remein, Duane		lologies		Remein, D			nnologies	hushet	
Clarification on what CRC cove SuggestedRemedy Change "CRC8" to "CRC8 cov	ers in normative table rering bit 0-63"			Does t variabl "The n "The n	his notation only es? otation ++ after otation after a	a counter indicates",	ated or does it als	o apply to other	
Response Response Status C				"The notation –= after a counter indicates", and "The notation += after a counter indicates"					
				Suggested	Remedy				
Changes from E to T				Chang	e to "counter" to -	"variable" in each instance	. (may want to ap	oply this globally)	
C/ 143 SC 143.4.3 Remein, Duane	P 80 Huawei Techr	L 44 nologies	# 70	Proposed PROP	Response OSED ACCEPT	Response Status W			
Comment Type TR Con	nment Status D			C/ 143	SC 143.4.3.4	P 81	L 53	# 73	
This cannot be true as wRow is a 1-bit variable. "(Number of bits matches the size of wRow)". This confusion exists because we use rRow and wRow in both the transmit and receive SDs to mean two different variable sets. In the transmit SD we only need a 1-bit variable while in the receive SD we need a 6-bit variable.				Remein, D	uane	Huawei Teo	hnologies		
				Comment 100G-	<i>Type</i> T EPON stuff. We	Comment Status A e no longer have 4 channels	5	100G-EPON	
Align variable name to SD in which it is used so that: In section 143.4.3 change wRow to iRow (for input row) and rRow to tRow (for transmit row) in text and figures. In section 143.4.4 change wRow to rRow (for receive row) and rRow to oRow (for output row) in text and figures. at pg. 80 line 44 Change to "(Number of bits matches the size of rRow)"			o tRow (for transmit row) v to oRow (for output Row)"	chang <i>Response</i> ACCE See co	e to 1-bit integer PT IN PRINCIPI omment #52	Response Status C .E.			
Proposed Response Resp REJECT.	oonse Status Z			<i>Cl</i> 143 Heaven, B	SC 143.4.3.4	P 82 Huawei	L 23	# 8	
This comment was WITHDRA	WN by the commente	er.		Comment	Type TR	Comment Status D			
CI 143 SC 143.4.3.2 Remein, Duane Comment Type E Com	Cl 143 SC 143.4.3.2 P81 L9 # 71 Remein, Duane Huawei Technologies Comment Type E Comment Status A					ts of GRANT_MARGIN and	, and Burst Delim	or maximum value iter that precede the first	
I don't believe we have any tim	ners in this section.			Proposed	Response	Response Status 7			
SuggestedRemedy	start and stan			, REJEC	ст.				
Response Resp ACCEPT IN PRINCIPLE.	oonse Status C			This c	omment was WI	THDRAWN by the commer	nter.		
Remove text page 81, lines 9-	12								
TYPE: TR/technical required ER/e	editorial required GR/	general require	d T/technical E/editorial G/g	general		Cl	143	Page 24 of 38	

COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed Z/withdrawn SC 143.4.3.4 5/22/2018 3:40:26 PM SORT ORDER: Clause, Subclause, page, line

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specifications and Management Parameters for 25Gb/s, 50Gb/s, and 100Gb/s Passive Optical Networks 1:

C/ 143	SC 143.4.3.4	P 82	L 36	# 75	C/ 143	SC 143.4.3.4	P 83	L 7	# 77
Remein, D	Duane	Huawei Techi	nologies		Remein, D	luane	Huawei Teo	chnologies	
Comment TYPE	<i>Type</i> E mis-aligned	Comment Status D		bucket	Comment 100G-	<i>Type</i> TR EPON stuff. For	Comment Status A wCol change type to 1-bit	integer	100G-EPON
Suggestee Inden	dRemedy t				Suggested per co	<i>IRemedy</i> mment			
Proposed PROF	Response POSED ACCEPT.	Response Status W			Response ACCE	PT IN PRINCIPLI	Response Status C E.		
C/ 143	SC 143.4.3.4	P82	L 36	# 74	See co	omment #52			
Remein, L	Juane	Huawei Techi	nologies		C/ 143	SC 143.4.3.5	P 83	L 44	# 78
Comment	Туре Т	Comment Status A			Remein, D	luane	Huawei Teo	chnologies	
"LinkID[c]" s/b "LinkId[c]" (or alternatively the other way around, now we have both forms).			v we have both forms).	Comment	Type TR	Comment Status A		100G-EPON	
Suggestee	dRemedy				100G-	EPON stuff. Env	StartHeader() section show	uld be updated to	o reflect only 2 channels
Chang	ge all instances of	"LinkID" to "LinkId"			Suggested	Remedy			
Response ACCE	ept.	Response Status C			Chang if(Env Envl	je: 'Left[col+1] == GF Left[col+2] == GR	ANT_MARGIN && ANT_MARGIN &&		
C/ 143	SC 143.4.3.4	P 83	L 2	# 76	Envl	Left[col+3] == GR	ANT_MARGIN) EnvPam	= epam;	
Remein, D	Duane	Huawei Techi	nologies		To: if(Env	l eft[col+1] == GF	ANT MARGIN) EnvPam	= epam:	
Comment 100G- device	<i>Type</i> TR -EPON stuff "For 1 es N = 1."	Comment Status A 00 Gb/s devices N = 4, for	50 Gb/s devices	100G-EPON N = 2, and for 25 Gb/s	Response ACCE	PT IN PRINCIPLI	Response Status C E.	– opun,	
Suggestee	dRemedy				See co	omment #52			
Chang	ge to: "For 50 Gb/s	devices N = 2 and for 25 G	b/s devices N =	: 1."	C/ 143	SC 143.4.3.6.	1 P85	L 2	# 79
Response	;	Response Status C			Remein, D	luane	Huawei Teo	chnologies	
ACCE	PT IN PRINCIPLE	Ε.			Comment	Type E	Comment Status D		bucket
See c	omment #52				What i	is a "start envelop	be header"		
					Suggested Chang	<i>IRemedy</i> je to "envelope sta	art header"		
					Proposed PROP	Response OSED ACCEPT.	Response Status W		

C/ 143 SC 143.4.3.6.1

Cl 143 SC 143.4.3. Remein Duane	6.1 P85 Huawei Tech	L 4	# 80	Cl 143 SC 143.4.4 Remein Duane	P 87 Huawei Techr	L 38	# 83
Comment Type TR 100G-EPON stuff. "(fo SuggestedRemedy Strike.	Comment Status A	loogioo	100G-EPON	Comment Type ER Errant ref to 143.4.3.6.1 SuggestedRemedy Change to 143.4.4.5.1	Comment Status A		
Response ACCEPT IN PRINCIP	Response Status C PLE.			Response ACCEPT.	Response Status C		
See comment #52				C/ 143 SC 143.4.4.3 Remein. Duane	P 88 Huawei Techr	L 46 nologies	# 84
Remein, Duane Comment Type T Clarification; "The pro PCS." SuggestedRemedy Change to read: "The EQs to account for FE Proposed Response	Huawei Tech Comment Status D cess adjusts the MAC rate to process adjusts the MAC rate EC parity insertion in the PCS. Response Status Z	account for FEC	RITY_PLACEHLDR	Comment Type TR 100G-EPON stuff. The T SuggestedRemedy change to 1-bit integer. Response ACCEPT IN PRINCIPLE See comment #52	Comment Status A YPE for rCol should reflect Response Status C	2 columns not 4	100G-EPON
REJECT. This comment was W	ITHDRAWN by the comment	er.		C/ 143 SC 143.4.4.3 Remein, Duane	P 89 Huawei Techr	L 13 nologies	# <u>85</u>
Cl 143 SC 143.4.3. Remein, Duane Comment Type E Extraneous line exten SuggestedRemedy In the words of the far with the state box. Proposed Response PROPOSED ACCEP	6.1 P86 Huawei Tech <i>Comment Status</i> D ding up into WRITE_EQ_TO_ mous Pete Trowbridge "nudge <i>Response Status</i> W T.	L48 nologies _ENV_TX state.	# 82 bucket	100G-EPON stuff. "For Gb/s devices N = 1." SuggestedRemedy Change to: "For 50 Gb/s Response ACCEPT IN PRINCIPLE See comment #52	devices N = 2 and for 25 G Response Status C	50 Gb/s devices N b/s devices N = 1.	I = 2, and for 25

C/ 143 SC 143.4.4.3

C/ 143	SC	143.4.4.4	P 89	L 32	# 86	Cl 143	SC	143.4.4.4		P 90	L17	# 88
Commont 7	uane	E Com		nologies	hushet	Commont	Turne	тр	Commont		lologies	
This ec original	<i>i ype</i> ditorial Ilv def	note has served its	s purpose; "EDITOF	R NOTE: the IsHead	er() function was	The fu	nction,	, SetMacOo	tet is not def	ined.		
Suggested Strike r Proposed F PROPO	Reme note Respo OSED	dy nse Respo ACCEPT.	nse Status W			Suggested Add in SetMa This fu along associ	IReme 143.3 acOctet unction with the iated w	<i>dy</i> .3: t(link_id, rx shifts the e e data_valie <i>i</i> th link_id.	_data, data_ eight bits in r d Boolean us	valid) <_data to the M ing the PLD_D,	AC using the PL ATA_VALID.ind	S_DATA.indication, ication to the MAC
C/ 143 Remein, Du	SC uane	143.4.4.4	P 89 Huawei Tech	L 34 nologies	# 87	Response ACCE	PT IN	PRINCIPLE	Response	Status C		
Comment Type TR Comment Status A IsMisaligned is written for an ordered set header SuggestedRemedy Replace function definition with:				Add in SetMa This fu with th with lir	143.3 acOctet unction ac data ak_id.	.3: t(link_id, rx shifts eigh _valid Bool	_data, data_ t bits in rx_da ean using the	valid) ata to the MAC e PLD_DATA_\	using the LS_D/ /ALID.indication	ATA.indication, along to the MAC associated		
bool Isl { retur eq<7 OR (eq< eq<2 } <i>Response</i>	Misalių rn((eq 71:40> <39:36 47:40>	gned(EQ eq) <pre>iq<39:36> == 0xF AN > == 08080808) 6> == 0x8 AND > == 0xFB)); Respon</pre>	ID // Mis-aligned I // s.b. INTER // Misaligned Er // s.b. Start (nse Status C	NTER_ENV_IDLE E_ENV_IDLE nv. Header Control Code		Cl 143 Remein, D Comment This p Suggested Chang	SC Duane <i>Type</i> hrase of <i>Reme</i> o ge to "d	143.4.4.4 E does not ma <i>dy</i> lue to differ	Comment ake sense. "o ent delay and	P90 Huawei Techr <i>Status</i> D due to different	L 27 nologies ONUs and trans	# 89 bucket
Response Response Status C ACCEPT IN PRINCIPLE. Replace function definition with: bool IsMisaligned(EQ eq) { return((eq<39:36> == 0xF AND // Mis-aligned INTER_ENV_IDLE eq<71:40> == 0x08080808) // s.b. INTER_ENV_IDLE OR (eq<39:36> == 0x8 AND // Misaligned Env. Header eq<47:40> == 0xFB)); // s.b. Start Control Code		Proposed PROP Cl 143 Remein, D Comment	Respon OSED SC Juane Type	nse ACCEPT. 143.4.4.5.	Response 2 Comment	Status W P 91 Huawei Techr Status A	L 39 nologies	# <mark>90</mark>				
		Clarification to "no subsequent frames are lost due to the error" SuggestedRemedy Change to read: "no subsequent frames are lost due to the error since the next continuation header will resynchronize the process for the following frame."					ce the next envelope frame."					
						Response ACCE	PT IN		Response	Status C		
						Chang	je to re uation	ad: "no sub header res	sequent frar ynchronizes	nes are lost due the process for	e to the error sin the following fra	ice the next envelope ame."
TYPE: TR/t	techni	cal required ER/ed	itorial required GR	general required T	technical E/editorial G/g	jeneral				C/ 14	3	Page 27 of 38

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

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SC 143.4.4.5.2	5/22/2018 3:40:26 PM

C/ 143 SC 143.4.4.5.2	2 P 92	L 33	# 91	C/ 144	SC 144.3.3	3	P 98	L 4	# 93
Remein, Duane	Huawei Technolo	ogies		Remein, Du	ane		Huawei Techr	nologies	
Comment Type T	Comment Status A			Comment T	/pe E	Comment S	Status D		bucket
What is magical about C	0utEQ<16> = 1?			We hav	e a mix of D	iscovery Window	(s) and discove	ery window(s),	we should be consistent.
SuggestedRemedy				SuggestedF	emedy				
It represents an Envelop	e Start Header.		Use low	er case cons	sistently.				
Add definition to constar	l_with OutEQ<16> = ES_HEAL hts:	DER		Proposed R	esponse	Response S	Status W		
ES_HEADER				PROPC	SED ACCEF	PT IN PRINCIPLE			
TYPE: integer Value: 1				Use "Di	scoverv Wind	dow" consistently			
The value of the enve	lope Start Flag indicating the h	neader is an envelo	ope start header.						
Response	Response Status C			Wrong	clause (is 14	3 and should be 1	44)		
ACCEPT.				C/ 144	SC 144.3.3	3	P 98	L 6	# 94
CI 144 SC 144 3 3 2	P102	13	# 00	Remein, Du	ane		Huawei Techr	nologies	
Remein. Duane	Huawei Technolo	oaies	# <u>99</u>	Comment T	/pe T	Comment S	Status A		
Comment Type F	Comment Status D		bucket	More lik	ely the end u	iser (SP) "The pe	riodicity of the	se windows is	unspecified and left up to
"who"? ONUs are not p	eople.		buonot						
SuggestedRemedy				Suggestear	emeay	the implementer			
Change "who may then	Change "who may then retry" to "which may then retry"								
Proposed Response	Response Status W			ACCEPT					
PROPOSED ACCEPT.									
Marson alexand (** 440 - **				C/ 144	SC 144.3.3	3	P 98	L 30	# 95
wrong clause (is 143 an	a snoula be 144)			Remein, Du	ane		Huawei Techr	nologies	
C/ 144 SC 144.1.6	P 97	L18	# 92	Comment T	/pe T	Comment S	Status A		
Remein, Duane	Huawei Technolo	ogies		We are	using EQ to 2.56ns) Usi	mean both a num	nber of bits (72 mbiquous as it	, 4 control and depends on th	64 data) and a time
Comment Type ER	Comment Status A			correct	at 25GMII wh	nich is 36-bits wid	e) It would be	a good idea to	explicitly distinguish
In 10G these were includ	ded in the variable definitions.	This would be bet	ter imho than in	these tv	o uses.				
SuggestedRemedy				SuggestedF	lemedy				
Move MACI & MADI defi	initions to the variable definition	ns section.		Where	Q is referrin	ig to a time chang	ge to EQt and a	add to definitio	ns to mean 2.56 ns.
Response	Response Status C			Response		Response S	Status C		
ACCEPT IN PRINCIPLE				ACCEP	T IN PRINCI	PLE.			
	••			Insert a	n editorial no	te: need to reviev	v the use of EC	as the unit of	time / size, and decide
Add MACI, MADI, MACF	R, MADR to abbreviations in Cl	lause 1. Keep exis	ting text in Clause	whether	it is EQ, TQ	, blocks, etc. in e	ach and single	case.	
TYPE: TR/technical required	ER/editorial required CR/ger	neral required T/te	chnical E/editorial G/a	onoral			CI 14	٨	Page 28 of 38

IYPE: IR/technical required ER/editorial required GR/general	required l/technical E/editorial G/general	C/ 144	Page 28 of 38
COMMENT STATUS: D/dispatched A/accepted R/rejected	RESPONSE STATUS: O/open W/written C/closed Z/withdrawn	SC 144.3.3	5/22/2018 3:40:26 PM
SORT ORDER: Clause, Subclause, page, line			

Cl 144 SC 144.3.3 P98 L33 # 2 Heaven, Bo Huawei Hua	C/ 144 SC 144.3.3 P98 L35 # 97 Remein, Duane Huawei Technologies Huawei Technologies Huawei Technologies Huawei Technologies					
Comment Type T Comment Status A LLID looks a not that accurate.	Comment Type T Comment Status A We now using more than one LLID; "which contains the ONU's LLID"					
SuggestedRemedy Change "LLID" to "PLID and MLID"	SuggestedRemedy Change "LLID" to "LLIDs"					
Response Response Status C ACCEPT IN PRINCIPLE.	Response Response Status C ACCEPT IN PRINCIPLE.					
Type changed from E to T	Wrong clause (is 143 and should be 144)					
Change	Change					
Upon receipt of a valid REGISTER_REQ MPCPDU, the OLT registers the ONU, allocating and assigning a new port identity (LLID), and bonding a corresponding MAC to the LLID.	The next step in the process is for the OLT to transmit a REGISTER MPCPDU to the newly discovered ONU, which contains the ONU's LLID, and the OLT's required synchronization time. To The next step in the process is for the OLT to transmit a REGISTER MPCPDU containing the PLID and MLID to the newly discovered ONU. The REGISTER MPCPDU also contains the OLT's required synchronization time.					
Upon receipt of a valid REGISTER_REQ MPCPDU, the OLT registers the ONU, allocating						
and assigning two new port identities (PLID and MLID), and bonding them to corresponding MACs in the OLT.						
	C/ 144 SC 144.3.3 P98 L36 # 3 Heaven, Bo Huawei					
	Comment Type E Comment Status R as same as above					
	SuggestedRemedy					
	Response Response Status C REJECT.					
	Context is missing					

C/ 144 SC 144.3.3

C/ 144 SC 144.3.3.2 P102 L13 # 100 Remein, Duane Huawei Technologies Huawei Technologies Huawei Technologies Huawei Technologies	C/ 144 SC 144.3.3.5 P103 L 35 # 102 Remein, Duane Huawei Technologies Huawei Technologies Huawei Technologies Huawei Technologies
Comment Type T Comment Status A The PMD is not turned on and off, the laser in the PMD is.	Comment Type TR Comment Status A We're using new opcodes for our messages.
SuggestedRemedy Change: "turning off the PMD" to "turning off the laser" and "turning on the PMD" to "turning on the laser" (line 20)	SuggestedRemedy Change names for all Opcodes used (suggest xxx25, so DISCOVERY25). Open 31A and add new opcodes to Table 31A-1. Response Response Status
Response Response Status C ACCEPT. Wrong clause (is 143 and should be 144)	ACCEPT IN PRINCIPLE. These opcodes are specific to Clause 144. If any changes in definitions are needed, they would go into Annex 31A.
Cl 144 SC 144.3.3.5 P103 L24 # 101 Remein, Duane Huawei Technologies Comment Type TR Comment Status A	Add Annex 31A to the draft, and insert new entries into Table 31A–1, covering new opcodes defined in Clause 144 with appropriate cross references. Update the 00-07 through 01-00 entry to match the range remaining after allocation of new Opcodes for Clause 144 MPCPDUs.
I find neither MAC:MADI nor MAC:MADI in 2.3.2. Same issue pg. 113 and 117. SuggestedRemedy spell out the alias so that the definition can be found in the referenced section. Response Response Status C ACCEPT IN PRINCIPLE.	C/ 144 SC 144.3.3.5 P106 L44 # 103 Remein, Duane Huawei Technologies Huawei Technologies Huawei Technologies Huawei Technologies Comment Type T Comment Status A A OpcodeSpecificFunction does not seem to be used anywhere but it is defined twice; here and on pg. 114. Sugresstud Remedy Sugresstud Remedy Huawei Technologies
Fixed per comment #92	Remove both definitions. <i>Response</i> ACCEPT. <i>Response Status</i> <i>C</i>

C/ 144 SC 144.3.3.5

C/ 144 SC 144.3.3.6	P107	L 5	# 4	C/ 144	SC 144.3.4.6	P115	L11	# 104
Heaven, Bo	Huawei			Remein, D	uane	Huawei Te	echnologies	
Comment Type TR Co	omment Status A			Comment	Type TR	Comment Status R		
The broadcast LLID of 25G s	hould be defined for d	stinguishing from	n 10G's in the case of	Is there	e precedence for	r using a for loop within a	state in a SD?	
COExistence with TOGEFOR				Suggested	Remedy			
Change "0x7EEE" to "0x7EE	ר"			I could	not find any. If	it exists I may withdraw the	is comment.	toto would get the
	.			variable	es that don't nee	ed the looping and anothe	r to set those varia	able that do need the
Response Res	sponse Status C			looping] .	1 0		
ACCEPT IN PRINCIPLE.				Response		Response Status C		
Insert Editorial Note with the	following text:			REJEC	CT.			
LLID domain in .3ca is compl and EPoC. We do not need t Reserve the following LLID va PLID broadcast = 0x0001	letely separate from LL o worry about conflict o alues:	ID domains in 10 of LLID values.	G-EPON, 10G-EPON,	Most o definitio and no Task fo	f the existing SE on of how messa t extraction of in or Glen & Marek	os in Clause 144 will need ages are parsed will be up dividual fields based on b	to be modified. A bodated (simplified it positions in the	s part of the work, d) to use concatenation message.
ULID broadcast = 0xFFFF				C/ 144	SC 144 3 4 6	P115	/ 47	# 105
				Remein. D	uane	Huawei Te	chnologies	// [100
Need to make decision on br	oadcast MLID value.			Comment	Type T	Comment Status	0	
C/ 144 SC 144.3.3.6	P110	L15	# 5	"MCI:N	IADR" s/b "MCI:	MADR"		
Heaven, Bo	Huawei			Suggested	Remedy			
Comment Type TR Co	omment Status A			per cor	mment			
Cannot find the definition of C	GuardThresholdOLT			Response		Response Status C		
SuggestedRemedy				ACCE	PT.			
The value of 8EQs for the pu carry realtime service in upst	rpose of promoting the ream	accuracy of ups	tream will be good to	C/ 144	SC 144.3.5	P116	L3	# 106
Response Res	sponse Status C			Remein, D	uane	Huawei Te	chnologies	
ACCEPT IN PRINCIPLE.				Comment	Тире т	Comment Status A		
				We no	w have multiple	transmitters "arbitrate a	single transmitter	·"
guard I hresholdOL I This constant holds the maxi	mal amount of drift allo	wed for a timest	amp received at the	Suggested	Remedv		0	
OLT. This value is measured	in units of 1 EQ.			Chang	e to " arbitrate	specific transmitters"		
TYPE: integer				Response		Response Status		
VALUE. 0				ACCEI	PT.			

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

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pecifications and Management Parameters for 25Gb/s, 50Gb/s, and 100Gb/s Passive Optical Networks 1:

C/ 144 SC 144.3.5	P116 L13	# 107	C/ 144	SC 1	144.3.5.5	P118	L14	# 110
Remein, Duane	Huawei Technologies		Remein, D	uane		Huawei Lec	hnologies	
Comment Type T	Comment Status A		Comment	Туре	Т	Comment Status A		
Should we also concer maximums? "The OI	n ourselves with the minimum maximum and T shall not issue more than the maximum su	d maybe median	MCC:N	MACR()	missing D	A		
outstanding grants as	advertised by the ONU during registration (se	ee pending grants in	Suggested	Remed	У			
77.3.6.3)."			Add D/	A to me	ssage.			
SuggestedRemedy			Response			Response Status C		
Change to: ""The OLT grants parameter adve	shall not issue to an ONU more outstanding artised during registration (see pending grant	grants than the pending s in 77.3.6.3)."	ACCEI	PT.				
Response	Response Status C		C/ 144	SC 1	144.3.5.5	P118	L14	# 111
ACCEPT IN PRINCIPI	∟E .		Remein, D	uane		Huawei Tec	hnologies	
Changed type from E than the pending envelopes in 144.xxxx	to T shall not issue to an ONU more outstanding lopes parameter advertised during registratic)."	envelope allocations on (see pending	Comment The de elemer statem accom Same possib	<i>Type</i> efinition nts j with ents are modation issue in ly Fig 14	TR of MCC:N h non-zerc e made fo on for omit Fig 144-5 44-11 (pg.	Comment Status R MACR(DA, GATE) in 14 value in associated Leng r Length, Fragment, etc. H ting zero length fields. ONU GATE Reception PI 115), and Fig 144-12 (pg.	4.36.3.5 states f th[j] field of the a lowever, in the r rocess state diag 115).	for LLID[7] "Only Irray are used." Similar Iormative SD there is no gram pg. 119 and
nomenclature.	ded: review the draft for consistency of envel	lope-related	Suaaested	r Remed	v		,	
C/ 144 SC 144.3.5	P116 L17	# 108	In the S GATE	SD char state ch	nge the "[7 nange for '	7]" for LLID, Length, Fragm "(i=0;i<7;i++)" to "for (i=0;i<	nent and ForceR <n;i++)".< td=""><td>eport to "[n]". In SEND</td></n;i++)".<>	eport to "[n]". In SEND
			Auu a	dennilio	n ior n a		on-zero value Le	ngtn(j) neids.
"In order to maintain th Can they be any grants	ne watchdog timer at the ONU, grants are pe s to any ONU?	riodically generated."	REJEC	CT.		Response Status C		
SuggestedRemedy			Chang	e the SI	D to show	the entire array of all 7 en	velope allocatior	ns is passed to the MAC
Add to the sentence so	o it reads: "In order to maintain the watchdog	timer at the ONU,	Contro	of Client	without be	eing parsed or evaluated in	MPCP, per con	nment #170.
grants are periodically	generated for that ONU."		C/ 144	SC 1	144.3.5.6	P117	L 31	# 109
Response	Response Status C		Remein, D	uane		Huawei Tec	hnologies	
ACCEPT.			Comment	Туре	т	Comment Status A		
			MA_C0 ForceF StartTi	ONTRO Report[7 me, LLI	DL.request]) is not c D[7], Lenç	(DA, GATE, ChMap, Start lefined in 144.3.3.5. Perha gth[7], Fragment[7], Forcel	Time, LLID[7], Le aps MCC:MACR Report[7]) is beir	ength[7], Fragment[7], (DA, GATE, ChMap, ng referred to.
			Suggested	Remed	У			
			Chang ForceF	e to: M0 Report[7	CC:MACR ′])	(DA, GATE, ChMap, Start	Time, LLID[7], L	ength[7], Fragment[7],
			Response			Response Status C		
			ACCEI	PT.				
TVPE: TR/technical require	ed ER/editorial required GR/general require	d T/technical E/editorial C/c	neneral				44	Page 32 of 38

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specifications and Management Parameters for 25Gb/s, 50Gb/s, and 100Gb/s Passive Optical Networks 1:

	SC 444 2 7	Diag	10	# 440		SC 4	44.0.7		24.00	1.4	# 440	_
C/ 144 Romoin D	3C 144.3.7	P122 Huawai Tachi		# 112	C/ 144 Bomoin D	30 1	44.3.7	ז נוגר	122		# 113	
			lologies		Remein, Do					lologies		
Comment	Type TR	Comment Status A			Comment 1	ype	TR	Comment Stat	us A			
We us descri	e normative langue bing details of the	age here for the generic Mi specific MPCPDUs (except	PCPDU but infor for LLID type ar	mative language when nd a few other	We nov and SA	w have a \?	a specific	: LLID for MPCP t	affic; the F	LID. Shouldn'	this be reflected in DA	١
langua	age with the speci	fics. This will also make PI	Cs easier as the	e will only need to be	Suggested	Remedy	/					
one Pl Cl 64)	IČS statement per	MPCPDU type rather than	multiple require	nents (see MP6-16 in	Change a) Dest	e "port" f tination /	to "PLID" Address	' so this reads: (DA). The DA in N s to Clause 31, or	IPCPDU is	the MAC Cont	rol Multicast address a	S
Suggested	Remedy				PLID to	b which t	the MPC	PDU is destined.				
Chang	je:				b) Sou	rce Addr	ress (SA)). The SA in MPCI	PDU is the	individual MAC	address associated	
follows	APCPDU structure	e snall be as snown in Figur	e 144–17, and is	further defined as	OI T er	e PLID ti nd. this c	nrougn w can be th	nich the MPCPD) is transm he individu	al MACs. Thes	PDUS originating at the se MACs may all share	; a
"The N	APCPDU structure	e is shown in Figure 144–17	, with details def	ined as follows:"	single u	unicast a	address,	as explained in 14	4.1.2.			2
In the	opening paras for		e from:		Response			Response Statu	is C			
"The n	npcpdu_type MPC	CPDU is an instantiation of t	he Generic MPC	PDU, and is further	ACCEF	PT.						
define	d as follows:" to					SC 4	44 2 7		2400	1.40	# 114	
shown	npcpau_type MPC i in Figure 144-xx	with details defined as follo	ne Generic MPC ws:"	PDU and shall be as	C/ 144 Remein Di	iane	44.3.7	r Hu	- IZZ awai Tachr		# 114	
where	mpcpdu_type is a	one of DISCOVERY GATE,	REGISTER_RE	Q, REGISTER,				0		lologics		
REGIS	STER_ACK, GATI	E, or REPORT and xx is rep	lace with the ap	propriat figure ref.		loot oll r	IR	Comment Stat	<i>IS</i> A ich hitc wit	hin a field are t	ranamittad	
Where	e there is additiona	al normative language in the	description cha	nge it to be	vveve		elerence		ICH DILS WIL	inin a neiù are i	Tansmilleu.	
inform	ative. For examp	le sentences such as:		instance "	Suggested	Remedy	/		6 - 11	atas "Oatata wit	this the factor and	
Chanc	npcpau_type MPC ie to:	PDU shall be generated by	a MAC Control	instance	transm	itted from	messag m top to l	bottom. Bits withi	n a field or	word are trans	mitted left to right with	
"The n	npcpdu_type MPC	CPDU is generated by a MA	C Control instan	ce"	the left	most bit	within a	field being the lsb	." The arro	ow/note to the r	ight of the octet	
Response		Response Status C			numbe Note th	ring can	then be	removed. ets" should be ker	t and place	ed above the ri	abtmost column of	
ACCE	PT.				numbe	rs.			n ana plao		ghanost oblahin of	
					Response			Response Statu	is C			
					ACCEF	PT IN PF	RINCIPLE	E.				
					Editoria represe	al Note: entation	Duane to and asso	o investigate byte ociated text as a c	order in 802 omment aç	2.3 and make a gainst D1.1.	a proposal for a figure	

C/ 144 SC 144.3.7

C/ 144 SC 144.3.7.1 P122 L43 # 115	C/ 144 SC 144.3.7.1 P124 L22 # 6
Remein, Duane Huawei Technologies	Heaven, Bo Huawei
Comment Type E Comment Status R	Comment Type ER Comment Status A
first describe discovery & registration then proceed to Gates & Reports. In 1G & 10G	Should define a value for invalid LLID used for GATE with less their 7 grants
Gates included discovery so there was some logic to the order.	Add description such as "The value of invalid LLID is 0"
SuggestedRemedy	
Put MPCPDU descriptions in the following order; DISCOVERY, REGISTER_REQ, REGISTER, REGISTER_ACK, GATE, and REPORT.	ACCEPT IN PRINCIPLE.
Response Response Status C	Resolved by comment #170.
REJECT.	
The order of definition does not help in any way to understand the use cases - MPCPDUs are referenced throughout the text, and not just here.	Remein, Duane Huawei Technologies
	Comment Type TR Comment Status A
Kramer, Glen Broadcom	"All transmission overhead components (see TBD) are included in and thus consume part of the granted transmission slot." This was reasonable when there was a one-to-one start
Comment Type TR Comment Status A	time and length per grant in a GATE but is it reasonable when there is one start time and
Description of GATE message is wrong. Grants with zero length are valid and are used to	last one or is it equally deducted from each?
request a report for a specific LLID without granting that LLID.	SuggestedRemedy
Reports are not sent in the associated grants. They are sent in PLID grant.	Change to : "Burst transmission overhead components (Start of Burst and End of Burst) are not included in the grant length parameters whereas parity overhead is."
Transmission overhead components are not included in granted length.	Response Response Status C
	ACCEPT IN PRINCIPLE.
SuggestedRemedy	Decelored hus common # #170
kramer_3ca_3_0518.pdf.	Resolved by comment #170.
Response Response Status C	C/ 144 SC 144.3.7.1 P124 L26 # 7
ACCEPT IN PRINCIPLE.	Heaven, Bo Huawei
Line kromer 200 20 0510 ndf with the following changes	Comment Type TR Comment Status A
- change "frag" to "flag"	We can learn that each ENV length of grant does not include FEC overhead and burst overhead from Figure 143-13
- "is used as an MPCP keep alive" to "may be used as an MPCP keep alive"	SuggestedRemedy
	"All transmission overhead components (see TBD) are included in and thus consume part of the granted transmission slot." should be removed
	Response Response Status C
	ACCEPT IN PRINCIPLE.
	Resolved by comment #170.

C/ 144 SC 144.3.7.1 Page 34 of 38 5/22/2018 3:40:27 PM

0	00 444 0 = 4	Diai	1 07	"	0	00 444 0 - 4	Diai	1.40	# <u>101</u>
C/ 144 Remein, E	SC 144.3.7.1 Duane	P124 Huawei Techr	L27 nologies	# 117	C/ 144 Remein, D	SC 144.3.7.1 uane	P 124 Huawei Te	L46 chnologies	# 121
Comment	Type TR	Comment Status A			Comment	Туре Т	Comment Status A		100G-EPON
Text f	or Fragmentation	flag.			100G-	EPON stuff. Tabl	e 144-1 Channel Assignm	nent flags bits 2 &	3 should be reserved.
Suggeste	dRemedy				Suggested	Remedy			
When	this flag is set to	0 the ONU shall not fragmer	it a frame; whe	n set to a 1	per co	mment			
fragm	entation is allowed	d within the respective grant.			Response		Response Status C		
Response	•	Response Status C			ACCE	PT.	·		
ACCE	PT IN PRINCIPLI	Ξ.				SC 444 2 7 2	DADA	1 20	# 120
Resol	ved by comment #	<i>‡</i> 170.			Remein, D	30 144.3.7.2 uane	P124 Huawei Te	chnologies	# 120
C/ 144	SC 144.3.7.1	P 124	L 29	# 118	Comment	Tvpe E	Comment Status D	0	bucket
Remein, E	Duane	Huawei Techr	ologies		missin	g article			
Comment	Type TR	Comment Status A			Suggested	Remedy			
FR is	normative.				Chang	e "- Time stamp'	to "- the time stamp"		
Suggestee	dRemedy				Proposed	Response	Response Status W		
chang	je:				PROP	OSED ACCEPT.			
"no ao "the (DNU should issue	a REPORT" to "the ONU m	ay issue a grat all issue a man	datory REPORT"	CL 144	SC 144 2 7 2	P124	1 46	# 100
At the	end of the para a	dd "An ONU must transmit r	nandatory REP	ORTs prior to gratuitous	Remein, D	uane	F 124 Huawei Te	chnologies	# 122
Response)	Response Status C			Comment	Type TR	Comment Status A		
ACCE	PT IN PRINCIPLI	Ξ.			Text fo	r b)			
Decel	und by commont	4170			Suggested	Remedy			
Resol	ved by comment 4	4170.			The nu	mber of LLIDs ir	the ONU with non-empty	queues.	
C/ 144	SC 144.3.7.1	P124	L 32	# 119	Response		Response Status C		
Remein, I	Duane	Huawei Techr	ologies		ACCE	PT.			
Comment	Type E	Comment Status D		bucket					
Oxym	oronic statements	have no place in a standard	l; "This is an en t cannot be em	npty field that is					
Same	issue at pg. 124 l	n. 48, pg. 126 ln. 49, pg. 12	8 In. 15, and 12	29 In. 20.					
Suggestee	dRemedy								
Chang	ge to: "This field is	transmitted as zeroes"							
Proposed	Response	Response Status W							
PROF	POSED ACCEPT.								
See a	lso comment #17) for text alignment							
0000									

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

C/ 144 SC 144.3.7.2 Page 35 of 38 5/22/2018 3:40:27 PM

Proposed Responses pecifications and Management Parameters for 25Gb/s, 50Gb/s, and 100Gb/s Passive Optical Networks	Proposed Responses	specifications and Management Parameters for 25Gb/s, 50Gb/s, and 100Gb/s Passive Optical Network	s 1:
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C/ 144 SC 144.3.7.2 P124 L47 # 123	C/ 144 SC 144.3.7.3 P126 L22 # 126
Text for c)	Exactly where is Pending Grants configured (which imho implies provisioning).
SuagestedRemedy	SuaaestedRemedy
The local time, in units of EQt, at which the REPORT information was collected in the ONU.	Change "configured to buffer" to "capable of buffering"
Response Response Status C ACCEPT IN PRINCIPLE.	Response Response Status C ACCEPT IN PRINCIPLE.
Nuke field Report Time + update respective figure (shift remaining fields up)	Per comment + change "Pending Grants" to "Pending Envelopes" in text and associated
C/ 144 SC 144.3.7.2 P125 L53 # 124	ilgure.
Remein, Duane Huawei Technologies	C/ 144 SC 144.3.7.6 P130 L3 # 127
Comment Type TR Comment Status A	Remein, Duane Huawei Technologies
Shouldn't this be the PLID?	Comment Type E Comment Status D bucket
SuggestedRemedy	Errant reference to Table 144-1 s/b 144-6
Change "a unicast type of LLID (see TBD)." to "the PLID of the originating ONU."	SuggestedRemedy
Response Response Status C	per comment
ACCEPT IN PRINCIPLE.	Proposed Response Response Status W PROPOSED ACCEPT.
Per comment + change "instance mapped to an active ONU" to "instance mapped to an ONU"	C/ 144 SC 144.3.7.6 P130 L8 # 172
C/ 144 SC 144.3.7.3 P126 L8 # 125	Kramer, Glen Broadcom
Remein, Duane Huawei Technologies	Comment Type T Comment Status A
Comment Type FR Comment Status	Both normal GATEs and discovery GATEs are scheduled by the same scheduler. Since
The presentation order of tables and figures seems backwards (low level details are	normal GATEs have grant length limited to 22 bits, we should apply the same limit to the discovery grant length. This will allow the entire scheduler operate on 22-bit numbers
presented before high-level details) and is opposite to that in previous sections.	Suggested Remedy
SuggestedRemedy	Replace the text "Discovery Grant Length: This 24-bit unsigned field represents the length
Reorder section so Figure 144–20 comes before Table 144–2 & 3. Add reference to Figure 144–20 in the opening para. Edit sections 144.3.7.4, 144.3.7.5, and 144.3.7.6 similarly.	of the discovery grant, expressed in the units of 1 EQ."
Response Response Status C	with text "Discovery Grant Length: This 22-bit unsigned field represents the length of the
ACCEPT IN PRINCIPLE.	discovery grant, expressed in the units of 1 EQ." In Figure 14-23, show the two most-significant bits of grant length as reserved.
Table and figure placement depends largely on the page flow.	Response Response Status C ACCEPT.

C/ 144	Page 36 of 38
SC 144.3.7.6	5/22/2018 3:40:27 PM

C/ 144 SC 144.3.7.6 P130 L40 # 9	C/ 144 SC 144.3.7.7 P131 L1 # 151
	Hajuuczenia, Marek Chaner Communicatio
Comment Type TR Comment Status A page 7 and 8 is basically the same, the only difference is that all ONUs calculate the RSSI thresholds thx based on ONUs' typical launch power in page 7, while every ONU calculate the RSSI is page 8. Considering that if the	Comment Type TR Comment Status D New SYNC_PATTERN MPCPDU is needed to address the need for dynamic configuration of Sync Pattern zones (value and/or duration)
ONU calculates the RSSI thresholds based on its transmitter TSSI in page 8. Considering that, if the ONU calculates the RSSI thresholds based on its typical launch power or TSSI is only an ONU's inner implementation issue, ONU can decide it by itself. So the current Table 144-6 can cover both the ways in page 7 and page 8. Only some illustration on how ONUs calculates RSSI thresholds is newly needed.	SuggestedRemedy See hajduczenia_3ca_1_0518.pdf for motivation and hajduczenia_3ca_2_0518.pdf for all changes in Clause 144 needed to accommodate the new mechanism, including new MPCPDU, changes to existing MPCPDUs, state diagrams, and associated text. All
SuggestedRemedy	where appropriate.
Add the following text below Table 144-6: th0, th1, th2 are ONU RSSI thresholds, they can be calculated by ONU based on the following equations:	Proposed Response Response Status Z REJECT.
th0 = 1H0 - $(ONU_1x - OL1_1x)$ th1 = TH1 - $(ONU_Tx - OLT_Tx)$ th2 = TH2 - $(ONU_Tx - OLT_Tx)$	This comment was WITHDRAWN by the commenter.
dBm.	C/ 144 SC 1443.3.3 P98 L32 # 96
OLI_IX is the OLI transmitter launch power which are announced by OLI, ONU_IX is the ONU transmitter launch power, the unit of $(ONU_IX - OIT_IX)$ is in dB	Remein, Duane Huawei Technologies
Personase Personase Status	Comment Type T Comment Status D
ACCEPT IN PRINCIPLE.	We should be specific on which types of LLIDs are allocated. "the OLT registers the ONU, allocating and assigning a new port identity (LLID), and bonding a corresponding MAC to the LLID."
Use the following reference: umeda_3ca_1_0518.pdf - delete ONU Rx_RSSI indication field in Table 144–6 - page 5 from presentation shows changes to DISCOVERY GATE MPCPDU, including ONU RSSI threhold information added as two separate fields into DISCOVERY GATE	SuggestedRemedy Change to: "the OLT registers the ONU, allocating and assigning a new ONU (PLID) and management (MLID) port identities, and bonding a corresponding MACs to the LLIDs."
MPCPDU.	Proposed Response Response Status W PROPOSED ACCEPT.

Wrong clause (is 143 and should be 144)

C/ 144 SC 1443.3.3

C/ Abstrac SC Abstract	P 3	L 4	# 1
Heaven, Bo	Huaw	ei	
Comment Type T	Comment Status	R	
Does 50G/10G include	case of 2x25G dowr	nstream and 1x10G u	pstream.
SuggestedRemedy How about add option c	f 2x25G downstrear	n and 2 x 10G upstrea	am(50G/20G)
Response REJECT.	Response Status	С	
No specific change prop	posed at this time.		

C/ Abstrac SC Abstract