

IEEE 802.3

CU4HDD Study Group – Task Force Meeting Minutes

15-Mar-2016 Plenary

Prepared by Dan Smith, vice chairman

Call Began on 3/15/2016, at 9:09 AM, Macau.

Agenda:

- Rich Explains COM
- Willam Lo's Presentation of 802.3cb Proposed Draft Commentary
- Final look at Anthony's channel slides
- Yong's changes to PAR, CSD, and Objectives
- Review Peter Wu's presentation on PHY

Preliminaries:

Patent statement was presented with no response from the participants.

Presentation/Discussion:

- We decided on a password for the Task Force private area. See chairman for details.
- Rich gave presentation on how COM works. (Channel Operating Margin) He presented a subset of his 46 slide tutorial, giving an overview to the group for a general understanding. See Rich's slides, which will be posted in the private area.
 - Refer to BM spec for chip-to-module for useful definition that relates to our proposal.
 - Annex 83E (inside the current 802.3bx-2015 spec, section 6, in the private area)
 - Annex 83D can also be used – if we decide to follow chip-to-chip normative.
 - PMA of section 83 becomes our PMD. See William's slides, where the PMA is 'logical', the PMD is 'physical'. Ours is much simpler.
 - Looking at Rich's slide 12, Figure 93B-1 shows TP1 and TP2. as the test points for drive and host (switch).
 - There is an observable point inside the design to allow Frame Loss Ratio (FER) testing for receiver tests.
 - Rich has found that a CTLE will open the eye, but a DFE is probably needed once the eye closes in certain systems.
 - From the PDF (Probability Density Func) we can determine the As, available signal in COM. (See slide 16 in Rich's presentation.)
- William gave a quick tutorial on PMA/PMD usage in our proposal – how he pulled from Section 51 of 10GBASE-KR and then Clause 72 of 10GBASE-KR PMD.

- 51.3 become our PMA (logical), the PMD being like section 72 in 10Gbase-KR.
- William presented the 802.3cb Proposed Draft. See William's posted presentation for details.
 - 4 new clauses will be introduced:
 - 200 – 2,5GBASE-KX PCS/PMA
 - 201 – 5GBASE-KR PCS/PMA
 - 202 – 2.5GBASE-KX PMD
 - 203 – 5GBASE-KR PMD
 - Many existing Clause changes – see William's document for details.
 - See open TBDs in his last slide.
- William presented PCS. See his posted document for details.
 - based on Clause 36
 - coined 2.5GPll (PCS Internal Interface), as our new interface
 - similar to GMll
 - Sequence Order Sets require the additional complexity of Word Encode Mapping – Table 200-3 changes.
 - He went through various figures, showing changes with red notes.
 - see links at the end for changes in other clauses
 - Clauses 69, 73, 78, 125
 - add our new clauses to various tables and text
 - 2.5GBASE-KX and 5GBASE-KR added in many places (see blue text)
 - A general understanding from Arthur:
 - use 1G for 2.5G and use 10G for 5G
- Things needed for July Plenary:
 - Tutorial about 90 minutes long with explanation of what's in our draft (as clean as we can make it)
 - Draft circulated 10 days in advance
- Yong went through changes to PAR, CSD and Objectives.
 - He removed references to 'Copper Cable'
 - Changes to 'Objectives' to increase 5G loss total to 16 dB (TP0 to TP5)
 - Changed frequencies to reflect actual values
- Discussed next steps:
 - Can we get a 0.1 draft out by May?
 - Would need out-of-cycle Interim in June to get draft to 0.2
 - Comment resolution before July to generate 0.3
 - Timeline shown – see posted document
 - Aggressive D0.1 baseline draft spec by mid May, 2016
 - Went through checklist for motions to vote on tomorrow

- Went through William's 'Proposed Draft Commentary'
 - Agreed to adopt Peter's presentation
- Dan presented his presentations
- Dan presented Anthony's presentation
- Yong presented Proposed draft Note in draft on Implicit Cable use in backplanes
- Peter presented his presentation
- Yong demonstrated the Comment tool

Adjourned: 3:28 PM, Macau time, until tomorrow at 9:00 AM.

March 16, 2016 (Wednesday)

Dan F. Smith (Vice Chair) started the meeting at 9:10 am

Yong Kim serving as a Recording secretary

Attendee list as below.

Motions:

Motion #1: Move that the 802.3cb Task Force approve adopted baseline revisions (refinements) modified in Lo_3cb_02_0316.pdf, Lo_3cb_03_0316.pdf, and Lo_3cb_04_0316a.pdf.

Moved by: Yong Kim; Seconded by: Peter Wu; Vote: Yes=5; No=0; Abstain=0, Motion Passes

Motion #2: Moved to approve minutes from January 2016 Interim

Moved by: Brett McClellan; Seconded by: Yong Kim; Vote: Yes=5; No=0; Abstain=0, Motion Passes

Motion #3: Move that the 802.3cb Task Force approve wu_3cb_01_0316a.pdf slide 13, as a baseline PMD and direct editors to create appropriate parts of draft 0.1.

Moved by: William Lo; Seconded by: Yong Kim; Vote: Yes=5; No=0; Abstain=0, Motion Passes

Motion #4: Move that the 802.3cb Task Force approve Calbone_3cb_01_0316a.pdf as a baseline, and direct editors to create appropriate parts of draft 0.1.

Moved by: William Lo; Seconded by: Yong Kim; Vote: Yes=5; No=0; Abstain=0, Motion Passes

Motion #5: Move that the 802.3cb Task Force create normative reference to TP1/TP2 and TP3/TP4 as in slide 12 of mellitz_3cb_01_0316.pdf using Calbone_3cb_01_0316a.pdf as a baseline document, and direct editors to create appropriate parts of draft 0.1.

Moved by: William Lo; Seconded by: Yong Kim; Vote: Yes=5; No=0; Abstain=0, Motion Passes

Motion #6: Move that the 802.3cb Task Force chair to request 802.3 to approve additional Interim meeting in June 2016, intended to be used as comment resolution. Meeting will be in SF Bay area, and

Date is to be announced (1 day in June 16th or 23rd week). This meeting is scheduled and can be cancelled.

Moved by: William Lo; Seconded by: Peter Wu; Vote: Yes=5; No=0; Abstain=0, Motion Passes

Motion #7: Move that the 802.3cb Task Force authorize editors (Yong Kim, et al) to draft D0.1 by April 18th 2016 week and 802.3cb to conduct its first task force ballot with review period of 2 weeks or more.

Moved by: Brett McClellan; Seconded by: Peter Wu; Vote: Yes=5; No=0; Abstain=0, Motion Passes

Motion #8: Move that the 802.3cb Task Force adopt the timeline as in Kim_3cb_05_0316.PDF.

Moved by: William Lo; Seconded by: Dan Smith; Vote: Yes=5; No=0; Abstain=0, Motion Passes

Motion #9: Move that the 802.3cb Task Force approve PAR revision as modified in Kim_3cb_01_0316.pdf

Moved by: Dan Smith; Seconded by: Peter Wu; Vote: Yes=5; No=0; Abstain=0, Motion Passes

Motion #10: Move that the 802.3cb Task Force approve CSD revision as modified in Kim_3cb_02_0316a.pdf

Moved by: William Lo; Seconded by: Peter Wu; Vote: Yes=5; No=0; Abstain=0, Motion Passes

Motion #11: Move that the 802.3cb Task Force approve Objectives revision as modified in Kim_3cb_03_0316b.pdf, based on accepted baseline proposals in Calbone_3cb_01_0316b.pdf and Kim_3cb_04_0316a.pdf.

Moved by: William Lo; Seconded by: Dan Smith; Vote: Yes=5; No=0; Abstain=0, Motion Passes

Motion #12: Move that the 802.3cb Task Force pre-circulate its D2.0 at least 10 days before the July 2016 Plenary, if its Task Force ballot is successfully closed (i.e. >= 75%) and the draft is deemed to be complete out of the Task Force June Interim.

Moved by: William Lo; Seconded by: Peter Wu; Vote: Yes=5; No=0; Abstain=0, Motion Passes

Moved to adjourn 10:41 am.

Moved by: Yong Kim; Seconded by: William Lo. Vote: Yes=5; No=0; Abstain=0, Motion Passes

Attendees:

Name	Affiliation	Attended 3/15/2016	Attended 3/16/2016
Calbone, Anthony	Seagate		
Carlson, Mark	Toshiba		
Chalupsky, David	Intel		

Name	Affiliation	Attended 3/15/2016	Attended 3/16/2016
Chandrian, Ajith	Cisco		
Chang, Jacky	HP		
Cox, Alvin	Seagate		
Czekalski, Marty	HGST		
D'Ambrosia, John	DELL		
Feyh, German	Broadcom		
Ghani, Abbas	Ericsson		
Haser, Alex (Ms.)	Molex		
Healey, Adam	Broadcom		
Horner, Rita	Synopsys		
Jones, Peter	Cisco		
Kim, Yong	Broadcom	X	X
Kipp, Scott	Brocade		
Law, David	HP	X	
Lo, William	Marvell	X	X
Marris, Arthur	Cadence	X	
McCarthy, Mick	Analog Devices		
McClellan, Brett	Marvell		X
McMillan, Larry	Western Digital		
McSorley, Greg	Amphenol		
Mellitz, Rich	Intel	X	
Poh, Ed	Molex		
Parthasarathy, Vasu	Broadcom		
Rahman, Hamza	Dell		
Ran, Adee	Intel		
Schoenhals, Mark	Marvell		
Sedarat, Hossein	Aquantia		
Sinha, Santanu	Broadcom		
Skaar, Tom	Seagate		
Smith, Dan	Seagate	X	X
Sommers, Scott	Molex		
Souvignier, Tom	Broadcom		
Suhler, Paul	HGST		
Sun, Phil	Marvell		
Svensen, Justin	LIT		
Telang, Vivek	Broadcom		
Tsang, Dennis	Halo	X	
Tenea, Bogdan	Ixia		
Tracy, Nathan	TE Connectivity		

Name	Affiliation	Attended 3/15/2016	Attended 3/16/2016
Tran, Paul	Marvell		
Walker, Dylan	Walker		
Wang, Roy	HPE	X	
Wassenberg, Paul	Marvell		
Wu, Peter	Marvell	X	X
Zemach, Rami	Marvell		
Zhang, Jin	Marvell		
Zhang, Vince	Halo	X	
Zimmerman, George	CME Consulting, Inc.		
Zimmerman, Yaron	Marvell		
Attendee Count:		10	4