IEEE P802.3az D1.0 Energy Efficient Ethernet comments

C/ 00 SC 0	Р	L	# 270	C/ 00	SC O	Р	L	# 268		
Diab, Wael	Broadcom			Diab, Wae	I	Broadcom				
Comment Type TR	Comment Status D			Comment	Type TR	Comment Status D				
For management, we	e will also need to work on the o	contents of the	C30 Annexes like 30A.	Has th	e TF decided h	how to handle TPPMD? There	seems to be se	veral references in the		
SuggestedRemedy	exes prior to WG ballot			editor's conter	s notes that the it in editor's not	ere is a possibility to pull in TP tes related to this.	PMD. There is s	ignificant technical		
				Suggested	lRemedy					
PROPOSED ACCER	PT.			Sugge cleane	est that a a deci ed up one way o	ision is made on this prior to V or the other.	VG preview so th	nat document can be		
C/ 00 SC 0	Р	1	# 265	Proposed	Response	Response Status W				
Diab. Wael	Broadcom	-	11 200	PROP	OSED ACCEP	PT IN PRINCIPLE.				
Comment Type TR There are several ins multiple places, valu same thing.	Comment Status D stances throughout the docume les are given in multiple places	ent where paran or different tern	neters are defined in ninology is used for the	While resour Editors	we originally co ces to take on s notes indication	onsidered pulling TPPMD into this task. Ing that we will pull in TPPMD	802.3, we were will be removed.	unable to find the		
This says has seen all				C/ 00	SC 0	Р	L	# 243		
potential conflict. He	ricult to maintain and if there ar	e subtle differer	ices then it creates a	Bennett, N	lichael	LBNL				
- Table 78-2 summa	rizes key parameters and they	are listed as TB	D. However, a subset of	Comment Type E Comment Status D						
these values are def	ined in the various PMD clause	s that are being	modified	at the risk of getting the 8-ball, I think we should be consistent about capitalization of Low Power Idle. For example:						
other places with inc	consistent terminology. For insta	ance, C78 used	the terminology							
synchronous, while (C55 uses the terminology symm	nteric.		page 30:						
SuggestedRemedy				line 13 Low Power Idle						
Please consolidate to readability is desired	o normative requirements in on I, a suggestion would be to mak	e place and cor (e use of cross	nsistant terminology. If references.	line 38 low power idle						
Proposed Response	Response Status W			line 10) low power idle	e				
PROPOSED ACCEF	PT IN PRINCIPLE.			line 33 Low Power Idle line 53 Low power Idle						
Harmonization of ter	ms will be carried out by the ed	itorial team.		Suggested	lRemedy					
Clause 78 will contai	in a summary of key parameter	s for different P	MDs but the normative	Use "L	ow Power Idle	" in sentences. Use "low pow	er idle" in labels	in figures and tables.		
text will be left to the	e specific PMDs			Proposed Response Response Status W						
				PROP	OSED ACCEP	PT IN PRINCIPLE.				
				Capita in lowe	lized and use " er case when it	"Low Power Idle" when it is ref is just normal English.	ers to a standar	d defined state. Leave it		

C/ 00 SC 0

proposed responses IEEE IEEE IEEE P802.3az D1.0 Energ	Jy Efficient Ethernet comments Nov	Nov 2008	
C/ 00 SC 0 P 00 L 0 # 137 Hajduczenia, Marek ZTE Corporation	C/ 00 SC 0 P 00 L 0 # 127 Hajduczenia, Marek ZTE Corporation		
Comment Type ER Comment Status D There are several locations in the draft e.g. page 172, line 6, where "state machines" are referenced. Per 802.3 guidelines, there are no "state machines" but "state diagrams". SuggestedRemedy Global hunt & destroy: all references to "state machine" must be replaced with "state diagram".	Comment Type ER Comment Status D Ip term Consistency in definitions "quiet mode" "Quiet mode" Pick one and stick to it consistently SuggestedRemedy IMHQ, "Quiet Mode" since it is something specific to EEE and should be emphasized	ninology	
PROPOSED ACCEPT IN PRINCIPLE. Editor will perform global hunt and remove state machine and replace with either "state" or "state diagram" where appropriate.	Proposed Response Response Status W PROPOSED ACCEPT IN PRINCIPLE. Stick with: Quiet Mode		
C/ 00 SC 0 P 00 L 0 # 136 Hajduczenia, Marek ZTE Corporation # 136	C/ 00 SC 0 # 126 Hajduczenia, Marek ZTE Corporation # 126		
Comment Type ER Comment Status D There are several locations, where cross-references are not live e.g. page 149, line 49. SuggestedRemedy As per comment. Make all cross-references in this draft live. Proposed Response Response Status W	Comment Type ER Comment Status D Ip term Consistency in definitions: "low Power Mode" "Low Power mode" "Low Power mode" "Low Power Mode" "Low Power Mode" "Low Power Mode" Pick one and stick to it consistently	าinology	
PROPOSED ACCEPT IN PRINCIPLE. We will do this, but it will be a continuing exercise as the draft changes so the commenter is requested to maintain a vigilant eye on any non-live cross references that remain. Editor needs help in linking crossreferences to times not in the draft but in the larger 802.3	SuggestedRemedy IMHO pick "Low Power Mode", add it to list of abbreviations and use "LPM" consisten avoid repeating this term everywhere (LPM is free in 1.5 in 802.3-2008) Proposed Response Response Status W	itly to	
document.	PROPOSED ACCEPT IN PRINCIPLE.		

Terminology will be rationalized

CI 00 SC 0

proposed responses	IEEE	IEEE P80	02.3az D1.0 Energy	Efficient E	therne	t comme	ents		Nov 2008
CI 00 SC 0	P 00	L 0	# 167	C/ 00	SC (0	P 00	L 0	# 135
Hajduczenia, Marek	ZTE Corporation			Hajduczei	nia, Mare	ek	ZTE Cor	rporation	
Comment Type T Term clutter I already saw "low powe mode" etc. Do all of the same thing ? Scrub the	Comment Status D er idle mode", "low power state", se refer to the same thing ? If so draft accordingly	"low power idle s , why have seve	<i>Ip terminology</i> state", "low power ral names for the	Comment Pletho refere Here page	<i>Type</i> ora of un ences wit is the list 149, line	ER resolved r th xx chara t of missin e 48, 53	Comment Status D references throughout f acters in them. g references:) the draft. Scrutir	nize the draft and update all
SuggestedRemedy As per comment				page page page	154, line 160, line	48, 54 4, 5, 11, 1	14		
Proposed Response PROPOSED ACCEPT I Editors will rationalize te	Response Status W N PRINCIPLE. erminology			page page page page	163, line 165, line 176, line 187, line	e 7 e 20, 23 e 30 e 18, 20, 22	2, 24, 27		
CI 00 SC 0	P 00	L 0	# 138	Suggeste	dRemed	'y			
Hajduczenia, Marek	ZTE Corporation			As pe	er comme	ent.			
Comment Type ER In the draft, there are set this mean and why is it	Comment Status D everal references to " <units>", e. here ?</units>	g. page 173, line	37. What does	Proposed PROF .x will	Respon POSED A be repla	se ACCEPT. ace with ac	Response Status V	V	
Fither replace with appr	opriate units or remove altogeth	er if it is only som	ne editorial marker	C/ 00	SC	n	Pnn	/ 0	# 141
Proposed Response	Response Status W			Hajduczei	nia, Mare	ek	ZTE Co	rporation	
PROPOSED ACCEPT I	N PRINCIPLE.			Comment	Type	ER	Comment Status D	-)	
It was a editorial marker	r. If no one objects to the time v	alues, that's wha	t we'll use.	"nsec" as a unit is not used anywehere else in the draft. "ns" is. "usec" as a unit is not used anywehere else in the draft. "us" is.					
CI 00 SC 0	P 00	L 0	# 122	"mseo	c" as a u	nit is not u	ised anywehere else in	the draft. "ms"	is.
Hajduczenia, Marek	ZTE Corporation			Suggeste	dRemed	ly A de start			dele servici de la companya de dela
Comment Type ER	Comment Status D			the co	ai search omment f	a destroy field.	replace all occurence	es of offending a	abbreviations as suggested in
Figures in this draft cont	tain "<=" characters instead of p	roper "Assignme	nt operator", which	Proposed	Respon	se	Response Status V	V	
Affected figures 71-1, 7 3az_0811_hajduczenia	1-2, 72-1, 72-2, 70-1, 70-2 (prob _1.pdf)	lem spots marke	d in the	PROF	POSED	ACCEPT.	·		
SuggestedRemedy									
Please check all the new proper "Assignment ope	wly added / modified figures and erator", which can be found in the	replace "<=" cha e Symbols' table.	aracters with the						
Proposed Response	Response Status W								
PROPOSED ACCEPT.									
Editor will use symbol in	nstead of "<=".								

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

CI 00 SC 0 Page 3 of 69 11/4/2008 1:51:44 PM

proposed response	es IEEE	IEEE	P802.3az D1.0 Energy	y Efficient E	thernet com	ments		Nov 2008
C/ 00 SC 0	P 00	L 0	# 128	C/ 00	SC 0	P1	L 56	# 15
Hajduczenia, Marek	ZTE Corporation	n		Dawe, Pie	ers	Avago Techn	ologies	
Comment Type ER When refering to an I is used currently in 80	Comment Status D dle codeword, it should be name 02.3	ed "Idle" and no	ot "IDLE". "Idle" is what	Comment A bug printe	t <i>Type</i> E g has crept into ers, and 2 lines l	Comment Status D the Frame template: page num ower than in published 802.3.	bers are too low	, won't print on some
SuggestedRemedy Global search & dest	roy: "IDLE" > "Idle" when referrir	ig to an idle ch	aracter / symbol.	Suggeste Remo	<i>dRemedy</i> ove (at least) on	e line-feed in each of left and ri	ight page footers	3
Proposed Response PROPOSED REJEC	Response Status W T.			Proposed PROF	Response POSED ACCEF	Response Status W		
Needs to be checked	I. I see IDLE when refering to an	idle character	/symbol	C/ 00	SC 0	P11	L 7	# 114
C/ 00 SC 0	P 00	L 0	# 116	Hajducze	nia, Marek	ZTE Corporat	tion	
Hajduczenia, Marek	ZTE Corporatio	n		Comment	tType E	Comment Status D		
Comment Type E Term "Low Power Idlu inclusion in the list of SuggestedRemedy	Comment Status D e" is used heavily in this docume abbreviations (1.5)	nt, making it a	n ideal target for	802.3 latest Kram <i>Suggeste</i> Upda	av extended the version. I am n er for a copy. <i>dRemedy</i> te the list of spe	e list of special symbols and op ot sure whether it is already pu ecial symbols and operators as	erators. You mig blished, though per changes intr	ght want to include the please contact Glen roduced in P802.3av.
Add "LPI <tab>Low Po</tab>	ower Idle" to Subclause 1.5. Cre	ate 1.5 as nec	essary.	Proposed	Response	Posnonso Status W	, · · · · · · · · · · · · · · · · · · ·	
Proposed Response PROPOSED ACCEP	Response Status W			PROF	POSED ACCEF	PT.		
C/ 00 SC 0	P 00 ZTE Corporatio	L 00	# 113	<i>CI</i> 01 Dawe, Pie	SC 1.3 ers	P 16 Avago Techn	L 44 ologies	# 19
		11		Comment	t <i>Type</i> T	Comment Status D		
Comment Type E	Comment Status D			Does	ISO/IEC 9314-	10 exist? I understand the FCE	D was withdrawn	in 2005.
alignments, etc. Putti etorial changes propo	czenia_1.pdf contains a series o ng them into separate comments osed therein.	s is pointless. I	al changes, style Please consider the	Suggeste If the	<i>dRemedy</i> re is no ISO/IEC	9314-10, don't delete the ANS	SI reference	
SuggestedRemedy				Proposed	Response	Response Status O		
As per comment.				•		, -		
Proposed Response PROPOSED ACCEP	Response Status W							

Will mark up detailed changes in a separte sheet.

C/ 01 SC 1.3

proposed respons	ses IEEE	IEEE	P802.3az D1.0 Energ	y Efficient E	Nov 2008			
C/ 01 SC 1.4	P 17	L 21	# 16	C/ 01	SC 4	P 17	L 1	# 269
Dawe, Piers	Avago Techn	ologies		Diab, Wae	el	Broadcom		
Comment Type T Jitter definitions are more up-to-date 8E check that we do h 64B/66B (10GE) ar	Comment Status A e a can of worms, and things hav 3/10B oriented definitions in FC-F ave definitions which are acceptand nd TP-PMD.	ve moved on sinc PI-4 but we for CI able for 8B/10B (e TP-PMD. There are ause 1, would have to e.g. Gigabit Ethernet),	Comment There signa Suggeste	t Type TR e are several de l, refresh signa edRemedy	Comment Status D efinitions that seem to be missin I, 10BASE-TE etc.	g for example L	PI, LPI mode wake
SuggestedRemedy				Pleas	se add the defin	itions		
If you do decide to	pull TP-PMD into 802.3, please	contact me.		Proposed	Response	Response Status W		
Response	Response Status C			PROF	POSED ACCER	T IN PRINCIPLE.		
ACCEPT IN PRINC	CIPLE. -PMD into 802.3			<i>Cl</i> 01 Diab, Wae	SC 5 el	P 18 Broadcom	<i>L</i> 1	# 264
C/ 01 SC 1.4	P 18	L 26	# 17	Comment	t Type ER	Comment Status D		
Dawe, Piers	Avago Techn	ologies		There	e are several at	previations that seem to be miss	sing for example	LPI
Comment Type T re 'Baseline Wande of 802.3 SuggestedRemedy	Comment Status D er' There is no quantitative defini	ition of this in TP-	PMD, nor in Section 4	Suggeste Pleas Proposed PROF	dRemedy se add the abbr I Response POSED ACCEF	eviations Response Status W PT.		
Change to 'baseline	e wander'. Similarly emitter coup	oled logic, non re	turn to zero.	~	00.44	Daa		"
Proposed Response PROPOSED ACCE	Response Status W			C/ 14 Booth, Bra	ad	AMCC	L 6	# 279
C/ 01 SC 1.5 Dawe, Piers	P 18 Avago Techn	L 34 nologies	# [18	Comment I have namir	t Type TR e some concerr ng convention r	Comment Status D a about using a lower case lette equire upper case?	r with a port type	LATE e. Does the port type
Comment Type T Containing the grow wire, it doesn't know	Comment Status D wing clause title length, and as th w; it's the modulation scheme that	ne medium isn't b at's baseband)	aseband (it's just a	Suggeste Chan	dRemedy ge the port type	e from 10BASE-Te to 10BASE-	TE.	
SuggestedRemedy Delete 'baseband' l	before medium.			Proposed PROF	POSED REJEC	Response Status W CT.		
Proposed Response PROPOSED REJE Page/line reference reference	Response Status W ECT. e seems to be incorrect. Will reco	onsider after reso	lving page/line number	There was c	e is not a port ty discussed and t	pe naming convention defined. he preference at that time was t	During an earlie for using a lower	er meeting, this issue r case for 10BASE-Te.

C/ 14 SC 14

IEEE P802.3az D1.0 Energy Efficient Ethernet comments

C/ 14	SC 14.1	P 20	L 17	# 284	C/ 14	SC 14.1.1	P 20	L 19	# 20
Booth, Brad					Dawe, Pier	s T	Avago T	echnologies	
Comment I	ype ER	Comment Status D	oing the Energy Effi		Comment	<i>l ype</i> E	Comment Status		I International Standard'
does no	t use the prot	ocol described in Clause	78.	cient FTTT type as this	Anywa	y, a documen	t referring to itself as 'Inter	national Standard' i	s posturing.
SuggestedF	Remedy				Suggested	Remedy			
Remove type has	e reference to s reduced vol	Energy-Efficient relative tage range requirements.	to 10BASE-Te and s	stipulate that this port	Chang 'The re	e lationship of t	his clause to the entire ISC	D/IEC 8802-3 LAN I	nternational Standard is
Proposed R	esponse	Response Status N	1		shown	in Figure 14-7	1.'		
PROPC	SED REJEC	Т.			'Figure	14-1 shows t	he relationship of the 10B/	ASE-T or 10BASE-1	Fe PMA, MDI and
108456	-T already in	polements the low power i	dle concent heing n	roposed in Clause 78	mediur	n (shown sha	ded) with other sublayers,	to the ISO/IEC Ope	en System
10BASE	E-Te uses the	same signaling method a	is 10BASE-T and m	akes it energy efficient	Dranaad				
by lowe	ring transmit	voltage range.			Proposed i	Response	Response Status V	V	
C/ 14	SC 14.1.1	P 20	L 16	# 21	FROF	USED REJEC	,ı.		
Dawe, Piers	i	Avago T	echnologies		The sa PHY ty	me language	is used to define the relati rall standard.	onship of all the cla	uses defining a particular
Comment T	ype E	Comment Status D			<u> </u>	SC 14 2 1	ງ	/ 11	# 290
The laye	er diagram co	uld be improved. If you c	hange it		C/ 14 Booth Bra	- 30 1 4.3.1		L 41	# 280
SuggestedF	Remedy					и Т			
Change Change Move 'H	the 7-point m the ALL CAF ligher layers'	naterial to 8 point. 2S to normal upper and lo down so that it doesn't ma	wer case. ake 'LAN CSMA/CD	layers' look like more	Comment Cabling Class I	g should be re D cabling is IS	eferred to as Class D, not of O/IEC 11801.	class D. And the re	ferenced specification for
layers ir	the stack. S	uggest putting 'OSI refere	ence model layers' a	nd 'LAN CSMA/CD	Suaaested	Remedv			
the stac	at the same le ks.	vel, underlined, to show the	ney are neadings to	r the stacks not layers in	Chang	e class to Cla	ss and reference 11801.		
Proposed R	esponse	Response Status W	I		Proposed I	Response	Response Status V	v	
PROPC	SED REJEC	т.			PROP	OSED ACCER	РТ.	-	
Out of s	cope.				C/ 14	SC 14.3.1.	2 P 23	L 3	# 22
					Dawe, Pier	S	Avago T	echnologies	
					Comment Should	<i>Type</i> E In't use colour	Comment Status D in 802.3)	
					Suggested	Remedy			
					Chang	e all the blue	to black		
					Proposed I	Response	Response Status V	V	
					PROP	OSED ACCER	РТ.		

C/ 14 SC 14.3.1.2

proposed responses	IEEE	IEEE	P802.3az D1.0 Energ	gy Efficient Ethernet commo	ents		Nov 2008
C/ 14 SC 14.3.1.2.1 Barrass, Hugh	P 23 Cisco	L 43	# 237	Cl 14 SC 3.1.2.1 Bennett, Michael	<i>Р</i> 232 LBNL	L 43	# 244
Comment Type E "for10BASE-Te" missing	Comment Status D			<i>Comment Type</i> E there needs to be a spa	<i>Comment Status</i> D ce between the words "for" a	ind 10BASE-Te	
SuggestedRemedy Insert space after "for"				SuggestedRemedy insert a space			
Proposed Response PROPOSED ACCEPT.	Response Status W			Proposed Response PROPOSED ACCEPT I	Response Status WIN PRINCIPLE.		
C/ 14 SC 14.4.2.1	P 27	L 3	# 238	Duplicate of comment #	237.		
Barrass, Hugh Comment Type E	Cisco Comment Status D			C/ 22 SC 22.2.1 Booth. Brad	Р 30 Амсс	L 14	# 285
The editor's note appear SuggestedRemedy Delete the editor's note.	s to be out of date - there a	re changes in the	e clause.	Comment Type ER Why is it Low Power Idle	Comment Status D e here but low power idle else	ewhere in the clar	LATE Jse.
Proposed Response PROPOSED ACCEPT.	Response Status W			The lowercase version,	low power idle, should be us	ed.	
C/ 14 SC 14.8	P 27	L 22	# 239	PROPOSED ACCEPT.			
Comment Type E	Comment Status D			Cl 22 SC 22.2.2.6.a Barrass, Hugh	P 31 Cisco	L 23	# 240
The editor's note appear SuggestedRemedy Delete the editor's note.	rs to be out of date - there a	re changes in the	clause.	Comment Type E The commenter wishes	Comment Status D to thank the editor for rectifyi	ing the error.	
Proposed Response PROPOSED ACCEPT.	Response Status W			The editor's note is no lo SuggestedRemedy Delete the editor's note.	onger necessary.		
C/ 14 SC 14.9 Dawe, Piers	P 28 Avago Techno	L 1 plogies	# 23	Proposed Response PROPOSED ACCEPT.	Response Status W		
Comment Type E PICS is 14.10	Comment Status D						
SuggestedRemedy Change 14.9 to 14.10, s	everal times						
Proposed Response PROPOSED ACCEPT.	Response Status W						

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/
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 SC
 22.2.2.6.a
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CI 22 SC 22.2.2.7	P 31	L 13	# 241	CI 22 S	C 22.2.2.9a	P 33	6 L 4	# 94
Barrass, Hugh	Cisco			CHOU, JOSEF	ΡΗ	REAL	TEK SEMICON	
Comment Type T	Comment Status D			Comment Type	e TR	Comment Status	D	
The use of "may" implies indication is mandatory w	that the indication is optio then the LPI signaling is re	nal. It needs to b eceived.	e clear that the	Need to me baseline p	odify the Figur	re 22-9a and the third rending several clock	d paragraph of this su is after the assertion o	bclause to comply to of LP IDLE command of
SuggestedRemedy Replace				MII. SuggestedRen	nedy			
"While RX_DV is de-asse	erted, the PHY may indicat	e that it is receiv	ng"	Add the fol "The MAC	lowing statem device may h	ents in subclause as alt RX_CLK at any ti	s follows and modify F me more than 9 clock	ig 22-9a accordingly. cycles after the start of
With				idle state a	wer is shown in Fi	gure 22-9a if the RX	_CLK_stoppable bit is	asserted"
"While RX_DV is de-asse that it is receiving"	erted, a PHY that supports	low power idle o	peration shall indicate	Proposed Resp PROPOSE	oonse D ACCEPT II	Response Status N PRINCIPLE.	W	
Proposed Response PROPOSED ACCEPT.	Response Status W			See text fro	om #242.			
			"	Modify the	figure to show	v (at least) 9 cycle de	elay.	
Cl 22 SC 22.2.2.7 Dawe, Piers	P 32 Avago Techr	L 10 nologies	# 24	CI 22 S	C 22.2.2.9a	P 33	5 L 4	# 242
Comment Type T re 'driving the value <111 use < >	Comment Status D 0> onto' On the page be	fore and in the ta	able below you don't	Comment Type The editor	T s note indicate	Comment Status es that a control bit is	D s needed to indicate "o	clock stoppable"
SuggestedRemedy Change to 'driving the val	lue 1110 onto' Similarly	on line 14, and i	n 35.2.2.7.	SuggestedRen Add a cont	nedy rol bit in Clau	se 45 PCS registers	(separate comment)	
Proposed Response	Response Status W			Change				
TROFOSED ACCELT.				While the F shown in	PHY device is if the RX_C	indicating low power LK_stoppable bit is a	r idle the PHY device asserted [Editor's note	may halt the RX_CLK as add reference].
				With				
				While the F shown in [f	PHY device is igure 22-9a] i	indicating low power f and only if the RX_0	r idle the PHY device CLK_stoppable bit is a	may halt the RX_CLK as asserted [45.2.3.1.3a].
				Proposed Res	oonse	Response Status	w	
				PROPOSE	D ACCEPT II	N PRINCIPLE.		
				Merge the	resolution of t	his comment and #9	4 to produce:	
				While the F than 9 cloc and only if	PHY device is k cycles after the RX_CLK_	indicating low power the start of the low p stoppable bit is asse	r idle it may halt the R power idle state as sho erted [45.2.3.1.3a].	X_CLK at any time more wn in [figure 22-9a] if
TYPE: TR/technical required	ER/editorial required GR	/general required	T/technical E/editorial G	/general			CI 22	Page 8 of 69
COMMENT STATUS: D/dispa SORT ORDER: Clause, Su	atched A/accepted R/reje bclause, page, line	cted RESPON	ISE STATUS: O/open W/	written C/closed U	/unsatisfied Z	/withdrawn	SC 22.2.2.9a	11/4/2008 1:51:44

IEEE P802.3az D1.0 Energy Efficient Ethernet comments

C/ 22 SC 22.2.9a P 33 L 4 # [281] Booth, Brad AMCC	C/ 22 SC Figure 22-20a P 34 L 12 # 266 Diab, Wael Broadcom
Comment Type TR Comment Status D LATE	Comment Type TR Comment Status D
Second paragraph is missing two references. RX_CLK_stoppable bit is undefined. Third paragraph is not required.	As drawn, the figure seems to violate the layering conventions we use, specifically the system behaviour signals. I believe that the intent is for the system's management to be able to access LP_IDLE.request and the LP_IDLE.indicate not that there signals which are
Change to read:	going around the MAC.
as shown in Figure 22-9a if the	SuggestedRemedy
Define RX_CLK_stoppable bit and add reference to 22.2.2.9a.	Please delete the system transmit and receive behaviour arrows. The management access can be explained in the text.
Delete third paragraph.	Proposed Response Response Status W
Proposed Response Response Status W	PROPOSED ACCEPT IN PRINCIPLE.
PROPOSED ACCEPT IN PRINCIPLE.	See #282
See resolution to #242. The third paragraph matches the style of the base document for all of the figures in this subclause.	The station management will be shown as the origin of these signals.
C/ 22 SC 22.7.1 P 34 L 1 # 282	C/ 24 SC 24.1.1 P 36 L 10 # 278 Booth, Brad AMCC AMCC <t< td=""></t<>
Booth, Brad AMCC	Comment Type T Comment Status D LATE
Comment Type TR Comment Status D LATE	Eliminate the use of will.
Figure 22-20a conflicts with Figure 22-3.	SuggestedRemedy
SuggestedRemedy	Change will enter to enters.
PLS_DATA.request arrow is in the wrong direction. TX_CLK and RX_CLK are missing. RX_DV mapping to PLS_DATA_VALID.indicate mapping is not shown. COL and CRS are not shown, and while not used in full duplex, they should be shown in the mapping. The LP_IDLE's should come from Station Management.	Proposed Response Response Status W PROPOSED ACCEPT.
Proposed Response Response Status W	C/ 24 SC 24.1.1 P 36 L 10 # 286
PROPOSED ACCEPT IN PRINCIPLE.	Booth, Brad AMCC
The diagram needs redrawing, with the following:	Comment Type ER Comment Status D LATE Terms seem to be mixed up again.
1.PLS_DATA.request arrow is in the wrong direction in Figure 22-3 in 802.3-2008 - make the change as part of this amendment as a service to humanity.	SuggestedRemedy There are various forms of low power mode, low power idle mode, Low power Idle mode,
2. Add in TX_CLK and RX_CLK.	low power idle state, etc. Use the term low power idle state.
3. Add a note that RX_DV, COL & CRS mapping is unchanged and not shown.	For example, the PHY will enter the low power idle state during periods Proposed Response Response Status W
4. The LP_IDLE's should come from Station Management.	PROPOSED ACCEPT IN PRINCIPLE. Pending on the consensus of the terminology used in EEE draft.

 TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general
 C/
 24

 COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn
 C/
 24

 SORT ORDER:
 Clause, Subclause, page, line
 SC
 24.1.1

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proposed responses IEEE	IEEE	P802.3az D1.0 Energ	y Efficient Ethernet comm	Nov 200		
Cl 24 SC 24.1.1 P 36 Barrass, Hugh Cisco Cisc	L 10	# 198	C/ 24 SC 24.1.1 Booth, Brad	Р 36 АМСС	L 8	# 273
Comment Type T Comment Status D There is no enable for LPI.			Comment Type ER Sentence construct is	Comment Status D confusing as may implies that	t it is optional.	LAT
SuggestedRemedy Replace			SuggestedRemedy Delete the word option	ally from the sentence.		
"When this capability is implemented and enabled"			Proposed Response PROPOSED ACCEPT	Response Status W		
"When this capability is implemented and utilized"			C/ 24 SC 24.1.2 Booth, Brad	Р 36 АМСС	L 33	# 274
Proposed Response Response Status W PROPOSED ACCEPT.			Comment Type ER Item g needs to be bet	Comment Status D ter stated to avoid confusion.		LAT
Cl 24 SC 24.1.1 P 36 Barrass, Hugh Cisco	L 12	# 199	SuggestedRemedy Change to read: g) Optionally support E	Energy Efficient Ethernet as d	escribed in Claus	ə 78.
Comment Type E Comment Status D This seems to indicate that 100BASE-TX is the onl clearer.	y supported PHY -	it needs to be made	Proposed Response PROPOSED ACCEPT Please refer to the ran	Response Status W IN PRINCIPLE.	nt #200	
SuggestedRemedy Change				P 36	/ 33	# 200
This capability is currently only supported in 100B/	ASE-TX.		Barrass, Hugh	Cisco	2.00	# <u>200</u>
to			The use of the words "	option and "mode" is mislead	ling.	
The only 100BASE-X PHY that supports this capat Proposed Response Response Status W	pility is 100BASE-T	ΓΧ.	SuggestedRemedy Change			
PROPOSED ACCEPT.	/ 13	# 272	Support the option of E as described in Clause	Energy Efficient Ethernet with 78 for the embodiment of 10	the function of Lo 00BASE-TX.	w Power Idle mode
Booth, Brad AMCC	213	π 212	to			
Comment Type ER Comment Status D Currently should not be stated. EEE only supports	100BASE-TX.	LATE	Support Energy Efficie in Clause 78 for the er	nt Ethernet with the optional f nbodiment of 100BASE-TX.	function of Low Po	ower Idle as described
SuggestedRemedy Remove currently from sentence.			Proposed Response PROPOSED ACCEPT	Response Status W		
Proposed Response Response Status W						

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

Cl	24	
SC	24.1.2	

CL 24 SC 24142			
Booth, Brad	Р 37 АМСС	L 14	# 276
Comment Type ER The PCS should avoid t	Comment Status D the statement about power rea	duction.	LATE
SuggestedRemedy Change to read: e) Optionally, receive an Proposed Response PROPOSED ACCEPT	nd process low power idle sta Response Status W IN PRINCIPLE.	te control signa	Is from the PCS; and
In order to make the ph "Optionally, receiving and"	rase style consistent with other nd processing low power idle	er text, change t state control sig	to gnals from the PCS;
Cl 24 SC 24.1.6 Dawe, Piers	Р 37 Avago Techno	L 27 logies	# 25
Comment Type T Figure 24-4 has much c	Comment Status D lashed material but I did not s	ee a statement	of what it means.
SuggestedRemedy Add a sentence here; m is shown dashed.'	naybe 'Functionality for Far-Er	nd Fault Indicati	on and Low Power Idle
Proposed Response PROPOSED ACCEPT.	Response Status W		
C/ 24 SC 24.1.6 Dawe, Piers	P 38 Avago Techno	L 8 logies	# 26
There is no function or Sense'.	process called 'CARRIER SEI	NSE' but there i	is one called 'Carrier
SuggestedRemedy Change 'CARRIER SEN PCS PMA PMD) Simil	NSE' to 'Carrier Sense'. Simila	arly with all the	boxes (except TX RX
Proposed Response PROPOSED REJECT. The use of capital letter	Response Status W	, , , , , , , , , , , , , , , , , , ,	
	Comment Type ER The PCS should avoid to SuggestedRemedy Change to read: e) Optionally, receive and Proposed Response PROPOSED ACCEPT In order to make the ph "Optionally, receiving and and" Cl 24 SC 24.1.6 Dawe, Piers Comment Type T Figure 24-4 has much of SuggestedRemedy Add a sentence here; m is shown dashed.' Proposed Response PROPOSED ACCEPT. Cl 24 SC 24.1.6 Dawe, Piers Comment Type T There is no function or p Sense'. SuggestedRemedy Change 'CARRIER SEN PCS PMA PMD). Simil Proposed Response PROPOSED REJECT. The use of capital letter	Booth, Brad AMCC Comment Type ER Comment Status D The PCS should avoid the statement about power re SuggestedRemedy Change to read: e) Optionally, receive and process low power idle state Proposed Response Response Status W PROPOSED ACCEPT IN PRINCIPLE. In order to make the phrase style consistent with othe "Optionally, receiving and processing low power idle and" Cl 24 SC 24.1.6 P 37 Dawe, Piers Avago Techno Comment Type T Comment Status Proposed Response Response Status W Figure 24-4 has much dashed material but I did not s SuggestedRemedy Add a sentence here; maybe 'Functionality for Far-Er is shown dashed.' Proposed Response Response Status W PROPOSED ACCEPT. Cl 24 SC 24.1.6 P 38 Dawe, Piers Avago Techno Comment Type T Comment Status D PROPOSED ACCEPT. Cl 24 SC 24.1.6 P 38 D D Dawe, Piers Avago Techno Comment Type T Comment Status D There is no function or process calle	Booth, Brad ANCC Comment Type ER Comment Status D The PCS should avoid the statement about power reduction. SuggestedRemedy Change to read: e) Optionally, receive and process low power idle state control signal Proposed Response Response Status W PROPOSED ACCEPT IN PRINCIPLE. In order to make the phrase style consistent with other text, change "Optionally, receiving and processing low power idle state control signand" Cl 24 SC 24.1.6 P37 L27 Dawe, Piers Avago Technologies Comment Type T Comment Status D Figure 24-4 has much dashed material but I did not see a statement SuggestedRemedy Add a sentence here; maybe 'Functionality for Far-End Fault Indicati is shown dashed." Proposed Response Response Status W PROPOSED ACCEPT. Cl 24 SC 24.1.6 P38 L8 Dawe, Piers Avago Technologies Comment Type T Comment Status D There is no function or process called 'CARRIER SENSE' but there sense'. Similarly with all the PCS PMA PMD). Similarly Fig 40-3, 40-4, 40-5, 40-14, 55-3, 55-4, 5 Proposed Response Response Status W PROPOSED

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

Cl	24	
SC	24.1.6	

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IEEE P802.3az D1.0 Energy Efficient Ethernet comments

C/ 24 SC 24.2.2	P 37	L 39	# 277	C/ 24	SC 24.2.2.5	P 41	L 41	# 186		
Booth, Brad	AMCC			GUPTA, S	UJAY	Infosys	lechnologies			
Comment Type ER	Comment Status D		LATE	Comment	Type E	Comment Status D				
Use of the term option	n is confusing.			c) WA	KE state. At the	end of the Low Power Id	lle state, the stream i	s terminated by a		
SuggestedRemedy				series code-o	of IDLE proups with defa	ult or negotiated amount	of time denoted by T	-w.		
Change to read:				Suggester	lRemedv		· · · · · · · · · · · · · · · · · · ·			
The Receive process	may support the low power idl	e state by		c) WA	KE state. At the	end of the Low Power Id	lle state. the stream i	s terminated by a		
Apply the change also The Transmit process	o to the Transmit: s may support the low power id	lle state by		series code-g	of IDLE groups for the de	fault or negotiated amou	Int of time denoted b	y Tw.		
Proposed Response	Response Status W			Proposed	Response	Response Status W	I			
PROPOSED ACCEP	T IN PRINCIPLE.			PROPOSED ACCEPT.						
The use of "mode" is	pending on the consensus of t	he terminology	used in EEE draft.	CI 21	SC 24 2 2 5	D / 1	/ /8	# 194		
(note: similar change	will also be made on page 39	line 1)		GUPTA, S	UJAY	Infosys 7	Fechnologies	# 104		
C/ 24 SC 24.2.2.5	5 P 41	L 32	# 183	Comment	Type E	Comment Status D	0			
GUPTA, SUJAY	Infosys Techr	nologies		Upon successfully receiving SLEEP code-groups, the 100BASE-X PCS will enter Low						
Comment Type E	Comment Status D	-		Power Receive state						
SLEEP state. The sta	irt of a Low Power Idle stream	is indicated by a	a series of SLEEP code-	If the E	Energy Efficient	thernet option is implen	nented.			
groups		,		Suggested	Remedy					
with fixed amount of t	ime denoted			Power	Successfully rec	eiving SLEEP code-grou	ps, the TOUBASE-X I	PCS will enter Low		
SuggestedRemedy				>>(if tl	he Energy Efficie	ent Ethernet option is imp	plemented.)<< this pa	art is understood in the		
SLEEP state. The sta	a series of SLEEP code-	larger	context may be	omitted at frequent place	es.					
for fixed amount of tin	ne denoted			Proposed	Response	Response Status W	1			
Proposed Response	Response Status W			PROP	OSED ACCEPT					
PROPOSED ACCEP	T.									

Cl 24 SC 24.2.2.5

proposed respons	es IEEE	IEEE	P802.3az D1.0 Energy	Energy Efficient Ethernet comments				
C/ 24 SC 24.2.3 GUPTA, SUJAY	4 P 43 Infosys Techr	L 10 nologies	# 185	C/ 24 Barrass, Hug	SC 24.2.3.4 Jh	P 43 Cisco	L 27	# 202
Comment Type E Comment Status D 24.2.3.4 Timers 24.2.3.4 Timers SuggestedRemedy in this section all the timers description begins with ; "In the low power receive state", this makes some definitions not so clear. without the state diagram right next. They could be better started off as "In the low power receive state, when it is in the Quite			Comment Type T Comment Status D There doesn't seem to be any point in negotiating the value of the lpi_rx_tw_timer. The transmitter must wait for at least 30us before it can send data, so there's no benefit to negotiating a smaller value (and it's very small anyway). Negotiating a longer wakeup tin would not allow any extra power savings as the transmitter has already started sending IDLE or /P/P/. SuggestedRemedy					
state etc" Proposed Response PROPOSED REJEC	Response Status W			Change This timer is set to a default value 30us and can be neg with LLDP.			e negotiated durin	g Auto-negotiation or
Cl 24 SC 24.2.3 Dove, Daniel Comment Type ER	4 P 43 ProCurve Net Comment Status D	L 22 tworking	# [<u>328</u> LATE	το The valu Proposed Re PROPOS	e of this timer is fixed sponse Res SED ACCEPT IN PR	d to 24us. sponse Status W INCIPLE.		
Spelling - continuos SuggestedRemedy Spelling - change co Proposed Response	ntinuos to continuous. Response Status W			Would lik Cl 24 Dove, Daniel Comment Ty Gramma	SC 24.2.3.4	raue to 30us since it is P 43 ProCurve Ne mment Status D	s used to determin <i>L</i> 43 etworking	ne if the link fails. # <u>329</u> LA

SuggestedRemedy

Proposed Response

Change to "is woken up"

PROPOSED ACCEPT.

Cl 24 SC 24.2.3.4

Response Status W

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LATE

Nov 2008

IEEE P802.3az D1.0 Energy Efficient Ethernet comments

C/ 24 SC 24.4.1 P 49 L 53 # 1	C/ 25 SC 25.3 P 54 L 19 # 3
Dawe, Piers Avago Technologies	Dawe, Piers Avago Technologies
Comment Type T Comment Status D	Comment Type E Comment Status D
Saying '100BASE-X supports Low Power Idle mode when the Energy Efficient Ethernet is	Don't say 'subclause'
can vary with time (i.e. in every case can be switched on and off). But it's optional.	SuggestedRemedy
SuggestedRemedy	Change to 'see', twice. Also, I think there should be no space in PMD_RXQUIET.request (rx_quiet); should be PMD_RXQUIET.request(rx_quiet)
Change 'when' to 'if'. If the EEE feature can be switched on and off, say 'if the Energy Efficient Ethernet is implemented and enabled.' or 'if the Energy Efficient Ethernet is implemented and Low Power Idle mode is enabled.'	Proposed Response Response Status W PROPOSED ACCEPT.
Proposed Response Response Status W	
PROPOSED ACCEPT IN PRINCIPLE.	Dawe, Piers Avago Technologies
'if the Energy Efficient Ethernet is implemented and Low Power Idle mode is utilized.' Please refer to comment #198	Comment Type E Comment Status D Untidy table wasting space
CI 24 SC 24.4.1 P 49 L 53 # 27	SuggestedRemedy
Dawe, Piers Avago Technologies	Make the table full width
Comment Type E Comment Status D New material should be underlined	Proposed Response Response Status W PROPOSED REJECT. This table was created by the original author.
Underline item c. Also in Table 35-2. 'Assert low power idle'.	C/ 25 SC 25 3 P 54 / 9 # 95
Proposed Response Response Status W	CHOU, JOSEPH REALTEK SEMICON
PROPOSED ACCEPT. There are more text to be underlined in subclause 24.3 and 24.4.	Comment Type TR Comment Status D
C/ 24 SC 24.4.1.5 P 50 L 33 # 180	Suggested Remedy
GUPTA, SUJAY Infosys Technologies	The signal rx_lpi comes from PCS sublayer and is defined as the primitive
Comment Type T Comment Status D This primitive is generated by the Receive Process of PCS, when Low Power Idle mode is implemented, to indicate that the transmitter is in Low Power Transmit state and the line is in Quiet state. See Clause 24.2.4.2 and Figure 24-8.	 PMA_RXLPI.request (rx_lpi). It is generated by PCS is intended to pass to PMD sublayer to control the duration of Signal_Detect assertion and deassertion time. Modify Table 25-1 (by adding this primitive), subclause 25.4.11.3, and 25.4.11.4 to clarify the functions. Proposed Response Response Status W
SuggestedRemedy	PROPOSED ACCEPT.
 >> Should it not be the Transmit Process , >> the clause reference is not traceable and it makes better to refer to figure 24-4 and not 24-11 or 24-8 	
Proposed Response Response Status W	
, PROPOSED ACCEPT.	
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

Cl 25 SC 25.3 Page 14 of 69 11/4/2008 1:51:45 PM

IEEE P802.3az D1.0 Energy Efficient Ethernet comments

C/ 25 SC 25.4.11	P 55 Cisco	L 41	# 203	C/ 25 SC 2 Barrass Hugh	5.4.11.3	P 59 Cisco	L 14	# 204
Comment Type T There is no enable for t	Comment Status D he LPI function.			Comment Type There is no ena	T Con able for LPI.	nment Status D		
SuggestedRemedy Change				SuggestedRemedy Change "enabl	, ed" to "impleme	nted"		
implemented and enab	led			Proposed Respons PROPOSED A	se Resp CCEPT.	oonse Status W		
to implemented				Cl 25 SC 2 Barrass, Hugh	5.4.11.4	P 59 Cisco	L 22	# 205
Proposed Response PROPOSED ACCEPT.	Response Status W			<i>Comment Type</i> There is no ena	T Con able for LPI.	nment Status D		
C/ 25 SC 25.4.11.1 Hajduczenia, Marek	P 55 ZTE Corporatior	L 50	# 170	SuggestedRemedy Change "enabl	, ed" to "impleme	nted"		
Comment Type E	Comment Status D and "25.4.11.1 Change to 7.1.2	"Encoder""		Proposed Respons PROPOSED A	se Resp CCEPT.	oonse Status W		
<i>SuggestedRemedy</i> What do You want to d	o in here ? Please clarify. The s	ame is applic	able to page 57, line 26	C/ 25 SC 2 Healey, Adam	5.4.11.5	P 60 LSI Corporatio	L 19	# 47
Proposed Response PROPOSED REJECT. The Encoder and Deco deactivate or set the pa	Response Status W der blocks in orginal TPPMD st rrk state, while in EEE their fund	andard do no tion need to l	t allow the capability to be halted and restarted.	Comment Type The wake time the far-end trar compliant input	T Con for the 100BAS asmitter. Further t signal upon wh	ment Status D E-TX receiver is deper more, the receiver sh nich to base timing rec	endent on the tin ould have some covery and adap	ne required to activate assurance of a tive equalization.
C/ 25 SC 25.4.11.1 Dove, Daniel	P 57 ProCurve Netwo	L 16 orking	# 330	Neither of thes SuggestedRemedy	e aspects of tra	nsmitter behavior are	currently define	d in the draft.
Comment Type ER Figure 25-1 has a spell	Comment Status D ing error in the PLUS_V state. "	Positove"	LATE	Specify that the 1. Shall deliver activation	e transmitter: a signal that wi	ll assert signal detect	within TBD1 us	following transmitter
SuggestedRemedy Change to "Positive"				2. Shall deliver following trans	a fully complian mitter activation	nt 100BASE-TX signal	l within within TE	3D2 (> TBD1) us
Proposed Response	Response Status W			Proposed Respons PROPOSED A	e Resp CCEPT.	oonse Status W		
				25.4.11.8 Char	nges to 10.1.2 "	Fransmitter"		
				During the Low	Power Idle mo	de, when tx_quiet is d	easserted, the t	ransmitter output shall

deliver a signal that exceeds Signal_Detect assertion threshold within 2 us, and deliver a fully compliant 100BASE-TX signal within 5 us.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general	01 25	
COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn	C/ 25	Page 15 of 69
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C/ 25	SC 25.4.11.5	P 60 ProCurve Ne	L 19	# 335	C/ 25 Bennett M	SC 3 /lichael	Р 54 I BNI	L 16	# 245
Dove, Da Commen Table incon 200m Thos "fat p If we more Suggeste Since requi	aniel at Type TR e values for Assert nsistent with the As nV. se thresholds apply pulse" (pulse durat e are to reduce the a, and need to char edRemedy e we want to keep irements and chan d Response	ProCurve Ne Comment Status D Time and Deassert Time a ssert Threshold of 1000mV for 350uS because the 100 ton of 10 bits) will arrive at th Assert/Deassert times, we on the thresholds.	etworking re set to 5uS. The ok/pk and the De BASE-T encodin the receiver in this cannot guantee the endation is to an sholds	LATE ese periods of time are eassert Threshold of of IDLE guarantees a timeframe. The "fat pulse" arrival any alyze the amplitude	Bennett, N Comment The c actua Suggester chang Proposed PROF Note: C/ 28C Healey, A	Aichael Type ER able plant spec lly in 25.4.6. dRemedy ge the reference Response POSED ACCEP This error exist SC 28C.12 dam	LBNL <i>Comment Status</i> D ifications for untwisted shielded to 25.4.6 <i>Response Status</i> W T IN PRINCIPLE. s in the original text. <i>P</i> 196 LSI Corporatio	pair (UTP) of ⁻ <i>L</i> 41 n	TP-PMD 11.1 are # [<u>48</u>
PRO Note: 25.4. The T Powe for ar 25.4. The T Powe 25.4. STP.	POSED ACCEPT. Will add the follow .11.6 Changes to 1 TP-PMD subclaus er Idle mode, wher ny valid peak to pe .11.7 Changes o 1 TP-PMD subclaus er Idle mode, wher .11.4 for any valid	wing stratments and modify 10.1.1.1 "Signal_Detect asse e 10.1.1.1 is applicable durin n rx_lpi is asserted, Signal_I eak signal, VSDA, of >400 m 0.1.1.2 "Signal_Detect deas e 10.1.1.2 is applicable durin n rx_lpi is deasserted, Signa peak to peak signal, VSDA,	Table 25-3. ertion threshold" ng the normal op Detect shall be as V for UTP, and > sertion threshold ng the normal op Detect shall be of <100 mV for U	eration. During the Low serted per 25.4.11.3 • 500 mV for STP. " eration. During the Low deasserted per JTP, and < 120 mV for	l'm no outlin- exten 1. Aut 100B, 2. The the tir the ex optior Suggester Add a Proposed PROF	type I tot sure where to e extensions of sions for EEE ir to-Negotiation is ASE-TX) e exchange of a ne required to c trended next pa of or 100BASE- dRemedy mendment to A Response POSED ACCEP	anchor this comment, but Anne Clause 28 for Energy Efficient E Include: Is mandatory for a EEE PHY (this idditional next pages for EEE ca complete Auto-Negotiation. To re ge mechanism introduced by IE TX).	x 28D should thernet and I s is currently n pability and m educe this time EE 802.3an-20	also be amended to propose that Clause 28 ot the case for ode negotiation extends e, a EEE PHY may use 006 (it is not currently an
					Cl 30 Hajduczer Comment Claus recirc Suggester As pe Proposed PROF	SC 30 nia, Marek <i>Type</i> TR e 30 is missing ulation of the dr <i>dRemedy</i> r comment <i>Response</i> 20SED ACCEP	P 63 ZTE Corporatio Comment Status D - it would be good to have at lea aft. Response Status W T.	L 1 on ast a rough loc	# <u>171</u>

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general	01 20
COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn	C/ 30
SORT ORDER: Clause, Subclause, page, line	SC 30

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IEEE P802.3az D1.0 Energy Efficient Ethernet comments

C/ 35	SC 35	P 65	L 1	# 172	C/ 35	SC :	35.2.1	P 65	L 14	# 6
Hajduczenia	a, Marek	ZTE Corporatio	n		Dawe, Piers	S		Avago Tec	hnologies	
Comment T	Type E	Comment Status D			Comment 7	Гуре	TR	Comment Status D		
In claus	se 35, there are	again references to subclause	s using "a" an	d "b" in the number.	Need to	o be cle	ear that thi	s is optional.		
Avoid it subclau	. Insert a new s uses.	subclause if needed and call for	renumbering	of the remaining	Suggestedl	Remed	y			
Suggested	Remedy				Change	e 'The r	napping c	hanges slightly when Low	Power Idle signali	ng is in operation.' to 'If
As per	comment.				the opti when L	ional Lo .ow Pov	ow Power ver Idle sig	Idle signaling feature is ir gnaling is in operation.'	nplemented, the m	apping changes slightly
Proposed F	Response	Response Status W			Proposed F	Respon	se	Response Status W		
PROPC	OSED REJECT	•			PROPO	OSED A	ACCEPT I	N PRINCIPLE.		
IEEE S to use t	tandards Asso his approach w	ciation staff editors have instruc /hen added clauses between ex	ted the editors	s of 802.3 amendments of the base document.	Change	e 'The r	napping c	hanges slightly when Low	v Power Idle signali	ng is in operation.'
To renu	umber all the class and would ca	auses of the base document wo	uld open too	much of the base to	to 'The	mappii	ng change	s slightly when optional L	ow Power Idle sign	aling is in operation.'
change		ase confusion about what was	being enange	u.	C/ 35	SC :	35.2.2.4	P 65	L 48	# 207
The cla	uses will all be	renumbered during the next rev	vision, when a ot (along with	Ill amendments are	Barrass, Hu	ugh		Cisco		
gainere					Comment 7	Гуре	т	Comment Status D		
Cl 35	SC 35.1.1	P6	L 16	# 5	There i	s no er	able for L	Pl.		
Dawe, Pleis	5	Avago Technol	ogies		Suggestedl	Remed	y			
Comment T	Type TR	Comment Status D			Replac	e				
Page a Want to	nd line number o mention the o	s in P802.3ayD2.3. ptional EEE functionality in 35.1	.1 Summary	of major concepts.	When I	_PI mo	de is enab	led (see [Editor's note ad	d reference]), the I	PHY shall interpret
Suggested	Remedy				with					
Per con	nment. State t	hat this option is for use only wi	h 1000BASE	-KX.						
Proposed R	Response	Response Status W			The PF	IY shal	l interpret.			
PROPC	DSED ACCEPT	IN PRINCIPLE.			Proposed F	Respon	Se	Response Status W		
The cor	mmenter is cor	rect that this should be included	in 35.1.1. Ho	wever, it is defined for		JSLD	ACCEPT.			
both 10	00BASE-KX a	nd 1000BASE-T.			C/ 35	SC :	35.2.2.6a	P 67	L 12	# 336
Add bu	llet point h) to 3	35.1.1			Dove, Dani	el		ProCurve N	Networking	
h) The	GMII may also	support low power idle signalin	g as defined t	for Energy Efficient	Comment 7 Incorre	<i>Type</i> ct code	TR shown in	Comment Status D TXD[7:0]		LATE
Etherne	et for some PH	r types (see Clause 78).			Suggestedl	Remed	V			
					Change	· e from '	'0001" to "	01"		
					Proposed F PROPO	Respon DSED /	se ACCEPT.	Response Status W		
TYPE: TR/t	echnical requir	ed ER/editorial required GR/ge	eneral require	d T/technical E/editorial G/ge	eneral					

IYPE: 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

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proposed responses IEEE	IEEE	P802.3az D1.0 Energy	Efficient Etherr	net comm	ients		Nov 2008
C/ 35 SC 35.2.2.7 P 68 Hajduczenia, Marek ZTE Corporat	L 42	# 173	C/ 35 So Barrass, Hugh	C 35.2.2.9a	P 69 Cisco	L 33	# 206
Comment Type E Comment Status D In Table 35-2, row 4 should be marked as insertion (underlined). It is	s not currently	<i>Comment Type</i> The editor's	T note indica	Comment Status D ates that a control bit is nee	ded to indicate "c	lock stoppable"
SuggestedRemedy As per comment.			SuggestedRem Add a contr	<i>edy</i> ol bit in Cla	use 45 PCS registers (sepa	arate comment)	
Proposed Response Response Status W PROPOSED ACCEPT.			Change				
Cl 35 SC 35.2.2.9a P 69 Hajduczenia, Marek ZTE Corporat	L 32	# 159	while the P shown in	. if the RX_	IS INDICATING IOW POWER IDE CLK_stoppable bit is asser	the PHY device n ted [Editor's note	nay halt the RX_CLK as add reference].
Comment Type ER Comment Status D Missing reference in "as shown in if"			While the P	HY device i	is indicating low power idle	the PHY device n	nay halt the RX_CLK as
SuggestedRemedy Provide the missing reference			shown in [fi Proposed Resp	gure 35-9aj onse DACCEPT	Response Status W	stoppable bit is a	sserted [45.2.3.1.3a].
Proposed Response Response Status W PROPOSED ACCEPT IN PRINCIPLE.			Accept the	remedy for	this comment, additionally	eplace similar pa	ragraph in 35.2.2.6a
See #206			Change	10 02) 03 10			
			The MAC d the low pow asserted [E	evice may h ver idle state ditor's note	nalt GTX_CLK at any time r e as shown in Figure 35-6a add reference].	nore than 9 clock if the GTX_CLK_	cycles after the start of stoppable bit is
			With				
			The MAC d the low pow is asserted	evice may h ver idle state [45.2.3.1.3a	nalt GTX_CLK at any time r e as shown in Figure 35-6a a].	nore than 9 clock if and only if the	cycles after the start of TX_CLK_stoppable bit
			C/ 36 So Hajduczenia, M	C 36 arek	P 72 ZTE Corpor	L 1 ration	# 160
			<i>Comment Type</i> Extra brack	ER et at the en	Comment Status D d of title in clause 36.		
			<i>SuggestedRem</i> Remove it	edy			
			Proposed Resp PROPOSE	onse D ACCEPT	Response Status W		

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CI 36 SC 36

IEEE P802.3az D1.0 Energy Efficient Ethernet comments

C/ 36 SC 36.2.4.7	P 40	L 43	# 7	CI 36	SC 36.2.4.8	B P 72	L 25	# 49	
Dawe, Piers	Avago Techr	nologies		Healey, A	dam	LSI Corpora	ation		
Comment Type TR	Comment Status D			Comment	Туре Т	Comment Status D			
Page and line numbers in I Need to make clear that the application.	9802.3ayD2.3. e new codings in Table 3	36-3 are optional	and of restricted	Table Per th encod	36-3, by itself, le PCS transmit led as /l/, regare	does not adequately describ ordered_set state diagram (dless of TX_ER and TXD<7:	e the low power idl Figure 36-5), TX_E 0>.	e encoding process. EN = FALSE is	
SuggestedRemedy				Suggeste	dRemedy				
Add sentence: 'The ability an option of 10GBASE-KX	o transmit or receive /Ll, 4 only.'	/, /LI1/ and /LI1/ i	s an option, to support	Modify the PCS transmit ordered_set state diagram (Figure 36-5) and PCS transmit code- group state diagram (Figure 36-6) to clearly define /LI/ encoding, mark the modifications as					
Proposed Response R	esponse Status W			Branaad			Jilale.		
PROPOSED ACCEPT IN F	PRINCIPLE.			FIOPOSEO	Response				
Add sentence: 'The ability	o transmit or receive /Ll	/, /LI1/ and /LI1/ i	is an option for certain	FROF	OSLD ACCEP				
PHYs to support Energy Ef	ficient Ethernet (see Cla	use 78).'		Signif	icant changes v	vill be required to the clause	to reflect the additi	ons to the state	
C/ 36 SC 36.2.4.8	P 72	L 25	# 50	mach	ines and the op	eration of Low Power Idle in	the transmit and re	eceive directions.	
Healey, Adam	LSI Corporat	ion		The e	ditor will work w	vith the commenter to prepar	e a more complete	definition in the next	
Comment Type T	Comment Status D			draft.					
Table 36-3, by itself, does	not adequately describe	the low power id	le decoding process.	C/ 40	SC 40.1.3	P 74	L 18	# 208	
Per the PCS receive state	diagram (Figures 36-7a	and 36-7b), /Ll/ v	would be decoded as	Barrass, H	lugh	Cisco			
RX_DV = FALSE and RX_	ER = FALSE (e.g. norma	al Inter-frame).		Comment	Туре Т	Comment Status D		40_mr_enabi	
SuggestedRemedy	(7	ala a shu ala Cara (l. 17	There	is no enable fo	r LPI.			
decoding, mark the modific	ations as optional, and o	7a and 36-7b) to define new state	variables as	Suggeste	dRemedy				
appropriate.				Chan	ge				
Proposed Response R	esponse Status W			\\/bon	this conchility	a anablad the appartian of k	Nu powor		
PROPOSED ACCEPT IN F	PRINCIPLE.			vinen	i triis capability i		bw power		
See #49				to					
				The a	ssertion of low	power			
				Proposed	Response	Response Status W			
				PROF	POSED ACCEP	T.			
				it is tr	ue that there is	no enable for low-power idle	. Should there be d	ne?	

C/ 40 SC 40.1.3

proposed response	es IEEE	IEEE	P802.3az D1.0 Energ	y Efficient E		Nov 2008		
C/ 40 SC 40.1.3 Healey, Adam	P 75 LSI Corporation	L 1	# 51	C/ 40 Healey, A	SC 40.2.2	P 78 LSI Corporation	<i>L</i> 1	# 52
Comment Type E Referring to Figure 4 highlight optional fun- indicating that dashed	Comment Status D 0-3, since Energy Efficient Ethern ctions and signals using dashed I d lines denote optional features.	et is an optior ines and add a	al feature, clearly a note below the figure	Comment Refer highli that c	t Type E rring to Figure 40 ght optional primi lashed lines deno	Comment Status D -4, since Energy Efficient Ether itives using dashed lines and a ote optional features.	net is an optio dd a note belo	nal feature, clearly w the figure indicating
SuggestedRemedy Per comment.				Suggeste Per c	edRemedy comment.			
Proposed Response PROPOSED ACCEP	Response Status W			Proposed PROI	l Response POSED ACCEPT	Response Status W		
C/ 40 SC 40.1.4 Dawe, Piers	P 76 Avago Technolo	L 45 ogies	# 8	<i>Cl</i> 40 Healey, A	SC 40.2.2	P 79 LSI Corporation	L 5	# 53
Comment Type T j) Ability to signal SuggestedRemedy j) Optionally, ability to	Comment Status D			Comment Corre relate Suggeste	t Type E ect indentation for ed primitives. edRemedy	Comment Status D the definition of primitive value	es for this and	all following EEE-
Proposed Response PROPOSED ACCEP	Response Status W T.			Per c Proposed PROI	omment. <i>I Response</i> POSED ACCEPT	Response Status W		
Cl 40 SC 40.12 Hajduczenia, Marek Comment Type TR This comment is to m	P 93 ZTE Corporation Comment Status D nake sure You do not forget to fill	L 1 n in PICS for cla	# 164	C/ 40 Healey, A Comment	SC 40.3 Idam t Type E	P 81 LSI Corporation Comment Status D	L 1	# 54
SuggestedRemedy As per comment.				Refer highli indica	rring to Figure 40 ght optional funct ating that dashed	-5, since Energy Efficient Ether tions and signals using dashed lines denote optional features.	net is an optio lines and add	nal feature, clearly a note below the figure
Proposed Response PROPOSED ACCEP PICS will be entered 1.0.	Response Status W T IN PRINCIPLE. per Draft 1.0 and the adopted res	ponses to cor	nments against Draft	Suggeste Per c Proposed PROI	edRemedy comment. I Response POSED ACCEPT	Response Status W		

C/ **40** SC **40.3**

proposed	responses	IEEE
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C/ 40	SC 40.3.1.3.4	P 82	L 8	# 55	C/ 40	SC	40.3.4	P 84	L 1	# 161		
Healey, Ada	am	LSI Corp	oration		Hajduczer	nia, Mar	ek	ZTE Corporation	n			
Comment T	<i>уре</i> т	Comment Status D			Comment	Туре	ER	Comment Status D		40_svc_to_humanity		
In the F possible Sdn[2] i Suggested	PHY Control state e that loc_rcvr_st is modified, chan	diagram, as proposed atus = OK while SEND nel C may not send ze	for Energy Efficient _Z is asserted. Unle ro as desired.	1000BASE-T, it is ess the definition of	Figure 40-10a has several problems as marked in 3az_0811_hajduczenia_3.pdf Make sure (1) lines do not cross (hard to guess which goes where) - see Figure 76-20 in 802.3av D2.1 for an example of how to solve it in a clear manner							
Modify	definition of Sdn[2	2] to read:			(2) lin (3) ar Simila	es are r rows do ar proble	not broken not meet ems also e	in the middle as it happens on the left side o xist in Figure 40-15a on page	of the figure 89	(marked with a red box)		
Suntzi	cn[1]^1 else i	f (loc_rcvr_status=OK)	* (tx_mode!=SEND	_Z)	Suggeste	dRemed	dy					
S	cn[2] else		·		As pe	er comm	ent					
Proposed F	Response	Response Status W	1		Proposed	Respor	nse	Response Status W				
PROPC	OSED ACCEPT.				PROPOSED ACCEPT IN PRINCIPLE.							
<i>CI</i> 40 Healey, Ada	SC 40.3.4 am	P 83 LSI Corp	L 2 poration	# 56	The referenced figures are largely as they appear in the current revision of IEEE Std. 802.3. The modifications required to realize optional Energy Efficient Ethernet features were minor in nature.							
Comment 7 Referrir	Type E ng to Figure 40-1	Comment Status D 0a, since Energy Efficie	ent Ethernet is an op	btional feature, clearly	How s thus s	such "se should b	ervices to h e discusse	numanity" should be addresse ed by the Task Force.	d is a questi	on of project scope and		
associa	ited transitions in	the dashed box labele	d "optional impleme	ntation."	See a	also com	ment #16	2.				
SuggestedI Per con	R <i>emedy</i> nment.				C/ 40 Healey, A	SC dam	40.4.2	P 85 LSI Corporation	L 8	# 57		
Proposed Response Response Status W PROPOSED ACCEPT.					Comment Type E Comment Status D Referring to Figure 40-14, since Energy Efficient Ethernet is an optional feature, clearly highlight optional functions and signals using dashed lines and add a note below the figure indicating that dashed lines denote optional features.							
					Suggester Per co	dRemed omment	dy 					
					Proposed	Respor	nse	Response Status W				

PROPOSED ACCEPT.

C/ 40 SC 40.4.2

IEEE P802.3az D1.0 Energy Efficient Ethernet comments

C/ 40 SC 40.4.2.4 Healey, Adam	P 86 LSI Corporation	L 16	# 85	<i>Cl</i> 40 Healey, Ad	SC 40.4.2.4 lam	P 86 LSI Corporation	L 24	# 84
Comment Type E Grammar: "sequences" SuggestedRemedy Per comment.	Comment Status D should be "sequence"			Comment The ab The ab manne of the s interop	Type T obreviated state r er that was not int standard and red perability issues.	Comment Status D names may bias the perception of tended. Additional text may be p luce the possibility of misunderst	of the function of rovided to 40.4 anding that cou	40_PHY_Control of each state in a .2.4 to guide a user uld lead to
Proposed Response PROPOSED ACCEPT.	Response Status W			A key i the WA	ssue in question	is whether the adaptive filter constate. The intended behavior wa	efficients shoul s to have the fi	d be updated during Iter coefficients
Cl 40 SC 40.4.2.4 Healey, Adam Comment Type E Incorrect state diagram SuggestedRemedy Per comment. Proposed Response PROPOSED ACCEPT.	P 86 LSI Corporation <i>Comment Status</i> D variable name: "tx_wake_timer" <i>Response Status</i> W	L 20	# 86	"If both UPDA" intende adaptiv the und It was WAKE undesi It is pro Suggested Clearly IDLE C Proposed I PROPO Refer t	PHYs continue TE state and con ed to allow the re ve filter coefficien derlying channel not intended that _TRAINING, and rable corner case oposed that the c <i>Remedy</i> v state that adapt OR DATA states a <i>Response</i> OSED ACCEPT to #191 which ma	to request low power operation, itinue to transmit for time defined imote PHY to refresh its receiver ths) and thereby track long term v characteristics." It adaptive filter coefficient would d attempting to do so could make es. However, this is not clearly s current text be updated to make to ive filter coefficients should be u and not in the WAKE_TRAINING <i>Response Status</i> W IN PRINCIPLE. ay modify the response to this co	then both PHY I by lpi_update state (e.g. timi variation in the be updated du es the impleme tated. the intention cle pdated in the L G or WAKE_SL	s remain in the _timer. This time is ng recovery, timing of the link or ring ntation subject to ear. JPDATE and SEND AVE states.
				Cl 40 Healey, Ad Comment Gramn Suggested	SC 40.4.2.4 lam <i>Type</i> E nar: "the both" sh <i>IRemedy</i>	P 86 LSI Corporation Comment Status D nould be "both"	L 32	# 87
				Per co Proposed I PROP	mment. Response OSED ACCEPT.	Response Status W		

IEEE P802.3az D1.0 Energy Efficient Ethernet comments

C/ 40	SC 40.4.5.1	P 86	L 40	# 83	C/ 40	SC 40.4.5.1	P 87	L 15	# 82
nealey, Ad	латі - –		111		Healey, Ad	uam 		lion	
Comment	Type T	Comment Status D		a addition of the	Comment	Type T	Comment Status D		40_signal_detect
signal		Energy Efficient Ethernet.	Fo ensure corre	ct interpretation of the	maxim	num assertion and	d de-assertion must be defir	ne to ensure inter	-operability.
operat	tion of the state diag	gram, such ambiguity shoul	d be removed.		Suggested	dRemedy			
Per th	e current definition	of scr_status, it may assum	e one of the foll	owing two values:	Propo	sal to be present	ed to the Task Force (tentati	ive name healey_	_01_1108.pdf).
OK: T	he descrambler has	achieved synchronization.		0	Proposed	Response	Response Status W		
NOT_	OK: The descramp	ier is not synchronized.			PROP	OSED ACCEPT	IN PRINCIPLE.		
It seer	ms to follow that one	ce you have determined the	ere is no input si	gnal (e.g.	Respo	onse pending plar	nned presentations on this s	ubject.	
signal	_detect = FALSE), 1	the scrambler cannot be syl	nchronized.		C/ 40	SC 40.4.5.2	P 87	L 22	# 189
Suggested	Remedy	ficient Ethernet when sign		CE par status must	Grimwood	, Michael	Broadcom C	orporation	
be set	to NOT_OK.	incient Ethemet, when sign	$a_0 = FAL$.SE, SCI_SIAIUS MUSI	Comment	Type TR	Comment Status D		40_signal_detect
Proposed	Response	Response Status W			Curren	ntly, signal detect	assertion and signal detect	deassertion time	es are not specified.
PROP	OSED ACCEPT.	,			Timer	s and values nee	ded.		
01.40	00 40 4 5 4	D.00		# 70	Suggester	Remedy	poortion time and a require	mont that it ha na	longer than 0 5 up
C/ 40	30 40.4.3. 1	P 80	L 44	# 79	Denne	e signal_detect_a	ssertion_time and a require	ment that it be no	nonger man 0.5 µs.
				10	Define	e signal_detect_d	eassertion_time and a requi	irement that it be	no longer than 1.0 µs.
Lomment	<i>Type</i> I I I I I I I I I I I I I I I I I I I	Comment Status D	iciant Etharnat f	40_mr_enable	Proposed	Response	Response Status W		
impler	mented, loc_lpi_req	and rem_lpi_req are FALS	E and, as a con	sequence, lpi_mode is	PROP Refer	OSED ACCEPT to #82.	IN PRINCIPLE.		
OFF. diagra	This will prohibit trai	nsition into the optional LP_)-10a), into the optional PH	IDLE state in th	e PCS Receive state	0.40	00 40 4 5 0	0.07	/ 05	" 00
(Figur	e 40-15b), and obvi	ate the need for the optional	al PCS Local LP	I Request state		SC 40.4.5.2	P81	L 25	# 80
diagra	ım (Figure 40-9).				nealey, Ad				
Simila	r conditions should	be applied when the Energ	y Efficient Ether	net feature is disabled	Comment	<i>lype</i> I	Comment Status D	10% would brow	adan implementation
by ma	nagement.				choice	without adverse	ly affecting quiet-refresh cyc	ling behavior.	
Suggested	dRemedy				Suggested	dRemedy			
Per co	omment.				Chang	ge lpi_quiet_timer	range to 20 to 24 ms.		
Proposed	Response	Response Status W			Proposed	Response	Response Status W		
PROP When cited v "norma	POSED ACCEPT IN optional Energy Eff /ariables should be al" 1000BASE-T op	PRINCIPLE. ficient features are not imple defined per the comment. 1 eration.	emented, the de This has the effe	fault values for the ct of restoring	PROP	OSED ACCEPT.			
As poi Etherr	inted out by comme net via managemen	nt #208, there is no means t.	to enable or dis	able Energy Efficient					

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/ **40** SC **40.4.5.2**

proposed responses	s IEEE	IEEE	P802.3az D1.0 Energy	nergy Efficient Ethernet comments					Nov 2008
Cl 40 SC 40.4.5.2 Barrass, Hugh	P 87 Cisco	L 51	# 209	<i>CI</i> 40 Barrass, H	SC 40.4.5.2 lugh	P 8 Cisco	8 L	. 14	# 210
Comment Type T The programmable wa	Comment Status D ake timer seems to be too con	nplex for a very s	40_tw_negotiation small benefit.	<i>Comment</i> The p	<i>Type</i> T rogrammable wa	Comment Status ke timer is unnecess	D ary (addressed	in a separate cc	40_tw_negotiation pmment)
The timer should be fix SuggestedRemedy Change Duration: This timer is to	xed to the smallest value that a negotiated parameter [add	is generally acco reference] not to	eptable. 9 exceed 16 us.	If the also b Suggester Chan Durat and s	programmable w ve fixed. <i>dRemedy</i> ge ion: The period o ball baye the pon	ake timer is fixed to 1 f lpi_wakemz_timer is	6uS then the d related to the	uration of lpi_wa resolved value c	ikemz_timer can of lpi_wake_timer
Duration: This timer sh	nall have a period of 16 us.			to					
Proposed Response PROPOSED ACCEPT Response pending pla See also #62.	Response Status W NPRINCIPLE. Inned presentations on this su	ıbject.		Durat Also, <i>Proposed</i>	ion: This timer sh delete Table 40-3 <i>Response</i>	all have a period of 5 3 <i>Response Status</i>	us. W		
C/ 40 SC 40.4.5.2 Grimwood, Michael	P 87 Broadcom Co	L 51 prporation	# 192	PROF Refer	POSED ACCEPT to #209.	IN PRINCIPLE.			
lpi_wake_time is speci implementation assum up to 3.8 μs since this values. Therefore, the should be constrained or equal to 16 μs. Bec range for lpi_wake_tim	ified to be less than or equal the priors and propagation delay is the sum of the minimum lp parameter range and associations such that wake time is greated ause the wake time is negotiate should be 4 µs to 16 µs.	o 16 µs. Howeve s, it is still possil i_wakemz_timer ated allowable au er than or equal t tted in 1 µs incre	and lpi_waitwt_timer tonegotiation values o 3.8 µs and less than ments, the allowable						
SuggestedRemedy Change:									
Duration: This timer is To:	a negotiated parameter [add	reference] not to	exceed 16 µs.						
Proposed Response PROPOSED ACCEPT Refer to #209.	than or equal to 16 µs. <i>Response Status</i> W IN PRINCIPLE.		a value greater than or						
TYPE: TR/technical require COMMENT STATUS: D/di SORT ORDER: Clause,	ed ER/editorial required GR/ ispatched A/accepted R/reje Subclause, page, line	general required cted RESPON	T/technical E/editorial G/g SE STATUS: O/open W/wi	jeneral ritten C/close	d U/unsatisfied	Z/withdrawn	C/ 40 SC 40.4.5.2		Page 24 of 69 11/4/2008 1:51:45 P

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$P_{R} = P_{R} + P_{R$	C/ 40 SC 40 4 5 2 P88 / 6 # 190
Healey, Adam LSI Corporation	Grimwood, Michael Broadcom Corporation
Healey, Adam LSI Corporation Comment Type T Comment Status D Per the current Energy Efficient Ethernet PHY Control state diagram, it is possible that the MASTER will be required to decode rem_lpi_req from the SLAVE while the SLAVE is receiving zeros from the MASTER (e.g. the timing loop is broken). This scenario would occur when the MASTER's lpi_update_timer expires and the MASTER transitions to WAIT_QUIET, transmitting zeros to the SLAVE while the SLAVE is still in the UPDATE state. Prior to the SLAVE detecting zeros from the MASTER, it chooses to exit low power idle. The MASTER will need to detect the SLAVE's rem_lpi_req = FALSE with the timing loop open. Since the timing loop will be open for a very short period of time, this is likely not an issue. However a very simple change to lpi_update_timer can eliminate this corner case. The change would make the duration of MASTER lpi_update_timer longer than the SLAVE lpi_update_timer. This ensures that the SLAVE always enters WAIT_QUIET before the MASTER, and hence maintains timing. In addition, it has negligible impact on the total refresh time since the SLAVE transition to WAIT_QUIET will force the MASTER to	Grimwood, Michael Broadcom Corporation Comment Type TR Comment Status D 40_signal_detect In order to accommodate the new requirement for signal_detect_deassertion_time (comment submitted separately), the lpi_waketx_timer value needs to be modified such that (lpi_wakemz_timer - lpi_waketx_timer) >= signal_detect deassertion time. So for the minimum value of lpi_wakemz_timer (2 µs), the signal detect deassertion time must be <= 1.0 µs.
SuggestedRemedy Define that the duration of lpi_update_timer for the SLAVE is 0.18 to 0.2 ms and duration of lpi_update_timer for the MASTER is 0.23 to 0.25 ms. Proposed Response Response Status W PROPOSED ACCEPT.	Refer to #82. Cl 40 SC 40.4.6.1 P 88 L 44 # 331 Dove, Daniel ProCurve Networking Image: Comment Type ER Comment Status D LATH Spelling SuggestedRemedy Change "PHY Control" Proposed Response Response Status W
	PROPOSED ACCEPT.

C/ 40 SC 40.4.6.1

proposed responses	s IEEE	IEEE P802.3az D1.0 Energy	/ Efficient E	thernet co	mments			Nov 2008
Cl 40 SC 40.4.6.1 Grimwood, Michael	P 90 L : Broadcom Corporatio	20 # <u>191</u> n	C/ 40 Hajduczei	SC 40.5. nia, Marek	1.1 Z	P 91 TE Corporatio	L 50	# 163
Comment Type TR The state diagram in f depends on scr_status interoperability issues under some conditions combinations of state issues. SuggestedRemedy A presentation will be	Comment Status D igure 40-15b has an exit condition fror s. scr_status is ambiguous and therefor . Also, allowing the wake_silent state i s and bypassed under others unneces transition sequences that also can con submitted proposing a remedy.	40_PHY_Control In the wake_silent state that bre this condition can lead to In LPI mode to be executed sarily introduces additional httribute to interoperability	Comment Table Suggeste Any c do no Proposed PROF Refer	Type TR 40-4 is empt dRemedy ontents will b t miss it Response POSED ACCI to #212	Comment St ty e inserted after this r Response Sta EPT.	atus D ecirculation ? atus W	This comment	is to make sure You
Proposed Response PROPOSED ACCEPT Response pending pla	Response Status W IN PRINCIPLE. anned presentations on this subject.		C/ 40 Barrass, F	SC 40.5. lugh	1.1 Comment St	P 91 Disco	L 50	# 212
Cl 40 SC 40.4.6.2 Hajduczenia, Marek	P 91 L ZTE Corporation	1 # <u>162</u>	Suggeste	rype I registers defin dRemedy	ned in 45.2.1.2 need	to be added to	o the table	
Figure 40-16a has sor (1) arrows should not (2) NOTEs are too clo space SuggestedRemedy As per comment	ne problems: meet as marked in 3az_0811_hajducz se to each other and become hard to	renia_3.pdf (red box) read when printed - add some	Proposed PROF Table value 1.0.	Response POSED ACCI will be filled s defined in 4	Response Sta EPT. in with Energy Efficie 15.2.1.2 as modified b	atus W ent Ethernet m by adopted res	anagement reg sponses to com	ister definitions and ments against Draft
Proposed Response PROPOSED ACCEPT Refer to #161.	Response Status W		Cl 40 Barrass, F Comment	SC 40.5. Iugh <i>Type</i> T	1.2 Comment St	P 92 Disco atus D	L 12	# 213
Cl 40 SC 40.5.1 Barrass, Hugh Comment Type T This clause should ref SuggestedRemedy	P 91 L Cisco Comment Status D Gerence the new autonegotiation require	40 # 211	New r Suggeste Add tl Proposed PROF Table	registers defir dRemedy ne register de Response POSED ACCI will be filled	ned in 45.2.7 need to escriptions into the ta <i>Response Sta</i> EPT. in with Energy Efficie	be added to t ble. atus W ent Ethernet ne	he table ext page bits ar	nd assignments defined
Add the following: Insert below bullet iter c) To negotiate Energy Proposed Response PROPOSED ACCEPT	n b): y Efficient Ethernet capabilities as spe <i>Response Status</i> W T.	cified in 28C.12.	45.2.7	7 as modified	by adopted respons	es to commen	ts against Draf	t 1.0.

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/ **40** SC **40.5.1.2** Page 26 of 69 11/4/2008 1:51:45 PM

SORT ORDER: Clause, Subclause, page, line

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C/ 45 SC 2.7.13a	P 98	L 5	# 246	C/ 45	SC 45.2.1.2.1a	P 96	L 35	# 91
Bennett, Michael				Healey, Ada	m 	LSI Corporatio	n	
Comment Type TR	Comment Status D		10 45 445	Comment Ty	/pe T Comn	ient Status D		ar idla aignaliag2 la it
SuggestedRemedy define a bit for 1000BA Proposed Response PROPOSED ACCEPT	ASE-KX EEE Response Status W		JIE 40-140	Suppose the trans Assumir seems it SuggestedR	ed to interpret the code-g smit PCS, or is it based on the second second second second second twould be cleaner to ass second second second second second second the second second second second second second second second secon	roups (or data-group on the assertion of s in the communicati sociate this bit with the	ps or symb_vector ome status flag b on between the F he PCS.	irs or) received from y the PCS? ² CS and PMA, it
Cl 45 SC 45 Hajduczenia, Marek	P 101 ZTE Corporation	L 1 on	# 166	Proposed Re PROPO	esponse Response Response	nse Status W	y.	
Comment Type TR This comment is to ma	Comment Status D ake sure You do not forget to fil	I in PICS for cla	ause 45	The four	LP Idle bits in register 1	.1 should have beer	n placed in the P	CS register space.
SuggestedRemedy				Move all	four bits to register 3.1,	bits 8-11.		
Proposed Response	Response Status W			<i>Cl</i> 45 Healey, Ada	SC 45.2.1.2.1a m	P 96 LSI Corporatio	L 39 on	# 92
				Comment Ty	/pe E Comn	nent Status D		
C/ 45 SC 45 Barrass, Hugh	P 96 Cisco	L 12	# 215	"The rec	eive link status bit shall	be implemented with	h latching high be	havior."
Comment Type E Table designation is w	Comment Status D			SuggestedR Change	emedy	Dit.		
SuggestedRemedy Change 45-1 to 45-5				Proposed Re	esponse Response	nse Status W		
Proposed Response PROPOSED ACCEPT	Response Status W Γ.			Change	"The receive link status	bit shall be impleme	ented with latching	g high behavior."
C/ 45 SC 45.2.1	P 37	L 41	# 11	To "This	bit shall be implemente	d with latching high	behavior."	
Dawe, Piers	Avago Techno	logies		2 instan	ces - 45.2.1.2.1a and 45	.2.1.2.1b		
Comment Type E P802.3ba is providing clickable entries giving	Comment Status D a very welcome third column ir g the subclause for each register	n Table 45-3, ca er.	alled 'Clause', with					
SuggestedRemedy								
Please do the same.								
Proposed Response PROPOSED ACCEPT	Response Status W							
TYPE: TR/technical require COMMENT STATUS: D/di SORT ORDER: Clause,	ed ER/editorial required GR/g ispatched A/accepted R/reject Subclause, page, line	eneral requirected RESPON	d T/technical E/editorial G/ NSE STATUS: O/open W/v	/general vritten C/closed	U/unsatisfied Z/withdra	wn C/ 45 SC 45	.2.1.2.1a	Page 27 of 69 11/4/2008 1:51:45

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Cl 45 SC 45.2.1.2.1b P 96 L 38 # 60 Healey, Adam LSI Corporation	Cl 45 SC 45.2.1.2.3a P 96 L 51 # 58 Healey, Adam LSI Corporation
Comment Type T Comment Status D What does it mean for the Rx PMA/PMD to "receive" LP idle? The LP idle signal is decoded by the Rx PCS. Presumably, the PCS indicates to the PMA/PMD that the loss of signal it is about to experience is related to quiet-refresh cycling and not a loss of link. Furthermore, in 1000BASE-T, it is possible to receive and LP idle signal without quiet-refresh cycling. For these reasons, it seems cleaner to associate this bit with the Rx PCS.	Comment Type T Comment Status D What does it mean to have the transmit PMA/PMD "receive" low power idle signaling? Is it supposed to interpret the code-groups (or data-groups or symb_vectors or) received from the transmit PCS, or is it based on the assertion of some status flag by the PCS? Assuming there is no breakdown in the communication between the PCS and PMA, it seems it would be cleaner to associate this bit with the PCS.
SuggestedRemedy Clarify the definition of this bit or relocate accordingly.	SuggestedRemedy Clarify the definition of this bit or relocate accordingly.
Proposed Response Response Status W PROPOSED ACCEPT IN PRINCIPLE.	Proposed Response Response Status W PROPOSED ACCEPT IN PRINCIPLE.
See #91	See #91
Cl 45 SC 45.2.1.2.1b P 96 L 46 # [93] Healey, Adam LSI Corporation	Cl 45 SC 45.2.1.2.3a P 96 L 52 # 96 Koenen, David Hewlett Packard Hew
Comment Type E Comment Status D "The receive link status bit shall be implemented with latching high behavior."	Comment Type T Comment Status D Should bit 1.1.4 indicat the the transmit PFA/PMD is currently transmitting low power idles signal instead of receiving them?
This is the "Rx LP idle received" bit.	SuggestedRemedy
SuggestedRemedy	Change "receiving" to "transmitting" in this paragraph.
Change bit name per comment.	Proposed Response Response Status W
Proposed Response Response Status W	PROPOSED REJECT.
See #92	This is a matter of semantic preference. The sublayer is receiving and transmitting low power idles. The current wording is unambiguous, so the editor suggests no change is necessary.

C/ **45** SC **45.2.1.2.3a**

7 45 SC 45.2.1.2.3a P 97 L 3 # 61 ealey, Adam LSI Corporation	Dawe, Piers Avago Technologies
omment Type T Comment Status D What does it mean for the Rx PMA/PMD to "receive" LP idle? The LP idle signal is decoded by the Rx PCS. Presumably, the PCS indicates to the PMA/PMD that the loss of signal it is about to experience is related to quiet-refresh cycling and not a loss of link. Furthermore, in 1000BASE-T, it is possible to receive and LP idle signal without quiet-refresh cycling. For these reasons, it seems cleaner to associate this bit with the Rx PCS. uggestedRemedy Clarify the definition of this bit or relocate accordingly. troposed Response Response Status W	Comment Type E Comment Status D Table too narrow for the new contents SuggestedRemedy Resize column widths to contents Proposed Response Response Status W PROPOSED REJECT. It is unclear which table is too narrow - neither the subclause nor the page number correspond to a table that peeds changing
PROPOSED ACCEPT IN PRINCIPLE. See #91	The commenter is advised to review 802.3av that may be more appropriate for this comment.
I 45 SC 45.2.1.6 P 38 L 29 # 12 awe, Piers Avago Technologies	C/ 45 SC 45.2.3 P 97 L 10 # 214 Barrass, Hugh Cisco
omment Type E Comment Status D Missing subclause heading	Comment Type T Comment Status D A bit is required for "clock stoppable" as used in Clause 22 etc.
uggestedRemedy Insert the heading for 45.2.1.6, which contains Table 45-7. Check for any other missing headings.	SuggestedRemedy Add the following:
roposed Response Response Status W PROPOSED ACCEPT IN PRINCIPLE.	Change Table 45-83 to add "clock stoppable" bit (change 3.0.10;7 Reserved to 3.0.9;7 Reserved)
The registers are moving, however the new clause subheading must be included.	Add subclause 45.2.3.1.3a
I 45 SC 45.2.1.6 P 39 L 9 # [13] awe, Piers Avago Technologies	45.2.3.1.3a Clock Stoppable (3.0.10)
omment Type E Comment Status D Pre-existing entries all say ' PMA/PMD type'. As the table title is PMA/PMD control 2 register bit definitions and the entries are grouped as 'PMA/PMD type selection' this seems superfluous, but one should be consistent.	A PHY that supports low power idle signaling may stop the derived xMII receive clock while it is signaling low power idle in the receive direction. If bit 3.0.10 is set to 1 then the PHY may stop the receive MII clock while it is signaling low power idle otherwise it shall keep the clock active. If the PHY does not support low power idle signaing or is not able to stop the receive clock then this bit has no effect (see 22.2.2.9a, 35.2.2.9a, 46.3.2.4a).
uggestedRemedy	Proposed Response Response Status W
To remove the clutter, strike out 'PMA/PMD type selection' from all the pre-existing entries.	PROPOSED ACCEPT.
roposed ResponseResponse StatusWPROPOSED REJECT.	

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

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SC 45.2.3

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C/ 45	SC 45.2.3.31	P 46	L 47	# 10	CI 45	SC 45.2.7.1	3a	P 98	L 10	# 193
Dawe, Pier	S	Avago Techn	ologies		Grimwood	l, Michael		Broadcom C	orporation	
Comment T Multi-W	<i>Type</i> E Vord	Comment Status D			Comment In Tal	<i>Type</i> T ble 45-145 EEE	Comment advertisement	Status D register, bit 7.6	60.10 is specified	as "Next page Always
Suggested Multi-w	Remedy vord				chang	jing the bit to read	served for pote	ntial future use	ea to sena triis ind e.	acation? Recommend
Proposed F	Response OSED REJECT.	Response Status W			Chan	ge:				
See #1	4				7.60. ²	5:11 Reserve	ed Ignore or	n read		
C/ 45	SC 45.2.7.13a	P 97	L 42	# 88	10:					
Healey, Ad	am	LSI Corporati	on		7.60.7	5:7 Reserved	d Ignore on	read		
Comment 7	Туре Т	Comment Status D			Delete	e the following to	wo rows in the	table:		
EEE ac constra reflects Further EEE op	dvertisement regi ain the modes adv the actual capate to the point, 45.2 peration for 10GB	ster, 7.60, includes R/W bits vertised to the link partner. H pilities of the local device. 2.6.13a.1 (and other subclau BASE-KR" How does the n	that a managen lowever, no regi uses), state that nanagement enti	nent entity may use to ster is maintained that "If the device supports ty know the device	7.60. 7.60.9 Proposed PROF	0 Next page 0:7 Reserved Response POSED ACCEP	Always set Ignore on re <i>Response</i> T.	to 1, indicating ad S <i>tatu</i> s W	that another pag	je follows
Suggested		IUI IUGDASE-KK?								
Define Next pa device.	EEE capabilities age bit). All bits ir	register with contents identi this register are RO, and w	cal to 7.60 (with ill reflect the cap	the exception of the pabilities of the local	C/ 45 Koenen, [<i>Comment</i>	SC 45.2.7.1 David <i>Type</i> T	3a Comment	P 98 Hewlett Pack Status D	L 40 kard	# 98
Proposed F	Response	Response Status W			Missi	ng section on de	finition for 100	0BASE-KX, ple	ease add.	
PROP	OSED ACCEPT I	N PRINCIPLE.			Suggeste	dRemedy				
Add re	gister 3.20 EEE C	Capability register			Add a	section under 4	15.2.7.13a for			
	norted PCS types	s listed in the register			"1000	BASE-KX EEE	Supported (7.6	0.4)"		
All Sup	poneu POS types	ร แรเอน แา แาย เอยูเรเอเ.			lf the opera	device supports tion is desired, f	EEE operatior his bit shall be	n for 1000BASE set to 1.	E-KX as defined i	n 70.3a, and EEE
					Proposed PROF	Response POSED ACCEP	Response T.	Status W		

C/ **45** SC **45.2.7.13**a

C/ 45 Healey, Ad	SC 45.2.7.14 a dam	P 99 LSI Corporation	L 23	# 89	C/ 45 S Healey, Adam	SC 45.2.7.15a	P 99 LSI Corporation	L 18	# 59
Comment	Type T	Comment Status D			Comment Tvp	e T C	Comment Status D		
Referr that th unform	ing to Table 45-14 is should be defin natted code field.	15, bit 15, not bit 10, is the Next ed here. The scope of this regis	page bit. Ho ter should be	wever, it is not clear constrained to the	EEE mode request m reflects wh	e control register, odes of operation nether or not the l	7.62, includes R/W bits that from the link partner. How ocal device actually suppor	t a managem ever, no regis ts a given mo	lent entity may use to ster is maintained that ode.
Suggested Chang Proposed PROF	dRemedy ge Table 45-145, 7 Response POSED ACCEPT.	60.10 to Reserved, Ignore on r Response Status W	ead.		I understa request 10 space that energy ref	nd that these con)GBASE-KR redu : tells the manage resh.	trol are only placeholders, I ced energy refresh. There i ment entity that the local de	out for examp is no bit in the evice actually	le bit 7.62.4 is used to management register supports reduced
					SuggestedRer	nedy			
C/ 45 Koenen, D	SC 45.2.7.15 a David	P 100 Hewlett Packard	L	# 101	Define EE this registe	E capabilities reg er are RO, and wi	ister with contents correspo Il reflect the capabilities of t	onding the mo the local device	odes in 7.62. All bits in ce.
Comment Sever	<i>Type</i> E al paragraphs hav	Comment Status D e duplicate "the the" in the last	sentence.		Proposed Res PROPOSI	ponse Re ED ACCEPT IN P	esponse Status W RINCIPLE.		
Suggested Fix.	lRemedy				This warra moot.	ints a similar resp	oonse to #88, however, if #2	216 is accepte	ed then the point is
Proposed PROF	Response POSED ACCEPT A	Response Status W			C/ 45 S Grimwood, Mid	SC 45.2.7.15a chael	P 99 Broadcom Corpo	L 23 pration	# 194
Cl 45 Koenen, D	SC 45.2.7.15 a David	P 100 Hewlett Packard	L 12	# 100	Comment Typ In Table 4 set to 0"	e T C 5-146 EEE mode . Since this is alw	Comment Status D control register, bit 7.62.10 vays set to 0, do we need to the protontial future use) is specified a o send this inc	as "Next page Always dication? Recommend
Comment	<i>Type</i> I	for 1000PASE KX reduced one	vrav bit				i for potential future use.		
Neeu		TOT TOUDAGE-INA reduced ene	igy bit		Suggesteurrer	neuy			
Suggested Add th	ne following section	n in 45.2.7.15a:			7.62.15:11	Reserved	Ignore on read		
1000E	BASE-KX reduced	energy (7.62.2)			To:				
lf the o 70.3.x partne	device supports re , this bit shall be s r then both shall c	duced energy refresh cycle for et to 1. If this bit is set for both operate LPI using the reduced e	1000BASE-K the local dev nergy metho	X LPI as define in ice and the link d.	7.62.15:10	Reserved	Ignore on read		
Proposed	Response	Response Status W			Delete the	Tollowing.			
PROF	OSED ACCEPT.				7.62.10	Next page Alv	ways set to 0, indicating tha	t no page foll	ows
See a	lso #216				Proposed Res PROPOSI	ponse Re ED ACCEPT.	esponse Status W		

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/ **45** SC **45.2.7.15a**

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C/ 45 SC 45.2.7.15a P 99 L 23 # 90 Healey, Adam LSI Corporation	C/ 45 SC 45.2.7.15a.1 P 99 L 48 # 62 Healey, Adam LSI Corporation LSI Corporation
Comment Type T Comment Status D Referring to Table 45-146, bit 15, not bit 10, is the Next page bit. However, it is not clear that this should be defined here. The scope of this register should be constrained to the unformatted code field. SuggestedRemedy Change Table 45-146, 7.62.10 to Reserved, Ignore on read.	Comment Type T Comment Status D Regarding the 1000BASE-T wakeup time advertisement Based on the premise that longer wake time corresponds to additional power savings (e.g. PHY layer circuitry may be put into a deeper sleep state) and there will exist applications that do not require a wake time as fast as 16 us, there is an advantage to increasing the upper bound on the advertised wake time
Proposed Response Response Status W PROPOSED ACCEPT.	Also, based on the premise that management may manipulate the advertised wake time to be larger than the minimum value supported by the PHY, this mechanism does not allow the local device to indicate that it supports a faster wake time than advertised. Consider a
C/ 45 SC 45.2.7.15a P 99 L 46 # 216 Barrass, Hugh Cisco Cisco	local device to indicate that it supports a laster wake time than advertised. Consider a local device that has prioritized power savings and therefore advertises a slower wake time than the PHY can support but would be able to support the faster wake time if necessary.
Comment Type T Comment Status D The editor's note suggests that this register is a placeholder awaiting a definition for reduced energy settings in the PHY clauses. There is no such definition, therefore delete this and the link partner register.	A link partner with an application that requires lower latency, and requests a faster wake time, may not be able to arbitrate a suitable wake time with the local device despite the fac the local device actually supports the desired wake time. SuggestedRemedy Proposal for modified 1000BASE-T wake time pegotiation to be presented to the Task
SuggestedRemedy Delete clause 45.2.7.15a and 45.2.7.15b (mis-numbered as 45.2.7.15a.6)	Force (tentative name healey_01_1108.pdf).
Proposed Response Response Status W PROPOSED ACCEPT.	PROPOSED REJECT. There is currently no register defined for negotiated wake times corresponding to 40.4.5.2. If comment #209 is accepted then the point is moot.
	Otherwise, if a different proposal is accepted then the register must be changed to match that proposal.
	C/ 45 SC 45.2.7.15a.1 P 99 L 49 # 9 Dawe, Piers Avago Technologies 4 9 4 9 4 9 4 9 4 9 4 9 4 4 9 4 <t< td=""></t<>

Comment Type T Comment Status D

Consistent spelling

SuggestedRemedy

To align with base document, change 'advertized' to 'advertised', 'advertizes' to 'advertises'. Two more in Clause 69.

Proposed Response Response Status W

PROPOSED ACCEPT.

C/ 45 SC 45.2.7.15a.1

proposed responses IEEE IEEE P802.3az D	D1.0 Energy Efficient Ethernet commentsNov 2008
C/ 45 SC 45.2.7.15a.2 P 100 L 1 # 165 Hajduczenia, Marek ZTE Corporation 275 276	C/ 45 SC Table 45-146 P 99 L 31 # 99 Koenen, David Hewlett Packard Hewlett Packard
Comment Type ER Comment Status D Missign references in 45.2.7.15a.2, 45.2.7.15a.3, 45.2.7.15a.4 and 45.2.7.15a.5 - o them and provide explicitly.	Comment Type T Comment Status D define Support for 1000BASE-KX in the EEE mode control register. SuggestedPercedy
SuggestedRemedy As per comment	For bit 7.62.2 Change to:
Proposed Response Response Status W PROPOSED ACCEPT IN PRINCIPLE.	1000BASE-KX 1 = Reduced energy refresh for 1000BASE-KX LPI R/W 0 = Normal engergy refresh for 1000BASE-KX LPI Proposed Response Response Status W PROPOSED ACCEPT IN PRINCIPIE
C/ 45 SC 45.2.7.15b P 100 L 31 # 217 Parross Hugh Cisco C	There is no function to reference, therefore the registers should be deleted. See #216
Comment Type E Comment Status D sub-clause is mis-numbered SuggestedRemedy	C/ 46 SC 1.7 P 103 L 25 # 247 Bennett, Michael LBNL Comment Type E Comment Status D It looks like an editor's note follows the primative PLS_DATA_VALID.indication on the
Proposed Response Response Status W PROPOSED ACCEPT.	SuggestedRemedy move the note to it's own line
C/ 45 SC Table 45-145 P 98 L 18 # 97 Koenen, David Hewlett Packard Hewlett Packard <td>Proposed Response Response Status W PROPOSED ACCEPT.</td>	Proposed Response Response Status W PROPOSED ACCEPT.
Comment Type T Comment Status D Missing support for 1000Base-KX. Please add to table.	
SuggestedRemedy Change definition of bit 7.60.4 to read:	
1000BASE-KX 1 = EEE is supported for 1000BASE-KX R/W 0 = EEE is not supported for 1000BASE-KX	
Proposed Response Response Status W PROPOSED ACCEPT.	

C/ 46 SC 1.7 Page 33 of 69 11/4/2008 1:51:45 PM

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C/ 46	SC 46.1.1	P 190	L 16	# 29	Cl	46	46 SC 46	46 SC 46.3.1.2	46 SC 46.3.1.2 P103	46 SC 46.3.1.2 P103 L40
Piers	S	Avago Techno	ologies		Hajducz	zer	zenia, Marek	zenia, Marek	zenia, Marek ZTE Co	zenia, Marek ZTE Corporation
Page an Page an Bullet e and exp continu	Type T nd line number of a says 'The RS g pects continuous lous? Need a m	Comment Status D of P802.3ayD2.3 enerates continuous data or s data or control characters o ention of the EEE option som	control charact n the receive pa lewhere in this	ers on the transmit path ath.' If EEE, is it still list, anyway.	Comment Text s absen signal transn Simila	T ice ice s ni:	ype ys "In th e of erro are de-a ssion go commer	ype T ys "In the absen e of errors and le are de-asserted ssion going on comment on pa	ype T Comment Status D ys "In the absence of errors or low powe e of errors and low power idle,", since T are de-asserted by the RS for each oct ssion going on comment on page 105, line 26.	ype T Comment Status D ys "In the absence of errors or low power idle," but shou e of errors and low power idle,", since TXC are de-asserted by the RS for each octet of the preambl ssion going on comment on page 105, line 26.
er con Ised F ROP(nment Response DSED ACCEPT	Response Status W			Suggestee As pe Proposed	dRe r cc Re	medy mmer sponse	emedy omment sponse	amedy omment sponse Response Status V	amedy omment sponse Response Status W
inition of X llet item: XGMII ma et for some	(GMII iy also PHY	with LPI is still continuous, so o support low power idle signa types (see Clause 78).	o e) doesn't neo aling as defined	ed to be changed. I for Energy Efficient	The c is unn Chang	0 16	or "In the	immenter is corre acessary for that je "In the absence	immenter is correct to highlight the amb acessary for that sentence. Low power in ge "In the absence of errors or low power	provide a second
-	SC 46.1.7	P 103	L 13	# 28	Also c)	n page 1	n page 105, line 2	n page 105, line 26	n page 105, line 26
3		Avago Techno	ologies		<i>CI</i> 46 Barrass. ⊦	łu	SC 46 ah	SC 46.3.1.2 ah	SC 46.3.1.2 <i>P</i> 103 ah Cisco	SC 46.3.1.2 <i>P</i> 103 <i>L</i> 52 ah Cisco
ype E ibed': this Remedy ed	isn't v	Comment Status D what the base document says	!		Comment There Suggestee Repla	Type is no dRem ice	ena iedy	T enable for L nedy	T Comment Status D enable for LPI. redy	T Comment Status D enable for LPI.
or R DPC	Cesponse DSED ACCEPT.	Response Status W			When	LPI r	node	node is enal	node is enabled (see [Editor's note	node is enabled (see [Editor's note add reference]),
					with					
					The P Proposed PROF	'HY shall ir <i>Response</i> 'OSED AC	r	nterpret ; CCEPT.	nterpret • <i>Response Status</i> V CCEPT.	nterpret

C/ 46 SC 46.3.1.2 Page 34 of 69 11/4/2008 1:51:45 PM

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C/ 46	SC 46.3.1.2	P 104	L 20	# 33	C/ 46	SC 46.3.1.5a	P 104	L 41	# 169				
Dawe, Piers	i	Avago Technol	ogies		Hajduczer	nia, Marek	ZTE Corporatio	'n					
Comment T	уре Т	Comment Status D			Comment Type ER Comment Status D								
l believe	e there is a small	bug in one of these tables. I	t may be this: the	e parameter first eight	Reference missing; also on page 107, line 12								
ZERO, (ZERO, ONE of a frame (a preamble octet). But we know what a preamble octet is.					SuggestedRemedy							
SuggestedF	Remedy				Pleas	e update							
Should Table 40	the PLS_DATA.iı 6-4.	ndication parameter for Start	be 10101010 (bir	nary)? Similarly in	Proposed PROF	Response POSED ACCEPT I	Response Status W N PRINCIPLE.						
Proposed R PROPO	esponse ISED ACCEPT II	Response Status W N PRINCIPLE.			See #	218							
The pre	amble octet is re	placed by the start character,	, that is why there	e is no applicable	<i>CI</i> 46 Dove, Dar	SC 46.3.1.5a niel	P 105 ProCurve Netw	L 6 orking	# 334				
Howeve that cell	er, the word "repla must be change	aces" has mysteriously disap d back to its original form:	peared from this	location. Therefore	Comment Figure Suggestee	<i>Type</i> T e 46-7a shows wal dRemedy	Comment Status D ke time being 4 bit times long		LATE				
'No app	licable paramete	r, replaces first eight ZERO, (ONE of a frame (a	a preamble octet). "	Insert wake	squiggly "some til time is variable.	ne later" symbols into the figu	re to indicate	that the time duration of				
C/ 46	SC 46.3.1.2	P 104	L 3	# 30	Proposed	Response	Response Status W						
Dawe, Piers			ogies		PROF	POSED ACCEPT.	,						
Comment T	ype ⊑ / up the table				C/ 46	SC 46.3.2.2	P 106	/ 38	# 32				
SuaaestedF	Remedy				Dawe, Pie	ers	Avago Technol	ogies					
Resize	column widths to	contents, making the table fu	ull width. Also Ta	ble 46-4.	Comment	Туре Т	Comment Status D						
Proposed R	esponse	Response Status W			Where can be	e RXC<3:0> is 0xF e high.	(all ones) no RXC line can b	e low. When i	it's 0x0, no RXC line				
	GED ACCELLI.				Suggestee	dRemedy							
Resize t	tables 46-3 and 4	16-4.			Remo during	ove the low lines at g 'frame data'.	either end of the RXC<3:0> o	composite trac	e, remove the high line				
					Proposed	Response	Response Status W						
					PROF	POSED REJECT.							
					The si consid base o	tyle is used becau dered inappropriat clause.	se RXC is a vector, therefore e. Furthermore, the style is co	using a single nsistent for all	line (high or low) is I of the diagrams in the				

Cl	46	
SC	46.3.2.2	

proposed	responses	IEEE
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Cl 46 Dawe, Piers	SC 46.3.2.2	P 106 Avago Techn	L 52 ologies	# 31	Cl 46 SC 46.3.2.4a P 106 L 12 # 218 Barrass, Hugh Cisco	
Comment Ty Because diagram	pe T there is now a should work for	Comment Status D 'basic frame' (as distinguish envelope frames too, it per	ed from an 'enve	elope frame') and this In P802 3ba we have	Comment Type T Comment Status D The editor's note indicates that a control bit is needed to indicate "clock stoppable"	
used 'Fra	ame reception v	vithout error'			SuggestedRemedy	
SuggestedRe	emedy				Add a control bit in Clause 45 PCS registers (separate comment)	
Change	Basic frame ree	ception' to 'Frame reception	without error'		Change	
Proposed Re PROPOS	esponse SED ACCEPT.	Response Status W			While the PHY device is indicating low power idle the PHY device may halt the RX_CLK a shown in if the RX_CLK_stoppable bit is asserted [Editor's note add reference].	as
					With	
					While the PHY device is indicating low power idle the PHY device may halt the RX_CLK a shown in [figure 46-8a] if and only if the RX_CLK_stoppable bit is asserted [45.2.3.1.3a].	as
					Proposed Response Response Status W PROPOSED ACCEPT IN PRINCIPLE.	
					Accept the remedy for this comment, additionally replace similar paragraph in 46.3.1.5a (page 104 line 40) as follows:	
					Change	
					The MAC device may halt TX_CLK at any time more than 128 clock cycles after the start the low power idle state as shown in Figure 46-7a if the TX_CLK_stoppable bit is asserte [Editor's note add reference].	t of ed
					With	
					The MAC device may halt TX_CLK at any time more than 128 clock cycles after the start the low power idle state as shown in Figure 46-7a if and only if the TX_CLK_stoppable bi is asserted [45.2.3.1.3a].	t of it
					C/ 46 SC 46.3.2.4a P107 L 20 # 333	
					Dove, Daniel ProCurve Networking	
					Comment Type T Comment Status D L	ATE
					Figure 46-8a shows wake time being 4 bit times long	
					SuggestedRemedy	
					Insert squiggly "some time later" symbols into the figure to indicate that the time duration wake time is variable.	of
					Proposed Response Response Status W PROPOSED ACCEPT.	

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/ 46 Page 36 of 69 SC 46.3.2.4a 11/4/2008 1:51:45 PM

IEEE P802.3az D1.0 Energy Efficient Ethernet comments

	L 39	# 64						
Diab, Wael Broadcom Healey, Adam LSI Corporation	า							
Comment Type TR Comment Status D Comment Type T Comment Status D								
It is unclear how frequently the /D20.5/ has to be inserted for all the XGMII colums to respond LPI. Conversly, it is also unlceat how long of an absence of the /D20.5/ character for the XGMII to respond as Idle. The text in 48.2.6.2.1 and the PCS transmit source state diagram being a standard as (20.7.4)	The text in 48.2.4.2 and Table 48-2 do not adequately describe the low power idle encoding process. The normative transmit process is defined in 48.2.6.2.1 and the PCS transmit source state diagram (Figure 48-6). Per Figure 48-6, I believe to the second destruction of the PCS transmit source state diagram (Figure 48-6).							
SuggestedRemedy Contrary to the definition in this subclause.	contrary to the definition in this subclause.							
Please specify the duration / rate that the /D20.5/ character has to appear SuggestedRemedy								
Proposed Response Response Status W Modify the PCS transmit source state diagram (Figure Idle encoding, mark the modifications as optional, and appropriate.	Modify the PCS transmit source state diagram (Figure 48-6) to clearly define Low Power Idle encoding, mark the modifications as optional, and define new state variables as appropriate.							
The text seems to be clear. Every time the XGMII coding of TXC/TXD indicates LPI, the PCS encodes K.28.0, K28.3 or K28.5 in all columns except one (chosen randomly) that is encoded K.20.5.								
There is nothing to suggest that any "rate" or "frequency" is suggested other than the Significant changes will be required to the clause to re XGMII clock frequency. Significant changes will be required to the clause to re machines and the operation of Low Power Idle in the	eflect the addition that the addition of the second s	itions to the state receive directions.						
Cl 48 SC 48.2.3 P 232 L 35 # 34 The editor will work with the commenter to prepare a draft. Dawe, Piers Avago Technologies addressed draft.	more complet	te definition in the next						
Comment Type TR Comment Status D Cl 48 SC 48.2.4.2 P 108	L 39	# 65						
Page and line numbers in P802.3ayD2.3. Healey, Adam LSI Corporation	n							
Need to make clear that the new codings in Table 48-2 and Table 48-3 are optional. Comment Type T Comment Status D								
SuggestedRemedy The text in 48.2.4.2 and Table 48-2 do not adequately	/ describe the	low power idle decoding						
Add sentence after 'is specified in Table 48-3.': The ability to transmit or receive Low Power Idle is an option, to support an option of 1000BASE-KX only.' Power Idle would be decoded as K30.7 (Invalid XGM definition in this actual decoded as K30.7 (Invalid XGM	process. The normative receive process is defined in 48.2.6.2.4 and the PCS receive state diagram (Figure 48-9). Per Figure 48-9, I believe Low Power Idle would be decoded as K30.7 (Invalid XGMII character) which contrary to the							
Proposed Response Response Status W deinhuon in this subclause.								
PROPOSED ACCEPT IN PRINCIPLE. Suggesteakerneay	o oloorly dofir	a Low Dowor Idla						
Change 48.2.3 (as suggested). decoding, mark the modifications as optional, and def appropriate.	ine new state	variables as						
Add sentence after 'is specified in Table 48-3.': Proposed Response Response Status W								
'The ability to transmit or receive Low Power Idle is an option for certain PHYs to support PROPOSED ACCEPT IN PRINCIPLE. Energy Efficient Ethernet (see Clause 78).'								
See #64								

C/ **48** SC **48.2.4.2**

IEEE P802.3az D1.0 Energy Efficient Ethernet comments

C/ 48 SC 48.2.4.2 Dove, Daniel	P 110 ProCurve Netv	L 12 vorking	# 332		<i>Cl</i> 48 McClellan	SC 4 , Brett	18.2.4.2	P 110 Solarflare	L 18	# 291
Comment Type ER Corr There is and Angstrom symbo	LATE	Comment Type T Comment Status D I'm concerned about the choice to break up XAUI coded idle columns with the /D20.5/ character to indicate LPI. From my limited knowledge of the XGXS PCS receiver it appears								
Replace with proper symbol w Proposed Response Resp PROPOSED ACCEPT IN PRI		to me that breaking the A columns will prevent the PCS from finding or maintaining column alignment and breaking the R column may prevent the PCS from performing clock rate compensation, thus causing fault conditions which would be indicated by local fault at the XGMII and requiring additional recovery time.								
Replace with +/- symbol.	P 110	L 18	# 63		l woul any co can di	d like to l oncern. C rect me	hear comm Dr, if this ha to a presen	nent from vendors of the XGX as already been reviewed with tation justifying the change.	S PCS on wh in the task fo	nether this change is of prce perhaps the editor
Comment Type T Con "Low Power Idle is indicated b during I ."	nment Status D y inserting /D20.5/ rand	domly in one co	umn of each row		Proposed PROF See #	Respons 'OSED A 63	se ACCEPT IN	Response Status W I PRINCIPLE.		
A /D20.5/ code-group is rando also includes the align colu- repeated deskew_error indicat = FAIL). SuggestedRemedy Correct definition per commen Proposed Response Resp PROPOSED ACCEPT IN PRI Add after 'during I ' 'to replace K or R (not A	mly inserted into one L Imn A , and inserting ions and eventually lo t. bonse <i>Status</i> W NCIPLE.	ANE of each /k /D20.5/ into an ss of alignment	(or R COLUM A will result in Indication (align_s	IN. status	Cl 48 Healey, Ad Comment How c rando Suggested Rigord succe Proposed PROF The us impler rando Howe Repla with "i	SC 4 Jam Type loes a us mness? JRemedy Jusly defi ssive col Respons 'OSED A ser of the nented b m uniforr ver, the t ce "inser nserting	IB.2.4.2 T ser of the si v ine the des lumn. se ACCEPT IN e standard bullet item " m distribution term "rando tring /D20.5/ wit	P 110 LSI Corporation Comment Status D tandard know if the implement sired progression of /D20.5/ co Response Status W I PRINCIPLE. has already overcome his fea e) When not sending an A , on between the two." om" needs a little more clarity. 5/ randomly in one column" th a random uniform distribution	L 18 tation meets ode-group ins r of "random either K o	# 66 the requirement of sertion for each ness" when he r R is sent with a

C/ 48 SC 48.2.4.2 Page 38 of 69 11/4/2008 1:51:45 PM

IEEE P802.3az D1.0 Energy Efficient Ethernet comments

C/ 48 S Dove, Daniel	SC 48.2.4.2	P 110 ProCurve Net	L 18 working	# 337	<i>Cl</i> 49 Healey, A	SC 4 dam	19.2.4.7	P 111 LSI Corpo	L 45 pration	# 67	
Comment Type The words	e TR s column and re	Comment Status D ow are transposed		LATE	Comment Type T Comment Status D In Table 49-1, the possible 8B/10B codes for Low Power Idle include /D20.5/.						
SuggestedRer Replace w	<i>nedy</i> /ith "randomly i	in one row of each column	during I .		Suggeste Add /	dRemed D20.5/ to	/ the list w	ith reference to 48.2.4.2			
Proposed Res PROPOSE	<i>ponse</i> ED ACCEPT.	Response Status W			Proposed PROF	Respon POSED /	se ACCEPT.	Response Status W			
C/ 49 S Dawe, Piers	SC 49.2.4.4	P 268 Avago Techn	L 11 ologies	# 35	<i>CI</i> 55 Taich, Din	SC nitry		P Teranetics	L	# 178	
<i>Comment Type</i> Page and Need to m	e TR line numbers i lake clear that	<i>Comment Status</i> D n P802.3ayD2.3. the new codings in Table 4	9-1 are optional.		Comment EEE i clause	<i>Type</i> s clause e 72.	E 78. There	Comment Status D are multiple places in c	lause 53 when EEI	E is referenced as	
SuggestedRemedy Add sentences after 'The control characters and their mappings to 10GBASE-R control codes and XGMII control codes are specified in Table 49-1. All XGMII and 10GBASE-R control code values that do not appear in the table shall not be transmitted and shall be treated as an error if received.':			Suggeste Upda Proposed PROF	dRemed te refere Respon POSED /	V nces to EE se ACCEPT.	EE according to the com Response Status W	ment				
10GBASE be transmi shalls.	-KR only.' If th itted and shall	is option is not supported o be treated as an error if rec	r not enabled, Lo eived.' Add PI	by Power Idle shall not CS to support the	Cl 55 Parnaby,	SC Gavin		P Solarflare	L Communica	# 309	
Proposed Res	<i>ponse</i> ED ACCEPT II	Response Status WN PRINCIPLE.			<i>Comment</i> Gene	<i>Type</i> ral.	E	Comment Status D		Late email	
Change 49	9.2.4.4 Il not be transn	nitted and shall be treated a	s an error if rece	ived."	Check Suggeste	k capitali dRemed	zation of a	auto-negotiation			
Add 'The ability Energy Eff shall not b	/ to transmit or ficient Etherne e transmitted a	receive Low Power Idle is t (see Clause 78). If this op and shall be treated as an e	an option for cer tion is not suppo rror if received.	ain PHYs to support ted Low Power Idle	Proposed PROF	Respon POSED /	se ACCEPT.	Response Status W			

CI **55** SC

IEEE P802.3az D1.0 Energy Efficient Ethernet comments

C/ 55	SC 124	Р	L	# 177	C/ 55	SC 55	.1.1	P 114	L 36	# 153
Taich, Din	nitry	Teranetics			Tidstrom,	Rick		Broadcom		
Comment	Type TR	Comment Status D			Comment	Туре І	E	Comment Status D		
THP s	state is not define	d at the beggining of the WAK	E signal Transr	nission.	Refere	ences the	Energy	Efficient Clause as Clause 72.		
Suggestee At the	dRemedy e start of each WA tialized with zeros	AKE signal the THP feedback o	delay line shall		Claus 10GB	e 72 is title ASE-KR".	ed "Phy	rsical Medium Dependent Subla	yer and Base	eband Medium, Type
Proposed	Response	Posponso Status W			Suggestee	dRemedy				
For di	iscussion by the c				Chang	ge from Cl	ause 72	2 to Clause 78.		
		jioup.			Claus	e 78 is title	ed "Ene	ergy Efficient Ethernet (EEE)".		
C/ 55	SC 3.2.2.21	P 124	L 19	# 197	Proposed	Response	9	Response Status W		
Graba, Jin	n	Broadcom			PROF	OSED AC	CEPT.			
Comment	Type TR	Comment Status D				00 FF	4.0	Daaa	1 40	# 474
The fi	rst normal idle co	deword in the first wake frame	e after an alert is	likely to contain	C/ 33	30 33	.1.3	P 114	L 43	# 174
enois		be used as a citterion for any v	vake frame eno					Terariettos		
Suggeste	dRemedy	aluala tha first isla an da usand a	ften en elentin i		Comment	Type I	ER	Comment Status D		
detect	fion.	clude the first idle code word a	ifter an alert in a	any wake frame error	1 l he 1 10GF	text reads:	: -IYs oni	tionally provide support for Low	Power Idle (PI) as part of Energy
Proposed	Response	Response Status W			Efficie	nt Etherne	et (see	Clause 72). This extension allo	ws PHYs to e	enter a low-power idle
For di	iscussion by the c				state of	of operatio	n wher	the MAC requests low power of	operation."	
C/ 55	SC 55.1	P 114	L 13	# 152	Since also w	10GBASE /hen Link I	E-T sup Partner	ports assymetrical LPI operatio	nal mode PH ep" signal.	Y can enter LPI state
Tidstrom,	Rick	Broadcom			Suggested	dRemedy				
Comment Refer	<i>Type</i> E ences the Energy	Comment Status D Efficient Clause as Clause 72	2.		Updat mode	e text to ir	nclude p	possibility to enter LPI mode als	o when Link	Partner has entered LPI
Claus 10GB	e 72 is titled "Phy ASE-KR".	vsical Medium Dependent Sub	layer and Basel	pand Medium, Type	Proposed PROF	Response POSED AC	, CEPT	Response Status W IN PRINCIPLE.		
Suggestee	dRemedy				The te	ext needs t	to clarif	v that the transition to LPI state	can occur in	transmit and receive
Chang	ge from Clause 7	2 to Clause 78.			directi	ons.		,		
Claus	e 78 is titled "Ene	ergy Efficient Ethernet (EEE)".			The e	ditor will cl	hange t	the text appropriately.		
Proposed	Response	Response Status W								
PROF	POSED ACCEPT									

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/ 55 SC 55.1.3

proposed responses IEEE IEEE IEEE P802.3az D1.0 Energy	Efficient Ethernet comments Nov 2008
C/ 55 SC 55.1.3 P 114 L 43 # 154 Tidstrom, Rick Broadcom Broadcom	C/ 55 SC 55.1.3.3 P 116 L 24 # 155 Tidstrom, Rick Broadcom
Comment Type E Comment Status D References the Energy Efficient Clause as Clause 72. Clause 72 is titled "Physical Medium Dependent Sublayer and Baseband Medium, Type 10GBASE-KR". SuggestedRemedy Change from Clause 72 to Clause 78.	Comment Type T Comment Status D The following sentence is vague with regards to how many LP_IDLE codewords are required for a transition to Low Power Idle: "In the transmit direction the transition to the LPI transmit state is initiated by the reception of LP_IDLE codewords on the XGMII interface." SuggestedRemedy Change the sentence to define the number of LP_IDLE codewords required for a transition
Clause 78 is titled "Energy Efficient Ethernet (EEE)". Proposed Response Response Status W PROPOSED ACCEPT. C/ 55 SC 55.1.3.1 P116 L11 # 311	to LPI. Proposed Response Response Status W PROPOSED ACCEPT. The editor will rewrite the text to clarify and make the number explicit.
Parnaby, Gavin Solarflare Communica Comment Type E Comment Status D Late email The PMA supports both a low power idle trapemit state and a low power idle receive state	[the number is defined later, but this is an overview clause so it was not included here. To avoid confusion the editor will add it to this subclause]
The PMA supports both a low power falle transmit state and a low power falle fecerve state. The current statement suggests there is only one PMA low power idle state. SuggestedRemedy Change the text to 'the PMA supports a low power idle transmit state and a low power idle receive state.'	C/ 55 SC 55.1.3.3 P 116 L 52 # 179 Taich, Dimitry Teranetics Comment Type ER Comment Status D Text reads: Text reads:
Proposed Response Response Status W PROPOSED ACCEPT. The editor will rewrite the text to make the transmit and receive states clear.	"The MAC is responsible for controlling transitions to and from the LPI state via XGMII signaling." MAC is only responsible for transitions to and from LPI state of the Transmit path. Receive path operational mode depends on the Link Partner Operational Mode (Normal or LPI).

SuggestedRemedy

Update text accordingly

Proposed Response Response Status W

PROPOSED ACCEPT.

C/ 55 SC 55.1.3.3 Page 41 of 69 11/4/2008 1:51:45 PM

proposed responses	IEEE	IEEE	P802.3az D1.0 Energ	y Efficient E	thernet comr	nents		Nov 2008
C/ 55 SC 55.1.3.3 Tidstrom, Rick	P 117 Broadcom	L 4	# 156	<i>Cl</i> 55 Barrass, H	SC 55.2.1 ugh	P 118 Cisco	L 43	# 220
Comment Type T The senetence below inc	Comment Status D dicates that the EEE Receive	e state machine	e is in the PCS.	<i>Comment</i> The ed	<i>Type</i> T ditor's note asks	Comment Status D a question.		
"The EEE Receive state in Figure 55-TBD."	machine is contained in the	PCS Receive	unction and is specified	The an Annex	nswer is that the 28C, no definiti	e resolution of the negotiable ion of the negotiation is requi	timer parameters red in this section	will be defined in
SuggestedRemedy				Suggested	lRemedy			
The EEE Receive state	machine as currently defined	is in the PMA	sublayer.	Delete	the editor's not	e.		
Possible remedies:				Proposed PROP	Response OSED ACCEP1	Response Status W		
 Change PCS to PMA. Redefine the state ma The state machine loc 	achine to be in the PCS. cation is vender determined.			The ed	ditor will remove	the note.		
Proposed Response For discussion by the gr	<i>Response Status</i> W oup.			[to cla the 10 Techn	rify: the note wa GBASE-T PHY, ology Depender	s not asking whether the resolved value whether the resolved value the resolved value of the the resolved and a definition of the theta was a state of theta s	blution/negotiation ue should be pas f the parameters i	n needs to take place in sed across the included in this clause].
New state diagrams will	be presented to the group.			Cl 55 Parnaby, (SC 55.2.2.3 Gavin	.1 P 119 Solarflare Co	L 10 ommunica	# 296
C/ 55 SC 55.1.4 Parnaby, Gavin	P 118 Solarflare Con	<i>L</i> nmunica	# 297	Comment	<i>Type</i> E	Comment Status D		Late email
Comment Type E	Comment Status D		Late email	Senter	ice is not graini			
Figure 55-4 contains two	o descriptions 'dashed rectan	gles are used	o indicate signals'	Suggested	IRemedy			
SuggestedRemedy				Remo	ve 'and' from 'a	and the transmit function'		
Delete one description				Proposed	Response	Response Status W		
Proposed Response PROPOSED ACCEPT.	Response Status W			PROP	OSED ACCEPT	Γ.		

C/ 55 SC 55.2.2.3.1

IEEE P802.3az D1.0 Energy Efficient Ethernet comments

C/ 55 SC 55.3.2.2.21 P 124 L # 256 Tellado, Jose Teranetics Teranetics Teranetics	C/ 55 SC 55.3.2.2.21 P 124 L 32 # 176 Taich, Dimitry Teranetics Teranetics Teranetics Teranetics Teranetics
Comment Type TR Comment Status D Comment about editor note: Make Tq+Tr = 128. This way LPI cycle period is indep of Tr and a power of 2. Less implementation headaches. Keeps multple modems is switch allgined (otherwise random based on LP)	Comment Type TR Comment Status D ident Editorial comment reads: "The process by which PCS scrambler synchronization is maintained during quiet signaling has not been specified. Simple solutions would be to freeze the scramblers during quiet.
SuggestedRemedy	[scrampiers are not used for the alert sequence]."
Proposed Response Response Status W For discussion by the group.	I suspect that freezing scramblers during Quiet Time and enabling them for Refresh/Data is unnecessary transition process sophistication and can raise yet another sync concern. Typical scramblers implementation takes virtually no power, why don't we leave them running all the time, during Quiet periods as well?
The editor suggests changing the allowed Tq/Tr values to the following {Tq, Tr} pa Tq+Tr=128	, with SuggestedRemedy Editor to put specific note in the text that PCS scrambler should be running constantly and not be affected by LPI mode states/transitions
{4,124}, {8, 120}, {16, 112}, {32, 96}	Proposed Response Response Status W
CI 55 SC 55.3.2.2.21 P 124 L # 257	PROPOSED ACCEPT.
Tellado, Jose Teranetics	C/ 55 SC 55 3 2 2 21 P 129 / 51 # 292
Comment Type TR Comment Status D	McClellan, Brett Solarflare
If link partner in LPI then offset by~1/2 LPI super-frame, othewise Master starts rel cycle~1/2 frame after Quiet and Slv 1 frame after. This prevents case where both simultanousely without knowing what LP is doing.	sh er Comment Type E Comment Status D Sentence is awkward: The SLEEP signal is signaled using 9 full LDPC frames
SuggestedRemedy	SuggestedRemedy The SLEEP signal uses 9 full LDPC frames
Proposed Response Response Status W PROPOSED REJECT.	Proposed Response Response Status W PROPOSED ACCEPT.
More details are needed to support this comment and the synchronization mechar not clear what text is required in the standard to make this scheme work.	n. It is The editor will clarify the text as suggested.
At least one synchronization proposal will be presented at the November meeting	

C/ 55 SC 55.3.2.2.21

proposed responses IEEE IEEE IEEE P802.3az D1.0 Energy	y Efficient Ethernet comments	Nov 2008
C/ 55 SC 55.3.5.1 P 126 L # 259 Tellado, Jose Teranetics Te	Cl 55 SC 55.3.5.2 P 126 L 24 Parnaby, Gavin Solarflare Communica	# 312
Comment Type TR Comment Status D -53dBm is too low. It's 58dB below the PBO=0 tx level and below tx PSD mask.	Comment Type T Comment Status D The clause does not define what quiet means for a non-active pair.	Late email
SuggestedRemedy Proposed Response Response Status W	SuggestedRemedy State that pairs that are not transmitting the refresh signal must meet the requirements of clause 55.3.5.1, except if the alert signal is being transm Proposed Response Response Status W	e tx power nitted.
PROPOSED REJECT. The editor believes that the comment may be valid, but requests that the commenter suggest a remedy.	PROPOSED ACCEPT. Cl 55 SC 55.3.5.2 P126 L 30 Parnaby, Gavin Solarflare Communica	# 301
[Note that the -53dBm value is taken from the 802.3an requirement for a disabled transmitter in 55.4.2.3.2]	Comment Type T Comment Status X	Late email
C/ 55 SC 55.3.5.2 P 126 L 19 # 260 Tellado Jose Terapetics	What happens if an alert occurs at the same time as a refresh on anothe the proposals make clear whether this refresh is transmitted or not.	er pair? None of
Comment Type TR Comment Status D Comment concerning Editor note: Set TBD=0. No need for extra symbols.	If the refresh is not transmitted, this could cause problems with adaptive expecting valid PAM-2 precoded data at that time. SuggestedRemedy	filters, which are
Proposed Response Response Status W PROPOSED ACCEPT IN PRINCIPLE. The editor will remove the requirement.	Proposed Response Response Status W For discussion by the group. CI 55 SC 55.3.5.2 P 126 L 30 Parnaby Gavin Solarflare Communica	# [300
Cl 55 SC 55.3.5.2 P 126 L 23 # 299 Parnaby, Gavin Solarflare Communica Solarflare Communica Comment Type T Comment Status D Late email Active pair is not defined. SuggestedRemedy State that the active pair defines only which pair will be used for the next refresh.	<i>Comment Type</i> T <i>Comment Status</i> X I am concerned that receivers may synchronize training to a refresh sign replaced by the alert sequence. In the present proposal alert is pam-2, b and therefore cannot be used to update coefficients in the same manner precoded refresh signal. Therefore the alert could corrupt coefficients / ti particularly a concern if the alert replaces a refresh signal. The alert is fo immediately by PAM-16 so there is little opportunity to recover the coefficients	Late email nal which is but not precoded, r as the pam-2 iming. This is blowed cients.
[Some earlier alert proposals also used active pair to determine where the alert would appear but this is no longer the case]. Proposed Response Response Status W PROPOSED ACCEPT. The editor will clarify the text as suggested.	[however, alert corrupts only 1 pair] SuggestedRemedy See presentation. Proposed Response Response Status W For discussion by the group.	

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

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 55
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 SC
 55.3.5.2
 11/4/2008 1:51:45 PM

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<i>Cl</i> 55 Tellado, Jo	SC 55.3.5.2	P 126 Teranetics	L 35	# 256	C/ 55 Parnaby, (SC : Gavin	55.3.5.2	P 126 Solarflare Com	L 40 nmunica	# 302
Comment Comm easy t	<i>Type</i> T nent concerning o detect with ve	Comment Status X Editor note: This is an implem ry low latency. Filter/timing upo	entation detail o dates per lane al	f the rx. Alert signal is re happening every	<i>Comment</i> This p	<i>Type</i> aragrap	T h is vague	Comment Status D		Late email
128x4 Regar This is	ding coruption	g the update a couple of frame of subsequent LDPC codeword n detail also. We will have seve	s later (<<512) v I: eral Wake LDPC	vill have no effect	Impre difficu See a	cise syn It and ca Iso item	s 4) and 5)	on could limit power savings perability problems. on page 128	opportunity, m	ake testing more
transit anywa	ioning rx from L iy and has no u	PI to normal data mode. First I nique information. See present	LDPC Frame wil ation	I likely be corrupted	Suggestee	dRemed	ly			
Suggested	Remedy				Use th meetir	ne synch ng.	nronization	scheme proposed in presen	tation submitte	ed to the November
/	_				Proposed	Respon	se	Response Status W		
Proposed	Response	Response Status W			For di	scussior	n by the gro	oup.		
For dis	scussion by the	group.			C/ 55	SC	55.3.5.2	P 128	L 12	# 303
C/ 55	SC 55.3.5.2	P 126	L 37	# 313	Parnaby, (Gavin		Solarflare Com	nmunica	
Parnaby, 0	Gavin	Solarflare Cor	mmunica		Comment	Туре	т	Comment Status D		Late email
Comment The e	<i>Type</i> T ditor's note stat	Comment Status D es that the non-THP encoded s	signal could corr	Late email upt following symbols.	Editor PAM-2	's note r 2 trainin	ecommeno g sequenci	ds that we require LPI capab e.	le PHYs to sup	pport the long LFSR
lf we r	equire that the	delay line of the THP is initializ	ed appropriately	then this problem	This s	eems se	ensible, as	it reduces the number of opt	ions in the sta	ndard.
goes a	away. [this initia	lization is required during link t	raining so the ca	apability already exists].	Suggested	dRemed	ly			
S <i>uggested</i> Requi	<i>Remedy</i> re that the delag	/ line of the THP is initialized d	uring the alert si	gnal.	Make seque	it a requ ince.	uirement th	at LPI capable PHYs suppor	t the long LFS	R PAM-2 training
Proposed	Response	Response Status W			Proposed	Respon	se	Response Status W		
For dis	scussion by the	group.			PROF	POSED	ACCEPT II	N PRINCIPLE.		
					Tholo	ditor will	add a rog	uiromont that EEE canable E		port the long ESP

The editor will add a requirement that EEE capable PHYs shall support the long LFSR PAM-2 training sequence after initial training. The long LFSR training sequence will be used for refresh signals during the LPI state. It is not a requirement that EEE capable PHYs use the long LFSR sequence during initial training.

C/ 55 SC 55.3.5.2

IEEE P802.3az D1.0 Energy Efficient Ethernet comments

Cl 55 Tidstrom,	SC 55.3.5.2 Rick	P 128 Broadcom	L 16	# 157	C/ 55 Parnaby, G	SC : avin	55.3.5.2	F Sol	P 139 arflare Cor	<i>L</i> mmunica	# 310
Comment In the	t <i>Type</i> T Edititor's notes, th	Comment Status D ne following question is asked	l:		Comment 7 Propos	<i>ype</i> ed Figu	T ure 55-19	Comment Stati	is D		Late email
"Do w <i>Suggeste</i> Curre	ve need a test moo dRemedy ently, there are thre	de, and what should be tested	I?" es defined. If te	st modes are required	With th to 1 co The las	e curre nplete t sleep	nt state m frame cou	achine the sleep Id be transmitted	signal coul in state TX	d be sent for § (_NORMAL].	€ or 10 frames [since up
for EE <i>Proposed</i> PROF	EE, then another to <i>I Response</i> POSED ACCEPT. need extra test mo	est mode bit will need to be a <i>Response Status</i> W	dded. mode bits.		as it de If the e elimina refresh	tects s nd of th ted. Th es.	leep. ne sleep si nere is still	gnal is used to tin an ambiguity if th	ne refreshe e start of th	es then this an he sleep signa	nbiguity needs to be al is used to time
At lea	ist one presentatio	on on test modes will be made	e at the Novem	ber meeting.	Suggested Use the	Remed e synch	y Ironization	mechanism desc	ribed in the	e submitted p	resentation.
Cl 55 Parnaby,	SC 55.3.5.2 Gavin	P 129 Solarflare Con	L 42 nmunica	# 304	If the sprobler	/nchror	nizatioin m s to be sol	echanism depenoved another way.	ds on timin	g based on th	e sleep signal then this
Comment tx_lpi	t <i>Type</i> T _state_active shou	Comment Status D uld be defined more rigorously	<i>.</i>	Late email	Proposed F PROPO	Respon DSED /	se ACCEPT II	Response Statu N PRINCIPLE.	s W		_
Suggester Define is sen	does the LPI stat dRemedy e that the LPI state it (on the tx side) /	e start and end ? e begins immediately after the detected (on the rx side).	e sleep finishes	and lasts until the alert	Any syn At leas	ng mis nchroni t one pi	zation me roposal for	chanism needs to r a synchronizatio	take this i n mechani	issue into acco	n. ount. esented at the November
Proposed PROF Editor	POSED ACCEPT	Response Status W IN PRINCIPLE.	v after the slee	n finishes and lasts	C/ 55 Parnaby, G	SC :	55.3.5.2.1	F Sol	²131 arflare Cor	L 21 mmunica	# 315
until t when	he alert is sent col the sleep is detec	mpletely (on the transmit side ted until the alert is detected.) and on the re	ceive side lasts from	Comment 7 The lpi frames	<i>ype</i> _tx_refi . This is	E resh_timer s incorrect	Comment Statu r is defined as usi	<i>is</i> D ng a period	d equal to lpi_	Late email quiet_period LDPC
					Suggested	zemea	у				

State that the lpi_tx_refresh_timer uses a period equal to lpi_refresh_period LDPC frames.

Proposed Response Response Status W PROPOSED ACCEPT.

CI 55	Page 46 of 69
SC 55.3.5.2.1	11/4/2008 1:51

1:51:45 PM

IEEE P802.3az D1.0 Energy Efficient Ethernet comments

<i>Cl</i> 55 <i>SC</i> 55.3.5.2.1 Lundy, Sean	P 131 Aquantia	L 21	# 293	C/ 55 Parnaby, C	SC 55.3.5.2.2 Bavin	P 129 Solarflare C	L 51 Communica	# 320
Comment Type ER lpi_quiet_period should SuggestedRemedy	Comment Status D be replaced with lpi_quiet_time		LATE	<i>Comment</i> The te Furthe Same	Type E xt refers to low pour rmore the text doe for rx lpi req	Comment Status D wer idle mode; everywher s not state whether this is	re else it is descri s a transmit or a r	Late email bed as a state. receive lpi state.
Proposed Response PROPOSED ACCEPT.	Response Status W			Suggested Chang tx Ipi	Remedy e mode to state. C rea.	Clarify that the state is the	low power idle tr	ansmit state for
CI 55 SC 55.3.5.2.1 Lundy, Sean Comment Type ER Ipi_wake_period is not d	P 131 Aquantia <i>Comment Status</i> D lefined	L 31	# 294 LATE	Clarify Proposed PROP [The e	that the state is th Response OSED ACCEPT IN ditor assumes tx_I	e low power idle receive <i>Response Status</i> W N PRINCIPLE. pi_reg is a typo for tx_lpi_	state for rx_lpi_re _req.]	eg.
SuggestedRemedy Change to lpi_wake_tim Proposed Response	e Response Status W			C/ 55 Parnaby, G	SC 55.3.5.2.2 Bavin	P 129 Solarflare C	L 52 Communica	# 314
PROPOSED ACCEPT.	P 131	L 632	# 305	Comment The de Suggested	Type E efinition suggests t Remedy	Comment Status D hat the request goes awa	ay once the PHY t	Late email transitions to LPI state.
Comment Type E The timer names do not Though this is unavoida	Comment Status D match those used in other clau ble to some extent, it can be im	ses (e.g. Claus proved.	Late email se 40).	Set to Proposed PROP	e : True when the MA Response OSED ACCEPT IN	AC is requesting that the <i>Response Status</i> W N PRINCIPLE.	PHY operate in th	ne LPI transmit state.'
SuggestedRemedy Replace lpi_tx_phy_wak	e_timer with lpi_wake_timer			C/ 55 Tidstrom, F	SC 55.3.5.4 Rick	P 132 Broadcom	L 1	# 158
There may be other sim Proposed Response PROPOSED ACCEPT I	ilar changes. <i>Response Status</i> W N PRINCIPLE.			<i>Comment</i> The st link pa	<i>Type</i> TR ate machines in th rtners. The state n	Comment Status D e current draft have a hol nachines will not be upda	le with regards to ted upon resoluti	the synchronization of a on of this draft.
The editor will attempt to	o match terms as much as poss	ible in next dra	ft.	Suggested The de Plenar Proposed For dis	Remedy etails for resolution y meeting. Response scussion by the gro	of this issue to be submi Response Status W pup.	itted in a presenta	ation for the November
				At leas	a one synchroniza	uon proposal will be pres	ented at the NOVe	ember meeting.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general

TYPE: TR/technical required ER/editorial required GR/gener	al required T/technical E/editorial G/general		Dama 47 at 00
COMMENT STATUS: D/dispatched A/accepted R/rejected	RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn	C/ 33	Page 47 of 69
SORT ORDER: Clause, Subclause, page, line		SC 55.3.5.4	11/4/2008 1:51:45 PM

proposed responses IEEE IEEE IEEE P802.3az D1.0 Ene	rgy Efficient Ethernet comments	Nov 2008
CI 55 SC 55.3.5.4 P 132 L 133 # 36 Dawe, Piers Avago Technologies 36	CI 55SC 55.3.5.4P 133LParnaby, GavinSolarflare Communica	# 316
Comment Type ER Comment Status D 6.5 point text! The minimum per style manual is 8 point.	Comment Type E Comment Status D The symbols in the state diagrams are not correct (see page 11 of the of This applies to page page 126, 120, 140, 141	<i>Late email</i> draft).
SuggestedRemedy Change all text in this figure and Fig 55-8 to 8 point. You can put the second and third boxes beside each other if you run out of height.	<i>SuggestedRemedy</i> Ensure that the state diagrams use the symbol set described on page 1	11.
Proposed Response Response Status W PROPOSED ACCEPT.	Proposed Response Response Status W PROPOSED ACCEPT IN PRINCIPLE.	
C/ 55 SC 55.3.5.4 P 132 L 14 # 319	The editor will check the state diagrams and update them to use the ap	propriate symbols.
Parnaby, Gavin Solarflare Communica	CI 55 SC 55.3.5.4 P 135 L	# 307
Comment Type E Comment Status D Late email	Parnaby, Gavin Solarflare Communica	
The editor's comment looks for a better way to detect C but not L or I.	Comment Type E Comment Status D	Late email
SuggestedRemedy Describe it as a member of C and not /l/ and not /L/	The dashed box linestyle does in the proposed Figure 55-15 does not n proposed Figure 55-17 on page 137.	natch that in the
Proposed Response Response Status W PROPOSED ACCEPT.	Several figures are missing text specifying that the transitions/states in are for EEE capable PHYs only	the dashed boxes
C/ 55 SC 55.3.5.4 P 133 L # 306 Parnaby, Gavin Solarflare Communica	SuggestedRemedy Use the linestyle on page 137 throughout the text for eee states.	
Comment Type T Comment Status D Late email	Add text to the figures.	
The state diagrams are old.	Proposed Response Response Status W PROPOSED ACCEPT.	
SuggestedRemedy	C/ 55 SC 55.3.5.4 P 135 L	# 317
See presentation at November meeting	Parnaby, Gavin Solaniale Communica	
Proposed Response Response Status W For discussion by the group.	Comment Type E Comment Status D The transitions from the TX_INIT block cross inappropriately.	Late email
New state diagrams will be presented at the November meeting.	SuggestedRemedy Redraw the transition lines so that they do not cross.	
	Proposed Response Response Status W For discussion by the group.	
	New state diagrams will be presented at the November meeting.	

C/ 55 SC 55.3.5.4

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proposed responses IEEE		IEEE	P802.3az D1.0 Energy	Efficient Ethernet co	mments		Nov 2008
C/ 55 SC 55.3.5.4 Parnaby, Gavin	P 138 Solarflare Co	<i>L</i> mmunica	# 318	CI 55 SC 55.3. Grimwood, Michael	52 P 128 Broadc	B L B om Corporation	# 195
Comment TypeTCommeThe transition out of RX_W should state machine can exit back to daSuggestedRemedyThe transition should be R_TYPEProposed ResponseResponseFor discussion by the group.New state diagrams will be present	ent Status D d not be 'R_TYPE ta mode with an e (rx_coded) = I se Status W nted at the Novem	(rx_coded)=C', sir rror condition. ber meeting.	<i>Late email</i> nce in this case the	Comment Type TR As pointed out in th time, how do they is synchronization of This is a critical iss but also ensure a r the respective link SuggestedRemedy The details for reso	Comment Status I ne editor's comment number resolve who was the first to refresh periods? This seen ue to resolve. Also we nee nechanism exists to synchip partners.	D er 4): "If both PHYs ent o enter LPI in order to e ns to require additional d to not only resolve th ronize and align refrest	ter LPI at the same ensure appropriate signaling." The "first to enter" issue, h periods for each of ion for the November
Cl 55 SC 55.3.5.4 P 140 L Parnaby, Gavin Solarflare Communica Comment Type T Comment Status D Proposed Figure 55-9 Solarflare Communica D		# 308 Late email	Plenary meeting. Proposed Response For discussion by t At least one propos meeting.	Response Status N he group. sal for a synchronization m	W echanism will be prese	ented at the November	
This state machine should not be The wake state is not required. SuggestedRemedy See presentation.	in the PCS. Move	it to the PMA.		CI 55 SC 55.4. Lundy, Sean Comment Type ER PHY Frame should	2.2.1 P 14: Aquant Comment Status I I be LDPC Frame. This occ	3 L 24 ia D curs on line 24 and line	# 295 LATE 25.
Move the state machine into the F Proposed Response Response For discussion by the group. New state diagrams will be preser	PMA Rx, remove the se <i>Status</i> W whether the second seco	ne wake state. ber meeting.		SuggestedRemedy Proposed Response PROPOSED ACCI The editor will repla	Response Status EPT. ace PHY frame with LDPC	W frame.	

C/ 55 SC 55.4.2.2.1

IEEE P802.3az D1.0 Energy Efficient Ethernet comments

Cl 55 SC 55.5.2	P	L	# 175	C/ 55 SC 55.6.1	.2 <i>P</i> 146	L1	# 37
Comment Type TR We need to define addition 1. Alert pattern implementa 2. LPI cycle implementatio 3. Transmit path frequency SuggestedRemedy See "10GBASE-T LPI Tes Proposed Response For discussion by the group	Comment Status D hal test modes to verify: ation n - for all possible Tr valu y stability in LPI mode t modes" Teranetics' pres Response Status W Ip.	es entation		Dawe, Piers Comment Type E Wrong table number SuggestedRemedy Insert '55.6.1.2 10G Change 'Table 55-11 Resize column width Proposed Response PROPOSED ACCE	Avago Tec <i>Comment Status</i> D r, no subclause heading. Tat BASE-T Auto-Negotiation pay 0' to 'Table 55-11'. ns to contents. <i>Response Status</i> W PT.	nnologies ble is too long. ge use'.	
Additional test modes nee At least one proposal will b	d to be defined for EEE-ca be presented in Novembe	apable PHYs. r.		Cl 55 SC 55.6.3 Grimwood, Michael	P 146 Broadcom	<i>L</i> 39 Corporation	# 196
Cl 55 SC 55.6.1 Tellado, Jose Comment Type T Comment regarding last ro inital PAM2 aquisition. The operating since start-up. T EMI issues SuggestedRemedy	<i>P</i> 146 Teranetics <i>Comment Status</i> D wo of table 55-10: No need a current draft claims the P his generates full power r	L d for reset PM/ PAM2 PRBS33 epeating seque	# 255 A training. This was for will be continuously ence which could have	Comment Type TR The 100BASE-TX a wake time (30 us for no equivalent specif Instead, for 10G, the However, this is not portion of the overal be explicit to ensure also to make Tw_PH	Comment Status D nd 1000BASE-T EEE specific 100BASE-TX and negotiate ication for 10GBASE-T EEE. ere is an lpi_wake_time negot the actual wake time (Tw_ph I wake time. The Tw_PHY tin implementations meet this o tY explicit for system-level im	cations include an d up to 16 us for 1 tiated in the range by as defined in Cla ne and associated verall PHY wake ti nplementations.	overall maximum PHY 000BASE-T). There is of 1 to 9 frames. ause 78) as it is only a requirement needs to ime requirement and
Proposed Response PROPOSED ACCEPT. The comment isn't clear to on page 128, line 12. See also comment 303	Response Status W	same conclusi	on as the editor's note	Add a requirement for requirement to be su Proposed Response PROPOSED ACCE The 10GBASE-T ed	or Tw_PHY for 10GBASE-T. Jbmitted in a presentation for <i>Response Status</i> W PT IN PRINCIPLE. itor will work with the Clause	The details and va the November Ple 79 editor to resolv	lues for this enary meeting. e this issue.

C/ 55 SC 55.6.3

proposed responses IEEE IEEE IEEE P802.3az D1.0 Energy	/ Efficient Ethernet comments Nov 2008
C/ 55 SC 55.6.3 P 146 L 39 # 321 Parnaby, Gavin Solarflare Communica	C/ 70 SC 70.1 P 149 L 18 # 40 Dawe, Piers Avago Technologies
Comment Type T Comment Status D Late email According to this text, lpi_wake_time is chosen from 1 to 9 PHY frames. Late email Late email	Comment Type E Comment Status D Table too narrow. Frame won't take the table notes into account when sizing columns
I think we need to look closely at this requirement, to ensure that in the worst conditions PHYs are able to return to an error free PAM-16 data mode after the wake frames, without compromising PHY and system power savings.	SuggestedRemedy Make the table wider so that the table note takes just two lines. Also Table 71-1, 72-1. Also make Table 72-1 wider
The exact requirements for this parameter are dependent on Tq/Tr/ frequency drift limits. SuggestedRemedy	Proposed Response Response Status W PROPOSED ACCEPT.
Increase the number of frames allowed for the wake time.	Expanding table does brings note down to two lines.
A presentation will be submitted for the November meeting.	C/ 70 SC 70.1 P 149 L 30 # 221 Barrass, Hugh Cisco
Proposed Response Response Status W For discussion by the group. Image: Comparison of the group of the	Comment Type T Comment Status D There is no enable for LPI.
This comment needs supporting data.	SuggestedRemedy
C/ 55 SC Many P L # 298 Parnaby, Gavin Solarflare Communica	When this capability is enabled, the assertion of low power
Comment Type E Comment Status D Late email Sleep and SLEEP are used throughout the document. Similar capitalization for other LPI	with
states. See for example 55.3.2.2.21 and 55.3.5	The assertion of low power Proposed Response Response Status W PROPOSED ACCEPT.
SuggestedRemedy Standardise on one. Suggest Sleep.	CI 70 SC 70.1 P149 L 33 # 68
Proposed Response Response Status W PROPOSED ACCEPT.	Healey, Adam LSI Corporation Comment Type E Comment Status D It seems like "deactivates transmit" should be "deactivates transmit functions."
	SuggestedRemedy Per comment.
	Proposed Response Response Status W PROPOSED ACCEPT.

C/ 70 SC 70.1 Page 51 of 69 11/4/2008 1:51:45 PM

proposed responses	SIEEE	IEEE	P802.3az D1.0 Energ	y Efficient Ethernet comments Nov 200
Cl 70 SC 70.3a Healey, Adam Comment Type E I believe the feature in Idle." SuggestedRemedy Update text per comme Proposed Response PROPOSED ACCEPT	P 149 LSI Corporatio <i>Comment Status</i> D question is actually "Energy E ent. <i>Response Status</i> W	L 47 n fficient Ethernet	# <u>69</u> " and not "Low Power	Cl 70 SC 70.5 P 150 L 40 # 224 Barrass, Hugh Cisco Comment Type T Comment Status D There are separate status bits for Tx & Rx. SuggestedRemedy Modify Table 70-3 to match 45.2.1.2 (Table 45-5). Proposed Response Response Status W PROPOSED ACCEPT IN PRINCIPLE.
Editor will change "Lov	v Power Idle" to "Energy Efficie	ent Ethernet".		Table 70-3 will be modified to match 45.2.1.2
Cl 70 SC 70.3a Barrass, Hugh Comment Type T There is no enable for SuggestedRemedy replace if the Low Power Idle with if the PCS transmit fu Proposed Response PROPOSED ACCEPT	P 149 Cisco Comment Status D LPI. e feature is enabled and the PC unction receives Response Status W	L 54	# 222	Cl 70 SC 70.6.10.2 P152 L16 # [74] Healey, Adam LSI Corporation Comment Type T Comment Status D Define a minimum value for T_UL. Obviously, T_UL = 0 is not acceptable. SuggestedRemedy Specify the minimum value of T_UL. As a placeholder, suggest T_UL(min.) = 160 us for a greater than +/-10% tolerance. All timer values should be subject to further review. Proposed Response Response Status W need consensus from group P152 L 19 # [39] Dawe, Piers Avago Technologies Comment Type E Comment Status D usec, msec Usec, msec Usec, msec D D D D
Cl 70 SC 70.5	suggested remedy. P 150	L 27	# 223	SuggestedRemedy us, ms (and use a mu not a u). At least four tables.
Barrass, Hugh <i>Comment Type</i> T There is no enable for <i>SuggestedRemedy</i>	Cisco Comment Status D LPI.			Proposed Response Response Status W PROPOSED ACCEPT.
Delete the row from Ta Proposed Response PROPOSED ACCEPT	able 70-2 Response Status W			

C/ 70 SC 70.6.10.2 Page 52 of 69 11/4/2008 1:51:45 PM

IEEE P802.3az D1.0 Energy Efficient Ethernet comments

Cl 70 SC 70.6.10.2 Healey, Adam	P 152 LSI Corporation	L 19	# 72	<i>Cl</i> 70 Healey, Ad	SC 70.6.10.3 am	5	P 152 LSI Corporatio	L 32 on	# 75
Comment Type T T_WL does not appear	<i>Comment Status</i> D to be used.			Comment I do no transm	<i>Type</i> T It understand the itter ceases tran	Comment e purpose of T	Status D SR. The receiv	ver SLEEP perio	od ends when the
SuggestedRemedy	-fielding			Suggested	Remedv				
Proposed Response	Response Status W			Delete transiti	the parameter d on condition from	lefinition, dele n the RX_SLE	te associated sta EEP state (Figure	ate variables, ar e 70-2).	nd delete it as a
PROPOSED ACCEPT.				Proposed I	Response	Response	Status W		
C/ 70 SC 70.6.10.2	P 152	L 7	# 108	PROP	OSED REJECT.				
Hajduczenia, Marek	ZTE Corporation			KX/KX	4/KR sleep trans	sition is based	on Chou_01_0	508 sleep transi	tion for 100Base-TX.
Comment Type E	Comment Status D			Editor	will provide clarif	fication to para	ameter descripti	on for TF approv	val.
On page 152 there are modify any existing tab	two tables without numbers and le or are completely new tables	without indic	ation whether they	C/ 70 Healey, Ad	SC 70.6.10.3	5	P 152	L 41	# 76
SuggestedRemedy				Commont		Commont	Status D		
Either add titles and ref	erence them in the text, or point	to table which	ch they replace / modify.		does not appear	to be used	Status D		
Proposed Response	Response Status W			Suggested	Pomodu	10 00 0000.			
PROPOSED ACCEPT	IN PRINCIPLE.			Delete	the parameter d	definition.			
Editor will add proper ta to reference the table.	able title & number and provide i	ntroductory s	entence or paragraph	Proposed I PROP	Response OSED ACCEPT	Response	Status W E.		
C/ 70 SC 70.6.10.2 Healey, Adam	P 152 LSI Corporation	L 9	# 73	This va	alue can be defin	ned a the Min	for T_UL per co	mment #74.	
<i>Comment Type</i> T Define a minimum valu	Comment Status D e for T_SL. Obviously, T_SL = 0) is not accep	table.						
SuggestedRemedy Specify the minimum va greater than +/-10% tol	alue of T_SL. As a placeholder, erance. All timer values should l	suggest T_S	L(min.) = 64 us for a further review.						
Proposed Response	Response Status W								

need consensus from group.

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/ 70 SC 70.6.10.3

C/ 70	SC 70.6.10.5.2	P 155	L 6	# 70
Healey, Ad	dam	LSI Corporation		

Comment Type T Comment Status D

Clause 70 defines 1000BASE-KX PMD sub-layer but the LPI Transmit state diagram (Figure 70-1) includes PCS layer functions such as low power idle encoding. The definition of these functions is misplaced and should be properly described in Clause 36 (the subject of a different comment). The functions defined in this clause should be limited in scope to the PMD-level functions. PCS state information required to the implement PMD functions, and vice versa, should be communicated to the PMD using service interface primitives.

It is imperative to preserve the IEEE 802.3 layering model. In the future, it is likely that additional 1000BASE-X PMDs will be amended to support EEE. It is wasteful to repeat the definition of the PCS low power idle encoding for each PMD, and potentially disasterous if the definitions are inconsistent.

SuggestedRemedy

A proposal will be made to the Task Force illustrating the layer model and modifications required to adhere to the layer model (tentatively named healey_02_1108.pdf).

Proposed Response Response Status W

response to be based on approval of presentation.

CI 70	SC 70.6.10.5.2	P 156	L 1	# 71
Healey, Adaı	n	LSI Corporation		

Comment Type T Comment Status D

Clause 70 defines 1000BASE-KX PMD sub-layer but the LPI Receive state diagram (Figure 70-2) includes PCS layer functions such as low power idle decoding. The definition of these functions is misplaced and should be properly described in Clause 36 (the subject of a different comment). The functions defined in this clause should be limited in scope to the PMD-level functions. PCS state information required to the implement PMD functions, and vice versa, should be communicated to the PMD using service interface primitives.

It is imperative to preserve the IEEE 802.3 layering model. In the future, it is likely that additional 1000BASE-X PMDs will be amended to support EEE. It is wasteful to repeat the definition of the PCS low power idle encoding for each PMD, and potentially disasterous if the definitions are inconsistent.

SuggestedRemedy

A proposal will be made to the Task Force illustrating the layer model and modifications required to adhere to the layer model (tentatively named healey_02_1108.pdf).

Proposed Response Response Status W

reponse to be based on approval of presentation.

CI 70 Dawe, Piers	SC 70.6.4	P1: Avago	51 o Technologi	L 9 es	# 38
Comment Ty manditor	rye E	Comment Status	D		
S <i>uggestedR</i> mandato	<i>emedy</i> ory Also 70.6.5,	71.6.6			
Proposed Re PROPO	esponse SED ACCEPT.	Response Status	w		
C/ 70 Healey, Adar	SC 70.6.4a m	P1 LSI C	51 orporation	L 25	# 77

Comment Type T Comment Status D

Referring to Table 39-1, the term "signal_detect assertion threshold" is not used hence the reference is ambiguous. In addition, "signal_detect deassertion threshold" is not a term used in Table 39-1 and constitutes another ambiguous reference. Finally, Table 39-1 defines what one might interpret to be the thresholds in terms of the 1000BASE-CX minimum differential sensitivity which has no comparable value in 1000BASE-KX. Should the -CX value be used?

The cross-reference to Table 39-1 does not appear to be adding any useful information. Define the signal_detect assertion and de-assertion criteria for Energy Efficient Ethernet directly in 70.6.4a.

SuggestedRemedy

Remove cross reference to Table 39-1 and specify the assertion/de-assertion criteria in this subclause.

Proposed Response Response Status W PROPOSED ACCEPT IN PRINCIPLE.

Editor needs recommended text to specify assertion/de-assertion critiera for PMD signal detect here.

propo	sed responses IEE	E	IEEE	P802.3az D1.0 Energ	y Efficient I	Ethernet comr	nents		Nov 2008
<i>Cl</i> 70 Healey, <i>A</i>	SC 70.6.5 Adam	P 151 LSI Corporatio	L 36	# 78	<i>Cl</i> 71 Barrass,	SC 71.3a Hugh	Р 160 Cisco	L 10	# 226
Comment The active a con inclue	nt Type T C wake-up time for the 10 ate the far-end transmit mpliant input signal upo ded). Neither of these a	omment Status D 00BASE-KX receiver is of ter. Furthermore, the rec n which to base timing re ispects of transmitter beh	dependent on th eiver should ha ecovery and ada navior are curren	e time required to ve some assurance of ptive equalization (if ntly defined in the draft.	Commen Ther Suggeste Repl	nt Type T e is no enable for edRemedy ace	Comment Status D		
Suggeste Spec 1. Sh activ 2. Sh follow	edRemedy cify that the transmitter: nall deliver a signal that ation nall deliver a fully compl wing transmitter activati	will assert signal detect iant 1000BASE-KX signa on	within TBD1 us al within within T	following transmitter BD2 (> TBD1) us	lf the with The	e Low Power Idle	feature is enabled and the PCS		
Proposed PRO This appro	d Response Re POSED ACCEPT IN Pl may not belong in 70.6 opriate section.	esponse Status W RINCIPLE. .5, but certainly within 70	.6. Editor will	propose new text in an	Two Proposed PRO CI 71	instances - lines d Response PPOSED ACCEPT SC 71.3a	10 and 13 Response Status W T. P 160	L 4	# [112
<i>Cl</i> 71 Barrass,	SC 71.1 Hugh	<i>P</i> 159 Cisco	L 10	# 225	Hajducze Commen	enia, Marek <i>nt Type</i> E	ZTE Corporation	'n	
Commen Ther Suggeste Repla	nt Type T C e is no enable for LPI. edRemedy ace	omment Status D			Unre spec Suggeste As p	esolved references ific location in the edRemedy er comment.	s "48.2.x", "71.6.x", "71.6.x", "70.6.x", "70 draft or any other specification	0.6.x". Need to	be resolved to a
Whe	n this capability is enab	led, the assertion of low	power		Proposed PRO Refe	d Response POSED ACCEPT erences will be res	Response Status W		
The a Proposed PRO	assertion of low power d Response Re POSED ACCEPT.	esponse Status W							

C/ 71 SC 71.3a

proposed respons	es IEEE	IEEE	P802.3az D1.0 Energ	y Efficient Ethernet comments	Nov 2008	
C/ 71 SC 71.5	<i>P</i> 160	L 36	# 149	C/ 71 SC 71.6.12.2	P 162 L 23	# 134
Hajduczenia, Marek		on		Hajduczenia, Marek		
Comment Type T	Comment Status D			Comment Type ER Comment	Status D	
Comparing tables 7' centered, the other of cases if after all it is	1-2 and 72-2, it is hard to say wh one left aligned) and why the add s the same Either name it "I PLe	y they have diffe ded entry is name anable" or "Low	erent format (one is ed differently in both Power Idle" - IMHO	On page 162 and 163 there are two t they modify any existing table or are	ables without numbers and w completely new tables	ithout indication whether
"LPI enable" is OK b	but need to add an abbreviation i	n section 1.5		SuggestedRemedy		
SuggestedRemedy				Either add titles and reference them i	n the text, or point to table wh	nich they replace / modify.
As per comment.				Proposed Response Response	Status W	
Align the style of all	tables in the draft into a consiste	nt form.		PROPOSED ACCEPT.		
Proposed Response PROPOSED REJEC	Response Status W			Editor will add proper table title & nur to reference the table.	nber and provide introductory	sentence or paragraph
The LPI enable will I	be deleted per comment #227			C/ 71 SC 71.6.5	P160 L 50	# 132
C/ 71 SC 71.5	P 160	/ 36	# 227	Hajduczenia, Marek	ZTE Corporation	
Barrass, Hugh	Cisco	200		Comment Type ER Comment	Status D	
Comment Type T Comment Status D				"71.6.5 PMD lane-by-lane signal dete signal detect function during normal of	ect function during normal ope operation"	erations" vs "72.6.4 PMD
I here is no enable f	or LPI.			SuggestedRemedy		
SuggestedRemedy Delete the row from	Table 71-2			Change title of 71.6.5 to read "PMD I operation". Need to define also what	ane-by-lane signal detect fun "normal operation" is	ction during normal
Proposed Response PROPOSED ACCE	Response Status W PT.			Proposed Response Response S PROPOSED ACCEPT IN PRINCIPL	Status W E.	
C/ 71 SC 71.5	P 161	L 8	# 228	Editor will change to "PMD lane-by-la	ne signal detect function duri	ng normal operation".
Barrass, Hugh	Cisco			C/ 71 SC 71.6.5	P161 L5	# 150
Comment Type T	Comment Status D			Hajduczenia, Marek	ZTE Corporation	
There are separate	status bits for Tx & Rx.			Comment Type T Comment	Status D	
SuggestedRemedy				It is really inconsistent to use "LPI" in	some places and "LP Idle" ir	others.
Modify Table 71-3 to	o match 45.2.1.2 (Table 45-5).			SuggestedRemedy		
Proposed Response Response Status W PROPOSED ACCEPT.			Replace "LP Idle" with "LPI". Add "LF use in the Clause of LPI is expanded remaining uses should be already ba	Pl <tab>Low Power Idle" to 1.5 i.e. has the form "Low Power sed on the abbreviation. Scru</tab>	i. Make sure only the first Idle (LPI)". The Ib the whole draft	
				Proposed Response Response PROPOSED ACCEPT IN PRINCIPL	Status W E.	
				Should be E not T.		

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/ 71 SC 71.6.5 Page 56 of 69 11/4/2008 1:51:45 PM

proposed responses IEEE IEEE IEEE P802.3az D1.0 Energ			y Efficient Ethernet comments				Nov 2008
Cl 71 SC 71.6.5a P 161 Hajduczenia, Marek ZTE Corpor Comment Type ER Comment Status D "assertion threshold as defined in TBD" this TBI reference to the location where Signal_Detect ass The same is true for page 161, line 43. The same is true for page 173, line 37 & 43. SuggestedRemedy	L 37 ation D needs to be repla ertion threshold is	# 133	Cl 72 Barrass, I Comment There Suggeste Repla	SC 72.3a Hugh t Type T e is no enable for edRemedy ace	P 171 Cisco Comment Status D LPI.	L 5	# 230
As per comment. Proposed Response Response Status W PROPOSED ACCEPT IN PRINCIPLE.			If the with The F	Power late for	eature is enabled and the PCS	5	
The KX4 signal detect should be similar as that de be proposed for TF approval at meeting. C/ 72 SC 6.4a P 173 Bennett Michael I BNI	fined for CX4 in cla <i>L</i> 37	ause 54.5.4. Text will # 248	Two i Proposed PROI	instances - lines 5 I Response POSED ACCEPT	and 8 Response Status W		
Comment Type ER Comment Status D the Signal_Detect units are already included so <u true for line 41 SuggestedRemedy remove <units> from lines 37 and 41</units></u 	inits> should be re	moved. The same is	Cl 72 Hajducze Comment I thini There	SC 72.3a nia, Marek t <i>Type</i> E k it is not very con e are other locatio	P 171 ZTE Corporati Comment Status D nmon to use "a" and "b" in the ns in the draft where a similar	L 50 on subclause num comment would	# 115 bers. d apply.
Proposed Response Response Status W PROPOSED ACCEPT. CI 72 SC 72.1 P 171 Barrass, Hugh Cisco Comment Type T Comment Status D There is no enable for LPI.	L 36	# 229	Suggeste Pleas and ti Idle" Powe subcl Proposed PROI	edRemedy se avoid using "a" hen create two lov to "72.4 PCS requ er Idle" to "72.5 PM auses appropriate I Response POSED REJECT.	and "b" in subclause numbers wer level ones or change "72. uirements for Low Power Idle" /IA requirements for Low Pow ely. Response Status W	s. Either create (3a PCS requirer and "72.3b PM/ er Idle", renumb	one major subclause nents for Low Power A requirements for Low ering the remaining
SuggestedRemedy Replace When this capability is enabled, the assertion of low with	w power		Cl 72 Barrass, I Comment There Suggeste	SC 72.5 Hugh <i>t Type</i> T e is no enable for <i>vdRemedy</i>	P 172 Cisco Comment Status D LPI.	L 35	# 231
The assertion of low power Proposed Response Response Status W PROPOSED ACCEPT.			Delet Proposed PROI	e the row from Ta I Response POSED ACCEPT	ble 72-2 Response Status W		

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 CI 72 SC 72.5

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Cl 72 SC 72.5 P173 L 8 # 232	C/ 72 SC 72.6.11.4 P178 L1 # 142
Comment Type T Comment Status D There are separate status bits for Tx & Rx. SuggestedRemedy Modify Table 71-3 to match 45.2.1.2 (Table 45-5). Proposed Response Response Status W PROPOSED ACCEPT.	Comment Type ER Comment Status D Consider usign the format of variable definition adopted by 802.3av in D2.1, Clause 77/76. It is much more readable and presents the size of teh variable as well as potential default values. SuggestedRemedy As per comment Proposed Response
Cl 72 SC 72.6.11.1 P 176 L 30 # 139 Haiduczenia Marek ZTE Corporation	PROPOSED REJECT.
Comment Type ER Comment Status D "Auto-negotiation as described in 73.x.x.x." - some reference is missing. This missing reference is repeated several time throughout the draft. Make sure You capture them all SuggestedRemedy Update the missing reference. Proposed Response Response Status W PROPOSED ACCEPT IN PRINCIPLE. Editor will replace with appropriate Auto-negotiation reference(s).	Cl 72 SC 72.6.11.4.1 P 178 L 1 # 119 Hajduczenia, Marek ZTE Corporation # Comment Type ER Comment Status D (1) I have not found any precedence for the use of term "enumerated variable". There are some use cases in 802.3-2008 though in the management section and all possible values are enumerated and described. Is the list of possible values complete or any other values can be asserted ? (2) what is a "variant" variable ? This terms is somehow alien to me in the context of 802.3 SuggestedRemedy (1) clarify the use of "enumerated variables" (2) define what a "variant variable" is
CI 72 SC 72.6.11.2 P 177 L 0 # 140 Hajduczenia, Marek ZTE Corporation # 140 Comment Type ER Comment Status D On page 177, there are two tables without numbers and without indication whether they modify any existing table or are completely new tables SuggestedRemedy Either add titles and reference them in the text, or point to table which they replace / modify. Proposed Response Response Status W PROPOSED ACCEPT.	 Proposed Response Response Status W 1.) Boolean is typically reserved for True or False, whereas an Enumerated Types can be ON or OFF, Black or White, etc. In assigning something other than True/False to a variable, it's normal programming practice to define it as an enumerated type variable. 2.) OK. This is use to encompase a variable number of elements and sizes that are implementation specific. I'm going to use the Basic Programming definition of: The Variant data type is the data type for all variables that are not explicitly declared as some other type. A Variant is a special data type that can contain any kind of data.
Editor will add proper table title & number and provide introductory sentence or paragraph to reference the table.	

C/ 72 SC 72.6.11.4.1

Cl 72 SC 72.6.11.4.1 P178 L1 # [14] Hajduczenia, Marek ZTE Corporation Comment Status D Comment Type T Comment Status D This counter counts the number of training frames sent." - the section counts the number of training frames sent." - the section counts the number of training frames sent." - the section counts the number of training frames sent." - the section counts the number of training frames sent." - the section counts the number of training frames sent." - the section counts the number of training frames sent." - the section counts the number of training frames sent." - the section counts the number of training frames sent." - the section counts the number of training frames sent." - the section counts the number of training frames sent." - the section into wo sets of Quiet/Perfect sent attass that can be negotiated now. Cl 72 SC 72.6.11.4.1 P179 L12 # [12] Maint values to variable at contener sequences of sets well wells and sets of the transmitters current coefficient values and other values." This sentence is way of the edge. Please clarify it, define 'other values' and the values." This sentence is way of the edge. Please clarify it, define 'other values' and the radius the status the setten of the training frames and woid doing that. Eliber comparation Comment Type E Comment Status D Table 72.3 CL4 P173 L1 # [17] Hajduczenia, Marek ZTE Corporation Comment Status D Suggested/Remedy Super comment.	proposed responses IEEE IEEE IEEE P802.3az D1.0 Energy	y Efficient Ethernet comments Nov 20
Comment Type T Comment Status D Definitions of the variables need (probably) more careful consideration. They are given value only duing the autorobably more careful consideration process tails 7 EEE will not work 7 if it will stat anyway. Then variables need default values. Comment Type E	C/ 72 SC 72.6.11.4.1 P 178 L 1 # 143 Hajduczenia, Marek ZTE Corporation ZTE Corporation # 143	C/ 72 SC 72.6.11.4.3 P 180 L 9 # 121 Hajduczenia, Marek ZTE Corporation ZTE Corporation ZTE Corporation ZTE Corporation
Ad default values to variables if under link negotation failure EEE mechanism can still operate. Proposed Response Response Status W Proposed Response Response Status W PROPOSED REJECT. Some of these values need to be deleted as they will not be negotiated during Auto-Neg. There is only two sets of Quiet/Refresh ratios that can be negotiated now. CI 72 SC 72.6.11.4.1 P179 L12 # [120] Hajduczenia, Marek ZTE Corporation Comment Status D This counter counts the number of training frames sent during the TX_WAKE and REFRESH states. C1 72 SC 72.6.11.4.1 P179 L12 # [10] TA variant variable that contains the status D The comment. Comment Status D The proposed Response PROPOSED ACCEPT IN PRINCIPLE. Proposed Response Response Status W PROPOSED ACCEPT IN PRINCIPLE. C1 72 SC 72.6.11.4.1 P179 L31 # [10] Repreposed Response Response Status D As per comment. Proposed Response Response Status D SuggestedRemedy As per comment. Proposed Response Response Status D Missing space between definitions of 'tx_ts_timer_done" and 'wake_alert' blocks. Please insert it SuggestedRemedy As per comment.	Comment Type T Comment Status D Definitions of the variables need (probably) more careful consideration. They are given value only during the autonegotiation process. What happens if the negotation process fails ? EEE will not work ? If it will start anyway, then variables need default values. SuggestedRemedy	Comment Type ER Comment Status D "This counter counts the number of training frames during the training frames sent." - this sentence is either incomplete or I am missing something. SuggestedRemedy Either complete the sentence or clarify it
Proposed response Response Status W PROPOSED REJECT. Some of these values need to be deleted as they will not be negotiated during Auto-Neg. There is only two sets of Quiet/Refresh ratios that can be negotiated now. ''''''''''''''''''''''''''''''''''''	Add default values to variables if under link negotation failure EEE mechanism can still operate.	Proposed Response Response Status W PROPOSED ACCEPT IN PRINCIPLE.
Some of these values need to be deleted as they will not be negotiated during Auto-Neg. There is only two sets of Quiet/Refresh ratios that can be negotiated now. "This counter counts the number of training frames sent during the TX_WAKE and REFRESH states. CI 72 SC 72.6.114.1 P179 L12 # 120 Hajduczenia, Marek ZTE Corporation CI 72 SC 72.6.4 P173 L1 # 117 Comment Type ER Comment Type ER Comment Type E Comment Type E Comment Type E Comment Type E Comment Status D Table 72-3 cuts into a block of text. Beat on Frame and avoid doing that. Either divide the section into two paragraphs or enable orphan control and make sure that a ligned to the top of the page. SuggestedRemedy As per comment. ZTE Corporation SuggestedRemedy As per comment. Na per comment. Proposed Response Response Status W PROPOSED REJECT. Tose type of edits will be performed when all sections are re-numbered. CI 72 SC 72.6.4 P173 L 32 # 118 Hajduczenia, Marek ZTE Corporation SuggestedRemedy As per comment Status D SuggestedRemedy As per comment Status D SuggestedRemedy As per comment Status <t< td=""><td>Proposed Response Response Status W PROPOSED REJECT.</td><td>Will change to:</td></t<>	Proposed Response Response Status W PROPOSED REJECT.	Will change to:
Cl 72 SC 72.6.11.4.1 P179 L12 # 120 Hajduczenia, Marek ZTE Corporation Cl 72 SC 72.6.4 P173 L1 # 117 Hajduczenia, Marek ZTE Corporation Cl 72 SC 72.6.4 P173 L1 # 117 SuggestedRemedy As per comment. Table 72-3 cuts into a block of text. Beat on Frame and avoid doing that. Either divide the section into two paragraphs or enable orphan control and make sure the table is not aligned to the top of the page. SuggestedRemedy As per comment. Proposed Response Response Status W PROPOSED ACCEPT IN PRINCIPLE. Very Paragram and the section into two paragraphs or enable orphan control and make sure the table is not aligned to the top of the page. SuggestedRemedy As per comment. Tre Corporation Very Proposed Response Response Status W PROPOSED ACCEPT IN PRINCIPLE. Proposed Response Tatus D Nament. SuggestedRemedy As per comment. Tre Corporation Those type of edits will be performed when all sections are re-numbered. SuggestedRemedy As per comment. Proposed Response Response Status W P173 L 32 # 118 Hajduczenia, Marek ZTE Corporation Cl 72 SC 72.6.4a P173 L 32 # 118	Some of these values need to be deleted as they will not be negotiated during Auto-Neg. There is only two sets of Quiet/Refresh ratios that can be negotiated now.	"This counter counts the number of training frames sent during the TX_WAKE and REFRESH states.
Comment Type ER Comment Status D "A variant variable that contains the state of the transmitters current coefficient values and other values." this sentence is way off the edge. Please clarify it, define "other values" are SuggestedRemedy Table 72-3 cuts into a block of text. Beat on Frame and avoid doing that. SuggestedRemedy As per comment. PROPOSED ACCEPT IN PRINCIPLE. W Cl 72 SC 72.6.11.4.1 P 179 L 31 # 109 Hajduczenia, Marek ZTE Corporation Those type of edits will be performed when all sections are re-numbered. Cl 72 SC 72.6.11.4.1 P 179 L 31 # 109 Hajduczenia, Marek ZTE Corporation Those type of edits will be performed when all sections are re-numbered. Cl 72 SC 72.6.11.4.1 P 179 L 31 # 109 Missing space between definitions of "tx_ts_timer_done" and "wake_alert" blocks. Please insert it SuggestedRemedy As per comment. SuggestedRemedy As per comment. ZTE Corporation Comment Type E Comment Type E Comment Type I 18 SuggestedRemedy As per comment. Proposed Response Zt 2 # 118 I 18 I 18 I 18 I 18 I 18 I 18 <td>Cl 72 SC 72.6.11.4.1 P 179 L 12 # 120 Hajduczenia, Marek ZTE Corporation # 120</td> <td>C/ 72 SC 72.6.4 P 173 L 1 # 117 Hajduczenia, Marek ZTE Corporation 4 117 117</td>	Cl 72 SC 72.6.11.4.1 P 179 L 12 # 120 Hajduczenia, Marek ZTE Corporation # 120	C/ 72 SC 72.6.4 P 173 L 1 # 117 Hajduczenia, Marek ZTE Corporation 4 117 117
As per comment. Proposed Response Response Status W PROPOSED ACCEPT IN PRINCIPLE. CI 72 SC 72.6.11.4.1 P179 L31 # 109 Hajduczenia, Marek ZTE Corporation Comment Type E Comment Status D Missing space between definitions of "tx_ts_timer_done" and "wake_alert" blocks. Please insert it SuggestedRemedy As per comment. Proposed Response Response Status W PROPOSED ACCEPT. Proposed Response Response Status W PROPOSED ACCEPT. SuggestedRemedy As per comment. Proposed Response Response Status W PROPOSED ACCEPT. SuggestedRemedy As per comment. Proposed Response Response Status W PROPOSED ACCEPT. SuggestedRemedy As per comment. Proposed Response Response Status W PROPOSED ACCEPT. SuggestedRemedy As per comment. Proposed Response Response Status W PROPOSED ACCEPT. SuggestedRemedy As per comment. Proposed Response Response Status W PROPOSED ACCEPT. SuggestedRemedy As per comment. Proposed Response Response Status W PROPOSED ACCEPT. SuggestedRemedy As per comment. Proposed Response Response Status W PROPOSED ACCEPT. SuggestedRemedy As per comment. Proposed Response Response Status W PROPOSED ACCEPT. SuggestedRemedy As per comment. Proposed Response Response Status W PROPOSED ACCEPT. SuggestedRemedy As per comment. Proposed Response Response Status W PROPOSED ACCEPT. SuggestedRemedy As per comment. Proposed Response Response Status W PROPOSED ACCEPT. SuggestedRemedy As per comment. Proposed Response Response Status W PROPOSED ACCEPT. SuggestedRemedy As per comment. Proposed Response Response Status W PROPOSED ACCEPT. PROPOSED ACCEPT. SuggestedRemedy As per comment. PROPOSED ACCEPT. PROP	Comment Type ER Comment Status D "A variant variable that contains the state of the transmitters current coefficient values and other values." this sentence is way off the edge. Please clarify it, define "other values" are SuggestedRemedy	Comment TypeEComment StatusDTable 72-3 cuts into a block of text. Beat on Frame and avoid doing that.Either divide the section into two paragraphs or enable orphan control and make sure the table is not aligned to the top of the page.
PROPOSED ACCEPT IN PRINCIPLE. CI 72 SC 72.6.11.4.1 P179 L 31 # 109 Hajduczenia, Marek ZTE Corporation Comment Type E Comment Status D Missing space between definitions of "tx_ts_timer_done" and "wake_alert" blocks. Please insert it Cl 72 SC 72.6.4a P 173 L 32 # 118 SuggestedRemedy As per comment. Response Response Status D Simplyfing "is used as an indicator of signal presence." to "is used to indicate signal presence.". D Proposed Response Response Status W Simplyfing "is used as an indicator of signal presence." to "is used to indicate signal presence.". Also applicable on: page 151, line 20 page 161, line 31 SuggestedRemedy Age applicable on: page 161, line 31 SuggestedRemedy SuggestedRemedy SuggestedRemedy SuggestedRemedy Proposed Response Response Status W SuggestedRemedy SuggestedRemedy SuggestedRemedy PROPOSED ACCEPT. V V V V V V V V V V SuggestedRemedy V V V V V V V V V V V V	As per comment. Proposed Response Response Status W	SuggestedRemedy As per comment.
CI 72 SC 72.6.11.4.1 P179 L 31 # 109 Hajduczenia, Marek ZTE Corporation Comment Type E Comment Status D Missing space between definitions of "tx_ts_timer_done" and "wake_alert" blocks. Please insert it Cl 72 SC 72.6.4a P 173 L 32 # 118 SuggestedRemedy As per comment. ZTE Corporation Comment Type E Comment Status D Proposed Response Response Status W PROPOSED ACCEPT. Response Status W SuggestedRemedy As per comment. SuggestedRemedy SuggestedR		Proposed Response Response Status W PROPOSED REJECT.
Comment Type E Comment Status D Missing space between definitions of "tx_ts_timer_done" and "wake_alert" blocks. Please insert it Cl 72 SC 72.6.4a P 173 L 32 # 118 SuggestedRemedy As per comment. Comment Type E Comment Status D E Simplyfing "is used as an indicator of signal presence." to "is used to indicate signal presence." to "is used to indicate signal presence." Proposed Response Response Status W Also applicable on: page 151, line 20 page 161, line 31 SuggestedRemedy Vertication SuggestedRemedy SuggestedRemedy SuggestedRemedy Simplyfing "is used as an indicator of signal presence." to "is used to indicate signal presence." Verticate signal presence." PROPOSED ACCEPT. Verticate SuggestedRemedy SuggestedRemedy SuggestedRemedy SuggestedRemedy SuggestedRemedy SuggestedRemedy Proposed Response Response Status W SuggestedRemedy SuggestedRemedy SuggestedRemedy SuggestedRemedy SuggestedRemedy SuggestedRemedy SuggestedRemedy SuggestedRemedy SuggestedRemedy SuggestedRemedy SuggestedRemedy SuggestedRemedy SuggestedRemedy <	Hajduczenia, Marek ZTE Corporation	Those type of edits will be performed when all sections are re-numbered.
Insert it SuggestedRemedy As per comment. Proposed Response PROPOSED ACCEPT. Comment Status V Comment Type E Comment Status D Simplyfing "is used as an indicator of signal presence." to "is used to indicate signal presence.". Also applicable on: page 151, line 20 page 161, line 31 SuggestedRemedy	Comment Type E Comment Status D Missing space between definitions of "tx_ts_timer_done" and "wake_alert" blocks. Please	CI 72 SC 72.6.4a P 173 L 32 # 118 Hajduczenia, Marek ZTE Corporation Image: Corporation Image: Corporation
SuggestedRemedy	Insert it SuggestedRemedy As per comment. Proposed Response Response Status W PROPOSED ACCEPT.	Comment Type E Comment Status D Simplyfing "is used as an indicator of signal presence." Simplyfing "is used as an indicator of signal presence." to "is used to indicate signal presence." Also applicable on: page 151, line 20 page 161, line 31
As per comment		SuggestedRemedy As per comment
Proposed Response Response Status W PROPOSED ACCEPT.		Proposed Response Response Status W PROPOSED ACCEPT.

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

CI 72 SC 72.6.4a Page 59 of 69 11/4/2008 1:51:45 PM

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C/ 72 SC 72.7.4.2 Hajduczenia, Marek	P 184 ZTE Corporatior	L 30	# 151	<i>Cl</i> 76 Dawe, Pie	SC 76.2.3.3	P 193 Avago Techn	L 36 ologies	# 42
Comment Type T TBD in FS12 in 72.7.4	Comment Status D 2 PICS. Needs an update			<i>Comment</i> bit <0>	<i>Type</i> E > bit <1>	Comment Status D	-	
SuggestedRemedy As per comment.				Suggested bit 0	<i>IRemedy</i> . bit 1			
Proposed Response PROPOSED ACCEPT	Response Status W IN PRINCIPLE.			Proposed PROP	Response OSED REJECT	Response Status W		
"Enters LowPower_st	when requested"			This c	omment was WI	THDRAWN by the commente	er.	
C/ 72 SC 72.7.4.2	P 184	L 30	# 41	Intend	ed for av			
Comment Type E	Comment Status D	gies		<i>CI</i> 78 Bennett, N	SC 1.2 lichael	<i>P</i> 188 LBNL	L 35	# 249
SuggestedRemedy ES12 Status L PI:M 2	Also CE43 and following			<i>Comment</i> The P	<i>Type</i> ER HY ojective for 1	Comment Status D 000BASE-KX is missing		
Proposed Response PROPOSED ACCEPT	Response Status W IN PRINCIPLE.			Suggested Insert as sho	<i>IRemedy</i> 1000BASE-KX I own:	pelow objective 3) 10GBASE-	T and renumber	remaining objectives
If TF agrees to LPI:M,	editor will replace O with "LPI:M	" ins FS12 an	d CF43-CF47	4) 100	0BASE-KX			
C/ 72 SC 72.7.4.4 Haiduczenia. Marek	P 187 ZTE Corporation	L 29	# 123	5) 100 6) 100	BASE-KR BASE-KX4			
Comment Type ER	Comment Status D			PROP	OSED ACCEPT	Response Status W		
(2) missing references SuggestedRemedy	and descriptions for elements C	F43 - CF47		<i>CI</i> 78 Bennett, N	SC 1.3 lichael	<i>P</i> 190 LBNL	L 29	# 251
(1) Either remove or fil(2) correct the missing	l in with appropriate text, if need references and fill in the text de	ed. scriptions, as	necessary	<i>Comment</i> We sh	<i>Type</i> ER ould be consiste	Comment Status D ant in the use of terms such as	s Low Power mo	de (see line 25). Low
Proposed Response Response Status W PROPOSED ACCEPT.				Power Low P	Idle mode and ower Idle, that is	EEE mode. Since the method s the term we should use.	d we use to redu	ce energy use is called
				Suggested replac	<i>IRemedy</i> e EEE mode wit	h Low Power Idle mode		
				Proposed PROP	Response OSED ACCEPT	Response Status W		
				Low P	ower Idle mode	will be used instead of Low P	ower mode.	

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general

TYPE: TR/technical required ER/editorial required GR/gener	al required T/technical E/editoria	al G/general		01 70	
COMMENT STATUS: D/dispatched A/accepted R/rejected	RESPONSE STATUS: O/open	W/written C/closed	U/unsatisfied Z/withdrawn	CI 18	Page 60 of 69
SORT ORDER: Clause, Subclause, page, line				SC 1.3	11/4/2008 1:51:45 PM

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C/ 78 SC 3 Bennett, Michael	<i>P</i> 192 LBNL	<i>L</i> 1	# 253	<i>Cl 78</i> Hajduczen	SC 78.1.1 ia, Marek	P188 ZTE Corporation	L 22	# 124
Comment Type E Depends should be De	Comment Status D			Comment "10 Me	<i>Type</i> ER egabit" should be	Comment Status D probably "10 Mb/s". The same ir	n line 45 on	the same page.
SuggestedRemedy Replace Depends with	Depending			Suggested As per	<i>Remedy</i> comment			
Proposed Response PROPOSED ACCEPT.	Response Status W			Proposed PROP	Response OSED ACCEPT	Response Status W		
Cl 78 SC 3 Bennett, Michael	<i>P</i> 192 LBNL	L 7	# 254	<i>Cl</i> 78 Hajduczen	SC 78.1.1 ia, Marek	P 188 ZTE Corporation	L 23	# 125
Comment Type E "advertisement.See An peroid and "on" should	Comment Status D nexes 28A and 73A on addition be "for"	onal details" nee	eds a space after the	<i>Comment</i> "legac outdat	<i>Type</i> ER y" - avoid using t ed.	Comment Status D his term. It make readers feel tha	it the referee	enced technology is
SuggestedRemedy replace "advertisement "advertisement. See A	.See Annexes 28A and 73A c nnexes 28A and 73A for addi	on additional det tional details"	ails" with	Suggested IMHO which are in	IRemedy strike it out. It is defined 100BAS total 4 occurence	not necessary. Can be replaced t E-T PHY. Search globally and eli as in the draft, all added to the ex	with referen minate any isting specit	ce to specific clause "leagy" keywords (there fications).
Proposed Response PROPOSED ACCEPT.	Response Status W			Proposed PROP	Response OSED REJECT.	Response Status W		
Cl 78 SC 5 Bennett, Michael Comment Type FR	P 195 LBNL Comment Status D	L 4	# 252	Editor term fo exister This c	does not feel at or any deployed t nce when any ne ould be personal	that term "legacy" means outdate echnology - which emphasizes th wer technology being invented. view. Open to the discussion and	ed technolog ne need for d other opin	y, but rather accepted interoperability and co-
there are no units asso	ciated with Tw_phy			C/ 78	SC 78.1.2	P188	L 35	# 102
add "nsec" after Tw_ph	у			Koenen, D	avid	Hewlett Packard		
Proposed Response	Response Status W			Missin	ig 1000BASE-KX	Comment Status D		
PROPOSED ACCEPT.				Suggested Add 10	IRemedy 000BASE-KX to :	a sub-bullet under a.)		
				Proposed PROP	Response OSED ACCEPT	Response Status W IN PRINCIPLE.		
				See re	esponse to #249			

Cl	78	Pag
SC	78.1.2	11/4

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C/ 78 SC 78.1.3	Р	L 25	# 188	CI 78	SC 78.1.3	P 189	L 36	# 181
GUPTA, SUJAY	Infosys Tec	hnologies		GUPTA, S	UJAY	Infosys Technolo	gies	
Comment Type TR C What is the idea behind intr relevant it would be under th SuggestedRemedy Perhaps can be added as a section. Further a symmetri partners enter LPI (may no no relation that with both go other than the what is speci Proposed Response Re PROPOSED REJECT.	Comment Status D oducing the concept (ne scope of Control Pla c behaviour could be b t be at the same time) ing into LPI simultane fed in the draft elsewh esponse Status W	of asynchronous, s ane, which will trig ne behavior in a so better described as and contrary for a ously would cause ere)	symmetric)? If it is ger and stop LPI. eparate Appendix a scheme where both symmetric (If there is a different behaviour	Comment In the treceptic codew Suggested It woul codew Proposed I PROP	Type T transmit direction on of LP_IDLE ords on the MA <i>Remedy</i> d be more cleat ords on the MII <i>Response</i> OSED REJECT sed remedy is a	Comment Status D on entrance to Low Power mode of C interface. to mention at as " reception of interface." Response Status W Iready in the text, lines 37-38 on t	f operation LP_IDLE he same pa	is triggered by the
Symmetric and asymmetric When both link partners car called symmetric. That is, a (by sending LP_Sleep code both can enter Low Power N On contrary, when asymme immediately following LP_S normal operational mode.	modes of operations a n only enter Low Powe fter link partner-1 indic word), it has to wait fo Mode. tric mode is supported leep codeword transm P 189	are different in thei r Mode simultaned ates that it is ready r link partner-2 to d l, link partner-1 ent ission, while link p <i>L</i> 1	r nature. pusly, this mode is y for Low Power Mode do the same before ers Low Power Mode artner-2 can still stay in # 103	CI 78 Koenen, D Comment Make o Suggested Make s LP_SI Proposed I PROP	SC 78.1.3 avid Type E case for signal i Remedy signal name cas LEEP & LP_WA Response OSED ACCEP	P 189 Hewlett Packard <i>Comment Status</i> D names in paragraph 78.1.3 consis se consistant for: KE <i>Response Status</i> W	L 39	# 104
Koenen, David	Hewlett Pac	ckard		"LP_SI	LEEP" will be re	eplaced with "LP_Sleep"		
Capitalize Low Power mode SuggestedRemedy Change from low to Low. Proposed Response Re PROPOSED ACCEPT.	esponse Status W			CI 78 Barrass, H Comment Typo - Suggested Chang Proposed I PROP	SC 78.1.3 ugh 10BASE-T, shu <i>Remedy</i> e 10BASE-T to <i>Response</i> OSED ACCEP	P 189 Cisco Comment Status D build be 100BASE-TX 100BASE-TX. Response Status W	L 40	# 233

proposed responses IEEE IEEE IEEE P802.3az D1.0 Energy	y Efficient Ethernet comments	Nov 2008
C/ 78 SC 78.1.3 P 189 L 50 # 129 Hajduczenia, Marek ZTE Corporation ZTE Corporation Telebox Telebox	CI 78SC 78.1.4P 190L 33Parnaby, GavinSolarflare Communica	# 326
Comment Type ER Comment Status D What is the difference between "Low Power Mode" and "Low Power operation" ? If none, why create two terms to refer to the same thign ? SuggestedRemedy As per comment. Proposed Response Response Status W	Comment Type E Comment Status D There are 7 protocols listed in the table. The text says 6 protocols. SuggestedRemedy Change text to 'the following seven' Proposed Response Response Status W PROPOSED ACCEPT.	Late email
PROPOSED ACCEPT IN PRINCIPLE. Elliminate "Low Power operation" term, use "Low Power Mode" of operation.	C/ 78SC 78.1.4P 190L 33Hajduczenia, MarekZTE Corporation	# 145
Cl 78 SC 78.1.3 P 190 L 22 # 130 Hajduczenia, Marek ZTE Corporation ZTE Corporation Comment Type ER Comment Status D Figure 78-2 has very large gaps between accompanying text and the figure. Eliminate them. Additionally, the text in the figure could be larger. It is hard to read on a print-out. SuggestedRemedy As per comment. Proposed Response Response Status W PROPOSED ACCEPT. V V V	Comment Type T Comment Status D "EEE defines Low power operational modes for the following six 802.3 pro 78-1 for the associated clauses." change to "EEE defines the Low Power I operation for the following six 802.3 PHYs. Table 78-1 lists the clauses as: each PHY." Table 78-1 does not list protocols but PHYs. Change caption of table 78-1 between EEE and IEEE PHYs" SuggestedRemedy As per comment	tocols, use Table Mode of sociated with to read "Relation
Cl 78 SC 78.1.3 P 190 L 25 # 144 Hajduczenia, Marek ZTE Corporation TE Comment Status D Comment Type T Comment Status D There is some naming inconsistency. When both link partners enter the mode, it is "synchronous". I would expect the opposite situation to be called "asynchronous" and not "asymmetric" SuggestedRemedy	Proposed Response Response Status W PROPOSED ACCEPT. "EEE defines Low power operational modes for the following six 802.3 pro 78-1 for the associated clauses." will be replaced by "EEE defines the Low Power Idle mode of operation for the following six 80 Table 78-1 lists the clauses associated with each PHX."	tocols, use Table 02.3 PHYs.
Change "asymmetric" in line 27 to read "asynchronous". Proposed Response Response Status W PROPOSED ACCEPT IN PRINCIPLE. Adopt following terminology - as per resolution to comment # 39 to draft 0.9: When link partners can only enter the Low Power Mode simultaneously, this mode is called "symmetric". When link partners can enter the Low Power Mode independently of each other, it is called "asymmetric".	Cl 78 SC 78.1.4 P 190 L 41 Barrass, Hugh Cisco Comment Type E Comment Status D 100BASE-T - should be TX SuggestedRemedy Change 100BASE-T to 100BASE-TX Proposed Response Response Status W PROPOSED ACCEPT. Visition of the status Comment Status	# 234

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/ 78 Page 63 of 69 SC 78.1.4 11/4/2008 1:51:46 PM

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<i>CI</i> 78 Barrass, Hu	SC 78.1.5 gh	<i>P</i> 190 Cisco	L 45	# 235	<i>Cl</i> 78 Parnaby, (SC Gavin	78.2.3	P 191 Solarflare C	L 37 communica	# 322
Comment Ty Missing	ype E clause number	Comment Status D			Comment Tw_P	<i>Type</i> hy as de	T efined doe	Comment Status D es not match the description	n in Clause 55.	Late email
SuggestedR Insert cl Proposed R PROPO	Remedy lause number 70 lesponse DSED ACCEPT.	Response Status W			The fi transn time it Also, i	rst idles nitted. N is guar in claus	transmitte ly unders anteed that e 55, the v	ed on the MDI do not indica tanding was that the first id at idles are transmitted by t wake time is defined as the	ate that real data i les are the wakes he MAC and no d time the wake sig	s capable of being signal, during which lata may be sent. gnal is sent.
CI 78	SC 78.2.1	P 191	L 6	# 327	Why c	loes the	definition	here include the MDI inter	face?	
Parnaby, Ga	avin	Solarflare Cor	nmunica		Suggestee	dRemec	ly			
Comment Ty The sub transmit	ype E oclause defines a t and receive stat	Comment Status D In LPI state. For PHYs that stees.	support asymme	Late email etric lpi, there are lpi	Define the fire assum	e Tw_PH st codev ning erro	HY as the words on t pr-free op	time between IDLE appear the XGMII are guaranteed t eration.	ing on the XGMII to be received by	interface and when the the remote PHY,
SuggestedF	Remedy				Clarif	/ definiti	on of wak	e time / phy wake time.		
Add Lov asymme	wPowerTx_st and etric LPI states.	d LowPowerRx_st to the des	cription, for PH	Ys that support	Proposed	Respor	ise	Response Status W		
Proposed R PROPO	esponse DSED ACCEPT.	Response Status W			Agree	in gene	eral, Tw_F	PHY should be defined as p and moment PHY is read	eriod of time betw	veen reception IDLE
Cl 78 Hajduczenia Comment Ty This sub a reader SuggestedR As per co Proposed R	SC 78.2.2 a, Marek ype E oclause is said to r with references Remedy comment esponse	P 191 ZTE Corporati Comment Status D define certain codewords a to locations where they are Response Status W	L 19 on nd signals. It w defined / descr	# 110	Draft the Al power lpi_wa Are th assun modifi Propo wheth	1.0 has ERT m idle mo ake_time ese "/I/ nption is ed. sed rem er there	following essage th ode to nor e repeated codeword correct th nedy sugg	wake definition (subclause ne PCS completes the trans mal mode by sending a WA d /l/ codewords encoded us ls" XGMII-driven or pre-defi hen current Tw_PHY definit gests to include Tp (Propaga dvantage in doing so	55.3.2.2.21, page sition from low AKE signal which sing the 65B-LDP(ined valid codewo tion holds, otherw ation delay) into T	* 124, lane 19): "After is composed of C coding technique". ords". If latest ise it should be [*] w_PHY. Not clear
PROPO Comme 78.2.2 d	OSED REJECT. Int is not clear. It definitions appear	is about of referencing read r first?	er to the associ	ated subclauses where			-			

CI 78 SC 78.2.3

proposed responses IE	EE	IEEE	P802.3az D1.0 Energy	y Efficient E	thernet comm	ents		Nov 2008
C/ 78 SC 78.2.4.3 GUPTA, SUJAY	P 194 Infosys Techn	L 3 ologies	# 182	<i>Cl 78</i> Koenen, I	SC 78.3 David	P 191 Hewlett Packar	L 46 rd	# 105
Comment Type T In each direction, the Reso and the received (from the link partner) Reco >> Assuming Recvd Tw_sy send data before the expiry The statement here, of cho SuggestedRemedy	Comment Status D olved Transmit Tw_sys is the eive Tw_sys. ys implies the partner may y of Recvd Tw_sys. bosing lesser of the two, co	he lesser of the ^r drop packets if ould make the p	local Transmit Tw_sys f an attempt is made to beer drop packets.	Comment Parag Suggeste Includ they s Proposed PROI Edito	t Type E graph should inclu dRemedy de sentence for ba see fit. POSED ACCEPT. r will include claus	Comment Status D de backplane PHYs: KX, KX4, ackplane PHY's Autonegotiatio <i>Response Status</i> W se 73 AN overview to cover ba	, KR for Auto- in method. All ckplane PHY's	Negotiation. ow editor to include as
Proposed Response R PROPOSED REJECT. Firstly, there is no remedy. The receive Tw_sys that exhow the negotiation will res LP will send data after a ce appropriate time to avoid p The standard requires that negotiation to a longer wak	Response Status W ach LP sends to its peer is solve in both directions, the ertain delay then it can cho backet loss. all devices have the abilit ke-up time must be limited	s a request. Bot erefore if a devi bose a sleep mo y to wake in the by the least ca	h link partners know ce understands that its ode that wakes in the minimum time, pable device.	CI 78 Barrass, H Commeni The f Suggeste Repla Durin EEE may H	SC 78.3 Hugh t Type T dRemedy ace first 2 paragraphs a dremedy ace first 2 paragraph g the link establish is supported by bo be used independe	P192 Cisco Comment Status D are incorrect. phs of this page with hment process, both link partn th link partners for the negotia ently in either direction.	L1 ers indicate th ated PHY type	# 236
Cl 78 SC 78.3 Koenen, David Comment Type E G	P 102 Hewlett Packa Comment Status D	L 1	# 106	The a as de <i>Proposeo</i> PROI	autonegotiation pro fined in 28C.12, 2 <i>Response</i> POSED ACCEPT.	Decess uses next page messag BC.13 and 73A.4. Response Status W	es or extended	d next page messages
SuggestedRemedy Fix grammatical errors as a Proposed Response F PROPOSED ACCEPT IN F See reponses to comments Editor would appreciate more remedy as one - next time	editor sees fit to do so. Response Status W PRINCIPLE. s ## 253, 254. ore constructive approach around.	- comment-wis	e and suggested					

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/ Efficient Ethernet comments Nov 20				
C/ 78 SC 78.4.1 P 193 L 11 # 146 Hajduczenia, Marek ZTE Corporation 4 146				
Comment Type T Comment Status D (1) "shall support the EEE Type, Length, Value (TLV) defined in 78.1.2." - there are no TLVs defined in 78.1.2 as far as I can say. (2) "the corresponding MIB objects defined in TBD" TBD in a reference. Cannot rese it in any way SuggestedRemedy (1) Update the reference to point to the appropriate location (78.4.2 ???). (2) reslove this missing reference to some subclause Proposed Response Response Status W PROPOSED ACCEPT IN PRINCIPLE. Change reference to 78.4.2.				
Cross reference to Clause 30 will be added when Clause 30 is completed. Cl 78 SC 78.4.2 P 193 L 18 # 147 Hajduczenia, Marek ZTE Corporation # 147 Comment Type T Comment Status D The whole first paragraph is repeated from 78.4.1. Seems unnecessary, strike the first paragraph in 78.4.2 SuggestedRemedy As per comment Proposed Response Response Status W PROPOSED ACCEPT IN PRINCIPLE. W				

CI 78 SC 78.4.2

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CI 70	SC 70 4 2 4	P 402	1 40	# 222	CI 79	80	70 4 2 2	D402 / 47 # 407
Parnaby, G	Bavin	Solarflare Co	mmunica	# 323	Hajduczen	nia, Mar	rek	ZTE Corporation
Comment 7	Туре Т	Comment Status D		Late email	Comment	Туре	Е	Comment Status D
The mi e.g. for minimu current	inimum system v r 10GBASE-t the um before data v t draft] //Remotiv	wake time also needs to be b e minimum wake has to allow vill be passed. [this is at least	ounded. for sleep, alert, t 9+4+1=14 LDF	phy wake at a PC frames with the	"Rece the lin Suggested Chang	ive Tw_ k partne d <i>Reme</i> e ge to "R	_sys, 2 oct er wait bef dy Receive Tw	tets, is the time, in microseconds, that the system is requesting that fore it starts to transmit data following Low Power Idle." poor English u_sys (2 octets wide) is the time (expressed in microseconds) that
Add a	description of th	e minimum wake time for ead	ch PHY type.		the system the Lo	stem is w Pow	requesting er Idle."	g the link partner to wait before it starts transmitting data following
Proposed F PROP	Response OSED ACCEPT	Response Status WIIN PRINCIPLE.			Proposed PROP	<i>Respor</i> OSED	nse ACCEPT.	Response Status W
This is per eac then re	good point - but ch PHY type. Th eflected in the su	t these parameters are not ne lus they should be defined firs bclause 78.5	ecessarily negot st in the approp	iable but rather fixed iate subclauses and	C/ 78 Parnaby, (SC Gavin	78.4.2.4	P 194 L 29 # 324 Solarflare Communica
Cl 78 Hajduczeni Comment	SC 78.4.2.1 ia, Marek <i>Type</i> E	P 193 ZTE Corpora Comment Status D	L 40 tion	# [111	Comment The se What i	<i>Type</i> entence is 'rease	T e regarding onably sur	comment Status D Late emains of refresh duty cycle changes is very vague.
"Transı waiting	mit Tw_sys, 2 o before it starts	ctets, is the time, in microsec to transmit data following Lov	onds, that the s w Power Idle." p	ystem is capable of oor English	In 100 Suggested	BASE· Reme	-T the timir dy	ng of this parameter change is critical.
Suggested Chang the sys Idle."	<i>Remedy</i> e to "Transmit T stem is capable	w_sys (2 octets wide) is the t of waiting before it starts tran	time (expressed smitting data fo	in microseconds) that lowing the Low Power	Clarify If there	when e is and Respon	the parame	eter change takes place on the link; is it only after a link retrain? , it may be problematic to time the change on both sides of the link.
Proposed F PROP	Response OSED ACCEPT	Response Status W			PROP	OSED	REJECT.	
					The ea	arlier pa e that th	art of the p ne link part	aragraph recommends sending at least 4 LLDP messages to tner has received them.
					Also, r seems messa	none of s clear t ages ca	these para that the ne innot be se	ameters have any effect unless LPI is being asserted therefore it w parameters will be used during the next assertion of LPI. LLDP ent when LPI is being asserted.

C/ 78 SC 78.4.2.4

proposed responses IEEE IEEE IEEE P802.3az D1.0 Energy	Efficient Ethernet comments	Nov 2008
Cl 78 SC 78.5 P 194 L 45 # 325 Parnaby, Gavin Solarflare Communica	C/ 78 SC 78.5 P 195 L 10 Bennett, Michael LBNL	# 250
Comment Type E Comment Status D Late email 'The maximal PHY recovery time is defacement for different protocols' seems to be a typo.	Comment Type ER Comment Status D In the protocol column of Table 78-2, 10GBASE-KX should be 1000BASE	-КХ
SuggestedRemedy change to 'A maximum PHY recovery time is defined for each physical protocol'	SuggestedRemedy replace 10GBASE-KX with 1000BASE-KX	
Proposed Response Response Status W PROPOSED ACCEPT.	Proposed Response Response Status W PROPOSED ACCEPT.	
CI 78 SC 78.5 P 194 L 45 # 131 Hajduczenia, Marek ZTE Corporation Image: Corporation<	Cl 99 SC P 3 L 4 Diab, Wael Broadcom	# 261
Comment Type ER Comment Status D By "defacement" do You mean "The act of damaging the appearance or surface of something" ?? I suspect it is a typo. Does not seem to make any sense in this case. SuggestedRemedy Change into something appropriate in this case (various, different etc.) Proposed Response Response Status W	Comment Type E Comment Status D The abstract still has a TBD for Backplane Ethernet. SuggestedRemedy Suggest language similar to what is already there for TP Ethernet Proposed Response Response Status W PROPOSED ACCEPT	
PROPOSED ACCEPT. See response to comment #325	Cl 99 SC P3 L5 Diab, Wael Broadcom	# 262
CI 78 SC 78.5 P 195 L 1 # 148 Hajduczenia, Marek ZTE Corporation Image: Corporation Image: Corporation	Comment Type E Comment Status D The LLDP scheme is not covered in the abstract or keywords.	
Comment Type T Comment Status D Table 78-2 is full of TBDs	SuggestedRemedy Suggest adding some language to cover LLDP in the For example: "A net	w LLDP TLVs is
SuggestedRemedy Change the TBDs with at least temporary values You have been working on. Leaving TBDs sends a wrong message. You can always change these values later on if that is the TF's consensus. Proposed Response Response Status W PROPOSED ACCEPT IN PRINCIPLE.	defined for negotiation system level energy efficiency parameters" and "TL keyword list <i>Proposed Response Response Status</i> W PROPOSED ACCEPT.	LV, LLDP" to the

TBD will be replaced by real values after TF discussion on draft 1.0

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

proposed responses IEEE IEEE IEEE P802.3az	D1.0 Energy Efficient Ethernet comments	Nov 2008	
C/ 99 SC P7 L 13 # 24 Diab, Wael Broadcom	C/ 99 SC 99 P 3 Dawe, Piers Avago Te	L 8 # 44	
Comment Type E Comment Status D Font on the TF Chair and Editor seems to be smaller and different than WG offic	Comment Type E Comment Status D er names. conciously	-	
SuggestedRemedy Please adjust font to match list above Proposed Response Response Status W	SuggestedRemedy consciously At line 10, consecuively s/b consecutively Line 40, 802.3az-2008 is too optimistic		
C/ 99 SC 99 P1 L2 # 4	Proposed Response Response Status W PROPOSED ACCEPT.		
Dawe, Piers Avago Technologies Comment Type E Amendement Comment Status	Cl 99 SC 99 P5 Booth, Brad AMCC	L 5 # 283	
SuggestedRemedy Amendment Also at line 30, change 'a amendement' to 'an amendment' At line 30, extra comma 'clause, Clause 78, which' Broken link 'Clause 78' Line 22, too many capitals: Media Access Control parameters, Physical Layers and management parameter Energy-Efficient Ethernet	Period in front of Section Four. SuggestedRemedy Please remove period. Proposed Response Response Status W s for PROPOSED ACCEPT.		
Proposed Response Response Status W PROPOSED ACCEPT.	Cl 99 SC 99 P 5 Dawe, Piers Avago Te	L5 # 45 echnologies	
C/ 99 SC 99 P 11 L 49 # 44 Dawe, Piers Avago Technologies Comment Type E Comment Status D	Comment Type E Comment Status D .Section SuggestedRemedy Section		
There is a newer version of this page SuggestedRemedy Ask P802 3ay for it	Line 12, Gb/s split over a line break. There's a Line 18, change 'of the IEEE Std 802.3 standar Line 24, change 'operation point-to-multipoint' to	Line 12, Gb/s split over a line break. There's a Frame option to stop this. Line 18, change 'of the IEEE Std 802.3 standard with' to 'of IEEE Std 802.3 with' Line 24, change 'operation point-to-multipoint' to 'operation on point-to-multipoint'	
Proposed Response Response Status W PROPOSED ACCEPT.	Proposed Response Response Status W PROPOSED ACCEPT.		

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