

P802.3ch Draft 0.5

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September 2018

IEEE P802.3ch

P802.3ch Editorial Team

- Natalie Wienckowski, Chief Editor
 - Front matter, Clause 1, Definitions
 - Clause 30 Management
 - Clause 44 Introduction to 10 Gb/s baseband network
 - Clause 45 Management Data Input/Output (MDIO) Interface
 - Clause 78 Energy-Efficient Ethernet (EEE)
 - Clause 98 Auto-Negotiation for single differential-pair media
 - Clause 104 Power over Data Lines (PoDL) of Single Balanced Twisted-Pair Ethernet
 - Clause 125 Introduction to 2.5 Gb/s and 5 Gb/s networks
 - Clause 149 Physical Coding Sublayer (PCS), Physical Medium Attachment (PMA) sublayer and baseband medium, type 2.5GBASE-T1
 - Clause 150 Physical Coding Sublayer (PCS), Physical Medium Attachment (PMA) sublayer and baseband medium, type 5GBASE-T1 and 10GBASE-T1
- Curtis Donahue, Editor
 - PICS

Draft 0.5 Chief Editor's Notes

- Draft 0.5 was been updated to include the following from the July 2018 meeting:
 - PAM4 was selected as the modulation method for all speeds.
 - A new IL limit to meet low frequency performance of the cables and which changed the maximum frequency to 3 GHz.
 - Link segment nominal characteristic impedance of 100 ohms.
 - Link Synchronization process
 - A line baud rate of 5.625 GBaud at 10 Gb/s, $\frac{1}{2}$ this at 5 Gb/s and $\frac{1}{4}$ this at 2.5 Gb/s
 - Added support for OAM
 - 10-bit RS symbol, with interleaving if needed

Draft 0.5 Chief Editor's Notes (cont'd.)

- More common content based on existing Clauses
- Technical content based on existing Clauses (97 & 126) with unapproved content highlighted in yellow to emphasize where we still need content.

Task Force Review

- Start task force review on D0.5 created out of this meeting
 - D0.5 was available on Thursday, August 2
 - Comments were due on Sunday, September 2
- Summary of comments
 - 56 comments received on time
 - 2 late comments
 - 4 commenters
 - 29 “EZ” comments

Commenting Do's and Don't

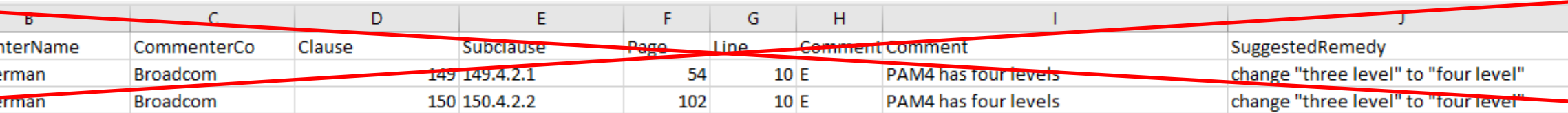
- Do
 - Comment on any technical or Editorial error you find.
- Don't
 - Assume someone else will find the error and comment on it.

We had a total of 4 commenters for D0p5. All found at least one typo that no other commenter found.


Commenting Do's and Don'ts (cont'd.)

- Do
 - Provide late comments if you see that something was missed.
- Don't
 - Put them in the main Excel table loaded to our website to submit them.

 When you do this, I have to create a new file with only your comments and put them in the correct format. I'm not going to do this so they'll be sent back to you!



	A	B	C	D	E	F	G	H	I	J
1	Comment	CommenterName	CommenterCo	Clause	Subclause	Page	Line	Comment	Comment	SuggestedRemedy
2	57	Feyh, German	Broadcom	149	149.4.2.1	54	10	E	PAM4 has four levels	change "three level" to "four level"
3	58	Feyh, German	Broadcom	150	150.4.2.2	102	10	E	PAM4 has four levels	change "three level" to "four level"



Task Force Review and Working Group Ballot comment input form									
1									
2	First name			Surname			Affiliation		
3	German			Feyh			Broadcom		
4	Click on column headers for help								
5	Category	Page	Sub-clause	Line #	Comment	Proposed Change		Must Be Satisfied	
6	Editorial	54	149.4.2.1	10	PAM4 has four levels	change "three level" to "four level"			
7	Editorial	102	150.4.2.2	10	PAM4 has four levels	change "three level" to "four level"			

Commenting Do's and Don'ts (cont'd.)

- Do
 - Provide presentations that explain your comments.
- Don't
 - Put generic statements in the implementation details like, “add a sentence to make the frequency “xxxxx MHz”.

When you do this, I have to write the text myself and hope what I put is what you're looking for. If you do this either they'll be sent back to you or you'll get an urgent email to ask you if what I have put matches your expectation.

Commenting Do's and Don'ts (cont'd.)

- Do
 - Keep your editor happy by writing clear, concise comments with clear and complete instructions for what you want done!
- Don't
 - Upset your editor by creating more work for her!

D0p5 Comment Review

Clause 150

- Merge with Clause 149

D0p5 highlighted text and
missing content review

Clause 44

- Pg 32, line 7: Need delay constraints – volunteer
- Need interleaving

Clause 45

- Need registers defined – George will provide for November Plenary mtg.

Clause 78

- Page 37, line 35 – Need EEE parameters for Table 78-2 – Presentations expected for November

Clause 98

- Any changes needed? If not, propose to remove this Clause.
- NOTE: Annex 98B is required and would be kept.
- William Lo will provide the text for this and it will be added.

Clause 104

- Need content based on the PoDL requirements and types to be supported – Presentations and text expected in November.

Clause 149

- Page 49, line 51 – November presentations
- Page 50, line 1 – Done in Sept., text from Paul Langner
- Page 57, line 42 – Do we have PMA_PHYREADY.indication? (In 97, not in 126) - yes
- Page 58, line 44 – Do we have PMA_REMPHYREADY.request? (In 97, not in 126) - yes
- Page 62, line 19 – Are the highlighted “four” and “4” correct? - yes
- Page 62, line 37 – Do we have R_BLOCK_TYPE and T_BLOCK_TYPE? - yes

Clause 149 (Cont'd.)

- Page 64, Line 23 – Is this text correct for PMA training mode descrambler polynomials? If so, need equations. – Motion from Sept. Bring from Clause 97.
- Page 64, Line 30 – Is the LPI signaling text correct? - November
- Page 65, Line 22 – LPI synchronization? - November
- Page 66, Line 22 – Refresh period signaling - November
- Page 68, Line 16 & 17 – highlighted 9 should be 10, agreed? - yes
- Page 70, Line 35 – Is the RFER (receive frame error rate) highlighted correct? – change TBD
- Page 71, Line 7 – Is the PMA training text correct? - November

Clause 149 (Cont'd.)

- Page 71 – PHY Control function? - November
- Page 73, Line 17 – What type of CRC? 16 –bit? - November
- Page 75, Line 9 – Auto negotiation definition when starting correct?
Replace section with 97.4.2.5
- Page 79, Line 44 – Section 4.4.4 PMA State variables: In 97 but not 126:
en_slave_tx, infofield_complete, loc_phy_ready, loc_countdown_done,
PMA_state, PMA_watchdog_status, rem_countdown_done,
rem_phy_read, sync_link_control - November
- Page 82, Line 7 – Is the Clause 97 Startup sequence correct for 2.5G? –
November
- Page 84, Line 25 – Is the Link Monitor State diagram correct? Do any
variable names need to change? – Yes, make necessary changes to reflect
multi-Gig

Clause 149 (Cont'd.)

- Page 85, Line 7 – What are the test modes needed? - November
- Page 85, Line 28 – Should the test mode clock be a 125 MHz clock?
- Page 85, Line 29 – what fraction of TX_CLK is this? Where is TX_CLK frequency defined? I couldn't find it in 97 or 126 even though the name is used many times.
- Page 85, Line 37 – Does this test mode have a unique Scrambler? If not, what do we refer to, if it is unique, what is the equation?
- Page 85, Line 43 – Is this test mode 5 definition correct?
- Page 85, Line 51 – Need test mode 7 description based on encoding.

Clause 149 (Cont'd.)

- Page 85, Line 7 – What are the test modes needed?
- Page 88, Line 4 – What time should be used for the output droop test?
- Page 88, Line 22 – Are these the correct modes?
- Page 88, Line 43 – Are the numbers correct? If not, what should they be? – **yes**
- Page 89, Line 2 – Change yellow highlighted text to TBD.
- Page 89, Line 30 – Are there additional AN functions?
- Page 94, Line 5 – Need delay constraints - November

D0p6

Timing

- No OOC mtg in October
 - All approved content required by Sunday, September 23
 - D0.6 available by Monday, October 15
 - Comments due on Tuesday, October 30

Backup

How to Comment

- Use the [comment tool](#)
- Use the [comment spreadsheet](#)

Clause: Subclause: Page: Line:

Please use "99" for comments on the front matter and "00" for comments on the entire draft. If referencing a Figure or Table, please enter the table or figure number in Comment. Enter Page and Line number of the first occurrence. For multiple occurrences, list in Comment.

Comment:

Comment Type: E ER T TR
E(ditorial) E(ditorial) R(equired) T(echnical) T(echnical) R(equired)

Suggested Remedy:

Task Force Review and Working Group Ballot comment input form						
First name		Surname		Affiliation		
Click on column headers for help						
Category	Page	Sub-clause	Line #	Comment	Proposed Change	Must Be Satisfied

THANK YOU