IEEE P802.3br Interspersing Express Traffic 1st Working Group recirculation ballot comments

C/00 SC 0 P L # 24	C/00 SC 0		Р	L	# 23				
Remein, Duane Huawei	Remein, Duane		Huawei						
Comment Type TR Comment Status R	Comment Type TF	Comment S	tatus R						
I concur with Geoff Thompson's Comment #31 from Draft 2.2. The PAR states participation in THIS TASK FORCE of about 30 persons.	I concur with com draft needs to be	I concur with comment #13 from Draft 2.2 by Steve Trowbridge. The terminology of the draft needs to be updated.							
In reviewing the minutes of the past meetings here is what I observe:	SuggestedRemedy								
Waikoloa 5 (4 of 5 sessions or more) + 5 (2 of 5 sessions or less)	Per comment.								
Pittsburgh 3 (4 of 5 sessions or more) + 1 (3 of 5 sessions) + 7 (2 of 5 sessions or less)	Response	Response St	tatus W						
Berlin 3 (2 of 2 sessions) + 1 (1 of 2 sessions) Atlanta 6 (3 of 3 sessions for all) San Antonio 10 (2 of 2 sessions for all)	REJECT. This is applies. It is copie	a pile-on to a comme d below.	ent from the p	prior ballot. The p	previous response still				
Ottawa 14 (7 for 1 of 2 sessions) San Diego 14 (4 for 1 of 3 sessions)	REJECT.								
Beijing 7 (for 1 of 1 half-day sessions) Indian Wells 13 (3 for 1 of 3 sessions)	The main complaid decided after the	The main complaint about the intiial CFI was that it presumed a solution and that should be decided after the project is created.							
From this data I can only conclude that at no meetings did TF attendance reach even 1/2 the approximate number stated in the PAR.	After the project w interspersing expr	vas created, preempt ress traffic. The sugg	tion was chos jested name o	en as part of the changes would r	e solution for not aid the reader in ected mechanism				
SuggestedRemedy	understanding the		0 1003011 10 0						
Per original comment.	The project meets	s the agreed objective	es.						
Response Response Status W	C/ 00 SC 0		P 0	L 0	# 7				
REJECT. This is a pile-on to a comment from the prior ballot. The previous response still applies. It is copied below.	Hajduczenia, Marek	Hajduczenia, Marek Bright House Network							
REJECT. The market projections in the Broad Market Potential based on the automotive	This is a pile on to	comment #13 agair	nst D2.2						
and industrial environments continue to be accurate. In fact, there is interest in additional	SuggestedRemedy Please implement comment #13 against D2.2 Response Response Status W								
markets such as carrier backhaul and professional audio video.									
We have active participation in joint meetings from IEEE 802.1 TSN (a group of more than									
30) which has a companion project (IEEE P802.1Qbu Frame Preemption) dependent on this project. Also, about 30 people have participated by commenting on ballots.	REJECT. This is a pile-on to a comment from the prior ballot. The previous response still applies. It is copied below.								
The interest in operating on fewer pairs and at lower speeds in the automotive and industrial market is driven by the need to reduce weight and power consumption.	REJECT.	REJECT.							
	The main complaint about the intiial CFI was that it presumed a solution and that should be decided after the project is created. After the project was created, preemption was chosen as part of the solution for interspersing express traffic. The suggested name changes would not aid the reader in understanding the material. There is no reason to obfuscate the selected mechanism.								
	The project meets	s the agreed objective	es.						
TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial (COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/	G/general written C/closed U/unsatisfi	ed Z/withdrawn	C/ 00 SC 0	D	Page 1 of 8 11/11/2015 12:22:24				

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C/ 1 SC 1.4.209 Kong, Samuel	P 25 Marvell	L 1	# 35	C/ 30 SC 30 Gardner, Andrew).14.1.13	P 26 Linear Techr	L 51 nology	# 16	
Comment Type T change the word "paus	Comment Status R se" to "PAUSE"			Comment Type Suggest adding	E Comr page break bef	<i>nent Status</i> R ore 30.14.1.13 for b	etter continuity		
SuggestedRemedy change the word "paus	se" to "PAUSE"			SuggestedRemedy See comment.					
Response REJECT. No lower cas reference doesn't mato	Response Status C se PAUSE in the draft 2.3. Sul ch. Was this comment intende	oclause does no d for another dr	t exist and page aft?	<i>Response</i> REJECT. Out o Also, these doc	<i>Respo</i> f scope. uments are profe	ense Status C			
C/ 30 SC 30.2.3 Zimmerman, George	P 19 CME Consulti	L 1 ng	# 36	Cl 79 SC 79 Remein, Duane	9.3.7.1	<i>Р</i> 28 Huawei	L 44	# 22	
Comment Type E Commenter recognizes external crossreference SuggestedRemedy Show all sections in fig	Comment Status X s this is out of scope for this re es on all blocks. gure as 'forest green' marked v	ecirculation. Fig vith tag 'externa	ure 30-3 is missing '.	Comment Type Wording: "if mo SuggestedRemedy Change "that" to "if more octets a	E Comr re octets are rec o "then" so the s are received than	nent Status R eived that were defi tatement reads: n were defined	ined"		
Proposed Response Pat to check with Pete	Response Status W Anslow.			Response REJECT. Out o	<i>Respo</i> f scope.	nse Status C			
Cl 30 SC 30.2.5 Gardner, Andrew	P 21 Linear Techno	L 1 blogy	# 15						
Comment Type E Table 30-9 title needs '	Comment Status R								
SuggestedRemedy See comment.									
Response REJECT. Out of scope Also, these documents	Response Status C e. s are professionally edited. Th	e table may not	split in the final version.						

CI 79 SC 79.3.7.1

IEEE P802.3br Interspersing Express Traffic 1st Working Group recirculation ballot comments

Thajadozonia, Marek Dinght House Network	Trette	Albert	Siemens A(G L 22	# 26				
Comment Type TR Comment Status R Unnecessary optionality "the Additional Ethernet Capabilities TLV s	hould be sent in an In	ent Type E	Comment Status R	s not clear why? T	This is also the case at				
LLDPDU addressed to the Nearest Bridge group address (see IEEE intend for interoperabilty, we need to leave as few "should" stateme down all options down. Additionally, there is no viable option presented (what address is to Nearest Bridge group is not used)	E 802.1Q)." - if we ot ents as possible and nail be used when the Ei Respo	other clauses at page 33 and 34. SuggestedRemedy Either explain why underlined or remove it Response							
SuggestedRemedy Change to "the Additional Ethernet Capabilities TLV shall be sent in addressed to the Nearest Bridge group address (see IEEE 802.1Q)	n an LLDPDU in: ."th	JECT. It is expla truction is "chan ough of deleted	ained. See the note on editing in ge," the change to the text is sh text.	nstructions on pag hown by underlinir	ge 16. When the editing ng new text and strike				
Response Response Status W	<i>Cl</i> 99 Remei	SC 99.1 n, Duane	<i>P</i> 35 Huawei	L 22	# 18				
 REJECT. The reason it is a should is that users configure what TLV frame. The usage rules are not a requirement on an implementation Clause 79 have "should" rather than "shall" for that reason. Interoperability is addressed by the shall in the last paragraph of 99 preemption capability is only enabled if the TLV is sent in a frame w If the TLV is sent to any other address, the preemption capability in ignored. 	/s to send in an LLDP h. All usage rules in Comm th. 1.4.2. That ensures that ith the correct address. Sugge formation in it will be Cl "th	Comment Type E Comment Status A This wording is clumsy and can easily be improved. "the MAC Merge sublayer may prevent the start of transmission of packets from the pMA SuggestedRemedy Change to: "the MAC Merge sublayer may prevent the start of packet transmission from the pMAC."							
C/ 79 SC 79.3.7.2 P 28 L 53 Hajduczenia, Marek Bright House Network	# 3 Respo	nse CEPT.	Response Status C						
Comment Type ER Comment Status A Incorrect reference to 802.1Q	C/ 99 Marris	SC 99.3. Arthur	3 P 40 Cadence De	L 46 esign Syst	# 27				
SuggestedRemedy Is "IEEE 802.1Q" and should be "IEEE Std 802.1Q" There are multiple locations in the draft where such a change is nee text modified in D2.1)	Comm Th eded (some outside of fra Sugge	Comment Type E Comment Status R The text "additional fragment counter" suggests that the counter is counting additional fragments which is incorrect.							
Response Response Status W ACCEPT.	Sugge Cl "a	Change text from: "and includes an additional fragment counter octet (frag_count) following the SMD"							
	To "a	To: "and following the SMD has an additional octet for the fragment count (frag_count)"							
	Respo RI	nse JECT. Out of sc	Response Status C						

C/ 99 SC 99.3.3

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CI 99	SC	00 3 3	P 11	/ 20	# 2	CI 99	SC 00 3 /	P 11	1.4	# 32	
Belitz, Tot	oias	33.3.3	Renesas	L Z J	π Ζ	Kong, Sa	nuel	Marvell	L 4	π 32	
Comment Type T Comment Status A For an MII Interface which is a nibble based interface, there is the possibility to detect an SMD-E instead of an SMD-C3. This is due to the sequence of nibbles provided by the PHY interface. For instance: 4'h5 – 4'h					Comment Type T Comment Status D The frag_count of the initial fragment is '0' as described in this section where as in Figures 99-5 and 99-6 the frag_count of the first continuing fragment is '0'. SuggestedRemedy Change the frag_count description to match Fig.99-5 and 99-6 Proposed Response Response Status W PROPOSED ACCEPT IN PRINCIPLE. In 99.3.4, change the text to: "The frag_count is a modulo-4 counter that increments for each continuation fragment of the preemptable packet. The frag_count protects against mPacket reassembly errors by enabling detection of the loss of up to 3 packet fragments.						
Response ACCE	PT. U	se 0x2A ins	Response Status C stead of 0xAD			The fi first c The v	ag_count field ontinuation frag alid values of f	is present only in mPackets w gment of each preemptable pa rag_count values are shown in	ith SMD-C. The f cket. Table 99–2."	rag_count is zero in the	
C/ 99 Marris, Art	SC hur Turra	99.3.3	P 41 Cadence Des	L 30 sign Syst	# 29	C/ 99 Kong, Sai	SC 99.3.6 nuel	P 42 Marvell	L 4	# 33	
Comment Type TR Comment Status A You cannot use an SMD encoding of 0xAD with a 100Mbps nibble interface. If you have an odd number of nibbles on the receive interface the D in 0xAD will look like 0xD5 and be decoded as an SMD-E.					Comment Type T Comment Status R Add a note for further clarification for mCRC						
Suggestee	lReme	dy				The n	nCRC value is	same as inverting the last 2 by	tes of CRC.		
Chang	ge 0xA	D to somet	thing else.			Response)	Response Status			
Response ACCE	PT. U	se 0x2A ins	Response Status W stead of 0xAD			REJE	CT. The existir	ng text is clear and we already	have a clarifying	note	

C/ 99 SC 99.3.6 Page 4 of 8 11/11/2015 12:22:25 P

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C/ 99 Zimmerma	SC 99.3.6	P 42 CME Consultin	L 29	# 37	C/ 99 Haiduczer	SC 99.3.6 nia. Marek	P 4 Briah	3 L 29 t House Network	9 # 6
Comment		Comment Status R	9		Comment	Type F	Comment Status	R	
"NOT	E—0x0000 is XOF	Red with two octets that conta	in the higher o	rder coefficients of the	Incon	sistent format of	of hex numbers: 0x0000) FFFF, 0x0000	
CRC a	and 0xFFFF is XO	Red	sienste ef the O	C " the first part of	Suaaeste	dRemedv			
this st leaves	atement is meanir the reader scrate	ngless. XOR'ing 0x0000 with thing his/her head as to what	something is c was meant.	oing NOTHING. It	Pleas	e use the sepa er.	aration with "-" every two	hex symbols - th	is makes reading much
Suggestee	dRemedy				Chan	ge (for example	e): 0x0000 to 0x00-00; (DX0000 FFFF to 0	X00-00-FF-FF
Delete	e the first sentence	e of the note, so that it reads:	- I	a afficients of the ODO "	Response) CT The forme	Response Status	C cinc Ov to indicate	a a bay number on defined in
Dananaa	FF IS XORED WITH		e lower order d	coefficients of the CRC."	1.2.5	Hexadecimal N	Notation. Checking Sect	ion 4, 5 and 6 of I	EEE 802.3, none of them use
REIE		is XORed with the whole CR	C (so ves the t	wo high order octets	hyphe	ens as separate	ers in hex numbers. The	ere were objection	is to using hypens as ranges
are ur absolu	nchanged and the utely clear which h	low order octets are flipped). half gets the 0000 and which g	The note was a lets the FFFF.	added to make it	The s	pace could be s it easier to re	removed in 0x0000 FFF ad and 0x0000 FFFF is	FF to make it 0x00 unchanged text a	200FFFF, but the space and out of scope.
Also, t differe	the Clause 4 CRC ent.	is XORed with all 1's so not i	lipping some c	f the bits is what is	C/ 99	SC 99.4.2	P 4	2 L 5	2 # 25
01.00	<u> </u>		1.00	# 40	Tretter, Al	bert	Siem	ens AG	
Ci 99 Remein F	30 99.3.0 Juane	P 42 Huawei	L 29	# 19	Comment	Type E	Comment Status	Α	
Commont		Comment Status P			"if it	is determined	that the link partner s	."	
Note a	appears to be usin	an incorrect paragraph tag			=> l a	ssume the wor	rd "supports" is missing		
Suggester	dRemedy	.g			Suggeste	dRemedy			
Chang	ge to Note (Time N	New Roman, 9pt)			Propo deterr	sal: The preen mined that the	link partner supports the	e preemption capa	ability.
Response	•	Response Status W			Response	9	Response Status	C	
REJE	CT. It is using the	note paragraph tag and the fo	ont is Times Ne	ew Roman 9pt.	ACCE	EPT.			
					<i>Cl</i> 99 Marris, Ar	SC 99.4.2 thur	P 4 Cade	2 L 5 nce Design Syst	3 # 28
					<i>Comment</i> Typo	Type ER	Comment Status	Α	
					Suggeste	dRemedy			
					Chang "partn To: "partn	ge: ner s" ner supports"			
					Response)	Response Status	w	
					ACCE	EPT.			
TYPE: TR	/technical required	d ER/editorial required GR/a	eneral required	T/technical E/editorial G/g	eneral			C/ 99	Page 5 of 8

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

C/ 99 SC 99.4.2 Page 5 of 8 11/11/2015 12:22:25 P

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CI 99	SC	99.4.3	P 43	L 16	# 20	C/ 99	SC	99.4.7.3	P 47	L 30	# 14
Remein, D	Duane		Huawei			Gardner,	Andrew		Linear Tech	hnology	
Comment	Туре	TR	Comment Status R			Commen	t Type	Е	Comment Status A		
Here	you sta	te that ver	ification may be disabled yet o	n page 36 line	35 you state that	Missi	ng perio	d at end of	sentence.		
"Pree suppo	mption orts it (s	capability ee 99.4.2	is enabled only after it has bee)."	en determined	that the link partner	Suggeste	dRemea	ły			
These	e staten	nents seei	m to be self contratictory.			See	comment	t.			
Suggestee	dReme	dy				Response	Э		Response Status C		
Provid	de norm	native lang	guage for when verification can	be disabled.		ACC	EPT.				
Response)		Response Status W			C/ 99	SC	99.4.7.4	P 49	L 14	# 1
REJE	CT. It is	sn't contra emption c	dictory. The LLDP TLV exchar apability and it can't be disable	nge determines d.	that the link partner	Belitz, To	bias		Renesas		
ouppe	nio pro	omption o				Commen	t Type	т	Comment Status A		
disabl doesr	ling it is n't make	somethin sense.	g done by the user, not the im	plementation, r	ormative language	happ For the	en that a nis case	the Preem uring fram	ble frame is starting with starts of the sta	SFD (0xD5) and co when the link veri	apability it could ontinued with SMD-C. fication is not
<i>CI</i> 99 Remein, E	SC Duane	99.4.4	P 44 Huawei	L 8	# 21	could bus.	cause t	he frame p ntation is c	preemption. This would ca reated to exemplify the iss	ause to send an inc sue (IEEE_802.3br	correct frame on theSMDS_Encoding.pdf).
Comment	Туре	Е	Comment Status A			Suggeste	dRemed	ly		· _	0, ,
Trans "Whe	mit s/b n preen	lower cas	e in the following: pability is active, Transmit proce	essing"		The c	origin of t	the proble s it could r	m is the pActive variable, t not change its state (FALS	the definition shou E -> TRUE) when	d change that under all a preemptable frame
Suggestee	dReme	dy				is on	going.		_		
per co	omment	I				Response			Response Status C		
Response ACCE	PT.		Response Status C			ACCI	EPT IN F	RINCIPLE	=. See 30		
Cl 99 Gardner, <i>I</i>	SC Andrew	99.4.7.3	P 47 Linear Technol	L 7 ogy	# 13						
<i>Comment</i> Missir	<i>Type</i> ng perio	E od at end o	Comment Status A of sentence.								
Suggestee See c	dReme commer	<i>dy</i> it.									
Response ACCE	PT.		Response Status C								

C/ 99 SC 99.4.7.4

IEEE P802.3br Interspersing Express Traffic 1st Working Group recirculation ballot comments

Cl 99 SC 99.4.7.7 P 51 L 31 # 30	C/ 99 SC Table 99-1 P 41 L 3, 11 # 31						
Marris, Arthur Cadence Design Syst	Kong, Samuel Marvell						
Comment Type TR Comment Status A	Comment Type T Comment Status A						
The value of the "pActive" and "preempt" variable can change during the PREEMPTABLE_TX state. This means the transmit state machine can cause fragmentation of a frame with an SMD of 0xD5.	For MII mode, a packet containing Preambles followed by 0xD and 0xA can be decoded either SMD-E or SMD-C3 depending on the even or odd numbers of Preamble nibbles						
SuggestedRemedy	SuggestedRemedy						
Consider only allowing the pActive variable to change in the IDLE_TX_PROC state.							
Response Response Status W	Response Response Status C						
ACCEPT IN PRINCIPLE. Also could happen if pActive changes state while transmitting a frame with verification disabled.	ACCEPT. Use 0X2A Instead of 0XAD						
The simplest fix would be to create an additional varible to capture the state of pActive when a frame starts: pAllow.							
In state SEND_SMD_S, add: pAllow <= pActive as the first action. In the definition of preempt, replace pActive with pAllow.							
CI 99 SC 99.4.8 P 53 L 42 # 17							
Gardner, Andrew Linear Technology							
Comment Type T Comment Status R							
There is an instance of must in subclause 99.4.8 that pertains to predictable operation of time sensitive data.							
SuggestedRemedy							
The IEEE convention is to use shall instead of must when a specification is mandatory. Consider using shall intstead of must.							
Response Response Status C REJECT. Out of scope. Also, this is not intended as a mandatory requirement. It is a statement explaining why delay constraints are important. It is describing an unavoidable situation.							
The actual delay constraints have "shall"s.							
The existing text is the same as used in other delay constraints subclauses (e.g. 69.3, 70.4, 71.4)							

C/ 99 SC Table 99-1

121, 02.0	12221 002		croing Express fram	o not working	Croup ic		t oommont.	0	
C/ 99,1 SC 99,1 Hajduczenia, Marek	P 35 Bright House	L 39 Network	# 5	C/ 99,1 Kong, Sam	SC 99,1 nuel		P 36 Marvell	L 29	# 34
Comment Type TR The text which wa "Preemption capa maximum size frau us. This is an upp Express frame wh additional delay ge The frame length Second, the maxii explicitly stated (c The statement "TF send an Express i 2000 byte frame is	Comment Status A is added in D2.1 could use some to bility is most useful at lower operat me (2000 octets) on a 100 Mb/s lin er bound on the additional delay be ten preemption capability is not use tes smaller in proportion to the spe for specific speeds it just an examp mum frame size should be reference an be changed over time). his is an upper bound on the addition frame when preemption capability is a also not correct - it is 2000 byte c	echnical improve ing speeds. The k is 160 us and efore a MAC Cli ed. At higher op ed." ole, and should ced through link onal delay befor s not used." is o acket.	ement. e duration of a l on a 1 Gb/s link is 16 ent can send an erating speeds the be marked as such. to Clause 3 and not re a MAC Client can put of place.	Comment Add a Suggested Add "(Response ACCE	Type T note for furt <i>Remedy</i> see IEEE 80	Comment of ther clarification for 02.3 Annex 31B)" ri <i>Response S</i> ICIPLE. Since we b	Status A PAUSE ght after "PAU Status C ecome part of	JSE" IEEE 802.3, we s	say "(see Annex 31B)"
SuggestedRemedy									
Remove the state Client can send ar Change "The dura and on a 1 Gb/s lii (see 3.2.7) on a 1 Change "At highe speed." to "At high the link speed, lim	ment "This is an upper bound on the n Express frame when preemption ation of a maximum size frame (200 nk is 16 us" to read "For example, 00 Mb/s link is 160 us and on a 1 C r operating speeds the additional dher operating speed, s this additional iting advantages of the preemptior	ne additional de capability is not 00 octets) on a the duration of a Gb/s link is 16 u elay gets smalle al delay gets sm n mechanism."	lay before a MAC t used.". 100 Mb/s link is 160 us a maximum size packet s" er in proportion to the naller in proportion to						
Response	Response Status W								
ACCEPT IN PRIN explaining that the increases.	ICIPLE. The statement about uppe expresss packet latency saved by	r bound is corre preemption de	ect and part of creases as speed						

If maximum packet size changes in the future, the suggested statement that the duration of a maximum size packet takes a specific time would become untrue. E.g. if maximum packet size was increased to 4000 octets, it would become 320 us. If we want an example that isn't impacted by changes in maximum packet size, then it "maximum size" should be deleted.

Use,

"For example, the duration of a 2000 octet packet on a 100 Mb/s link is 160 us and on a 1 Gb/s link is 16 us. This is an upper bound on the additional delay before a MAC Client can send an Express frame when preemption capability is not used. At higher operating speeds, this additional delay gets smaller in proportion to the link speed, reducing advantage of the preemption mechanism."

C/ 99,1 SC 99,1