IEEE P802.3cb 2.5 Gb/s & 5 Gb/s Backplane *and Cable* Task Force Closing Report

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IEEE P802.3cb 2.5 Gb/s & 5 Gb/s Backplane and Cable Project information

Task Force Organization

- Dan Smith, Seagate, P802.3cb Task Force Chair
- Dan Smith, Seagate, P802.3cb Arch Ad Hoc Chair

Task force web and reflector information

- Reflector information: http://www.ieee802.org/3/cb/reflector.html
- Home page: http://ieee802.org/3/cb/index.html
  - PAR: http://www.ieee802.org/3/cb/P802_3cb_PAR_modification_072716.pdf
  - CSD: http://www.ieee802.org/3/cb/P802_3cb_CSD_modification_072716.pdf
  - Objectives: http://www.ieee802.org/3/cb/8023cb-objectives.pdf
  - Timelines:http://www.ieee802.org/3/cb/8023cb_timeline_0316.pdf
  - Public and Private Areas: http://www.ieee802.org/3/cb/index.html

IEEE P802.3cb Activities This Week

Accomplishments:

- Final Comment Resolution on Draft 1.2, becoming Draft 1.3, as shown in our Private Area. Changes to Draft 1.2 are shown in slides below.
- Comments to PAR were responded to, satisfied the commenter, and approved by the Task Force. Revised PAR forwarded to Executive Committee.
- Comments to CSD were responded to, satisfied the commenter, and approved by the Task Force. Revised CSD forwarded to Executive Committee.

802.3cb PAR/CSD Comments

Comments received during July Plenary, against the current PAR and CSD revisions:

802.3cb - Amendment: 2.5Gb/s and 5 Gb/s Operation over Backplane, PAR Modification and CSD:

1) Section 8.1 – An Explanation should be put in 8.1 to explain what was modified.

2) CSD has a “(CU4HDD)” which is not defined, is it necessary? Suggest remove.

3) CSD – Footer indicates “March 2016” suggest update as this CSD is being updated and should be documented as such.

Comments resolved and approved by 802.3cb Task Force:

802.3cb - Amendment: 2.5Gb/s and 5 Gb/s Operation over Backplane, PAR Modification and CSD:

1) Section 8.1 – An Explanation should be put in 8.1 to explain what was modified. *Wording added, approved by 802.3cb Task Force. The wording and the Working Group motion are shown below.*

2) CSD has a “(CU4HDD)” which is not defined, is it necessary? Suggest remove. *Agree to remove superfluous name in title.*

3) CSD – Footer indicates “March 2016” suggest update as this CSD is being updated and should be documented as such.
Agree to change footer date to July 2016, to coincide with the change in Item 2 above.

802.3cb PAR Modification

http://www.ieee802.org/3/cb/P802_3cb_PAR_modification_072716.pdf

Wording added to this revision:

8.1 Additional Explanatory Notes:
Item 1: Section 2.1 - remove the words from the title, ‘and Copper Cables’
Item 2: Section 5.2.b - remove the words ‘channels such as ’ also ‘and twinaxial copper cables ’.
Item 3: Section 5.5 - remove the words ‘and copper cable’.

The changes are proposed because the IEEE P802.3cb project is intended to address a backplane system within a box (enclosure) that contains an array of storage devices interfacing to a backplane, not a stand-alone cable solution. However, the storage devices plug directly into the enclosure's sub-system, through either a backplane board, or backplane board plus internal cables. To avoid any confusion with a stand-alone cable system, it has been decided to remove the reference to 'cable' from the PAR title, scope and need.

Actual PAR Document Revision

7.1 Are there other standards or projects with a similar scope?: No
7.2 Joint Development
Is it the intent to develop this document jointly with another organization?: No

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Item 3: Section 5.5 - remove the words 'and copper cable'.

The changes are proposed because the IEEE P802.3cb project is intended to address a backplane system within a box (enclosure) that contains an array of storage devices interfacing to a backplane, not a stand-alone cable solution. However, the storage devices plug directly into the enclosure's sub-system, through either a backplane board, or backplane board plus internal cables. To avoid any confusion with a stand-alone cable system, it has been decided to remove the reference to 'cable' from the PAR title, scope and need.

Motion

Move that the IEEE 802.3 Working Group approve the IEEE P802.3cb PAR revision:

(http://www.ieee802.org/3/cb/P802_3cb_PAR_modification_072716.pdf)

Moved by: Dan Smith

Seconded by: Larry McMillan

(Technical 75% Required)

Y: __

N: __

A: __

Motion Passes/Fails

Adopted Criteria for Standard Development (CSD) 2.5 Gb/s and 5 Gb/s Ethernet over Backplane ~~and Copper Cable~~

Motion

Move that the IEEE 802.3 Working Group approve the IEEE P802.3cb CSD revision:

(http://www.ieee802.org/3/cb/P802_3cb_CSD_modification_0727616.pdf)

Moved by: Anthony Calbone

Seconded by: Curtis Donahue

(Technical 75% Required)

Y: __

N: __

A: __

Motion Passes/Fails

Summary of comments on D1.2

6 Comments received on D1.2,
http://www.ieee802.org/3/cb/comments/index.html

All Editorial-Required (ER) comments

				CommentType	Comment Status / Response Status	
# 1	Cl 130B	SC 130B.4.4.2		ER	A / C	Kim, Yongbum
Correct symbol character should be used for ">=", not the two char as used here.						
# 2	Cl 69	SC 69.1.2		ER	A / C	Kim, Yongbum
Figure 69 2 should be Figure 69-2, i.e. missing dash "-" and remain in green color font.						
# 3	Cl 128A	SC Figure 128A-		ER	A / C	Kim, Yongbum
Drawing – lines w/ 90 angle shows stubs. Please fix. Also do others in 128A and 130A - general fix and clean up lines.						
# 4	Cl 128B	SC 128B.4.4.1		ER	A / C	Kim, Yongbum
Typo - erroneous "]" on line 18, 24, 28. Delete them						
# 5	Cl 128A	SC 128A.3.2.3		ER	A / C	Kim, Yongbum
Delete blank row in Table 128A-4						
# 6	Cl 130A	SC 130A.1		ER	A / C	Kim, Yongbum
"shows the test point locations associated with 5GSEI." Is missing the cross reference to Figure 130A-1. Insert the cross reference so that it reads<CR>"Figure 13						

- D1.3 generated, Clean and with Change Bars, found at http://www.ieee802.org/3/cb/private/index.html

Changes (becoming D1.3)

Comment #1, CL130B, ER, Wrong Symbol

3.2.2	>= 16 dB f	⇒	2.2	~~>=~~ ≥ 16 dB from f_{min} measured at TP1 and

Comment #2, CL69, ER, Missing dash "-"

Open System Interconnection (OSI) reference model are shown in Figure 69-1, Figure 69-1a, ~~and~~ Figure 69-~~-~~2, and Figure 69–2a.

Comment #3, CL128A, ER, Clean up unsightly "stubs" in drawings. Also in CL130A

Comment #5, CL128A, ER, Delete blank row in the table

Table 128A–4—2.5GSEI host jitter tolerance parameters

Parameter	Value	Units
Transmitter steady-state voltage, *vf*	400	mV
Linear fit pulse peak	0.84 × *vf*	mV
Random Jitter	0.2	UI
Applied peak-to-peak sinusoidal jitter	Table 128A–5	

⇒

Table 128A–4—2.5GSEI host jitter tolerance parameters

Parameter	Value	Units
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Linear fit pulse peak	0.84 × *vf*	mV
Random Jitter	0.2	UI
Applied peak-to-peak sinusoidal jitter	Table 128A–5	

Comment #4, CL128B, ER, Delete erroneous "]", three places

PG1	2.5GBASE-KX pattern generator output level	128B.2.1	No more than 800 mV with gain b_{TC}	M	Yes [ ] ~~]~~

Comment #6, CL130A, ER, Missing Cross Reference

pluggable storage drive module interfaces. Figure 130A–1 shows the test point locations associated with 5GSEI.

802.3cb Task Force Motion #5

Motion to approve comments and revise revision to Draft 1.3.

(http://www.ieee802.org/3/cb/private/8023cb_D1p3_CB.pdf)

Moved by: Larry McMillan

Seconded by: Yong Kim

(Technical 75% Required)

Y: 11

N: 0

A: 0

Motion Passes

Motion

Move that the IEEE 802.3 Working Group progress the IEEE P802.3cb draft to Working Group ballot:

Moved by: Dan Smith

Seconded by: Larry McMillan

(Technical 75% Required)

Y: __

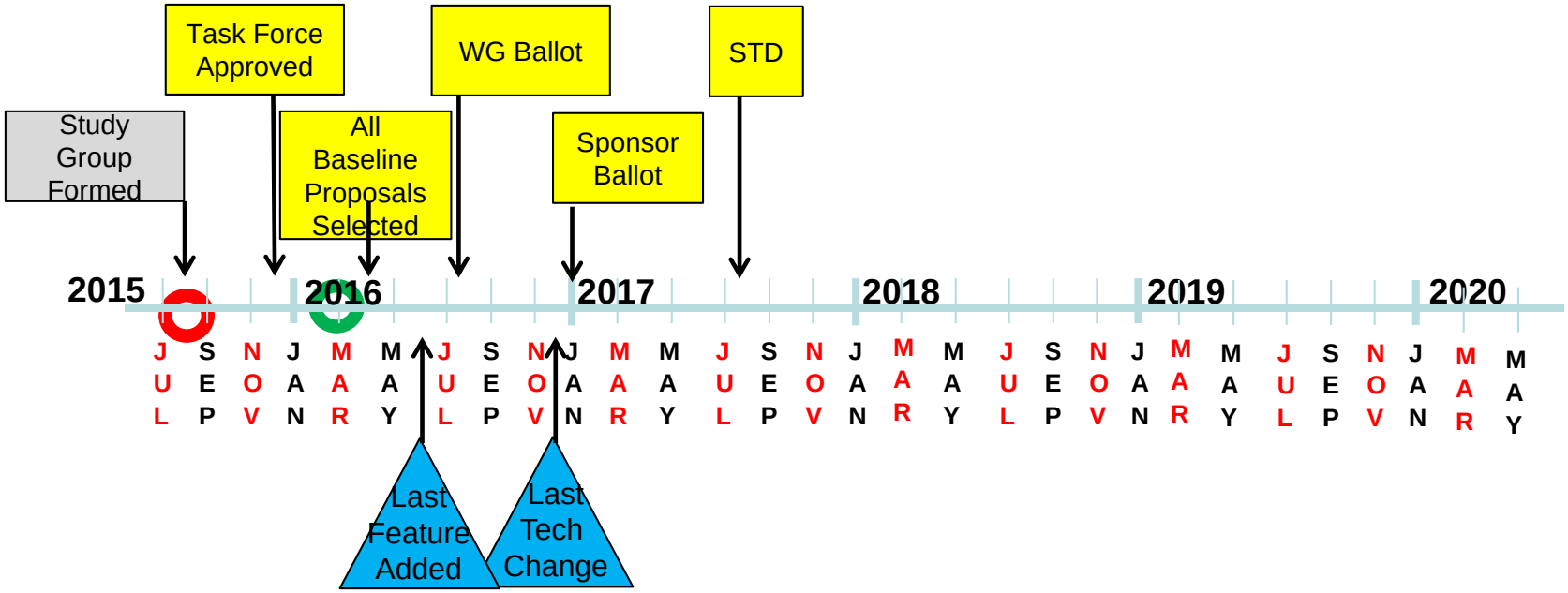
N: __

A: __

Motion Passes/Fails

802.3cb 2.5 Gb/s and 5 Gb/s Backplane Timeline

FASTEST Possible Timeline – and achievable – meaningful and timely contributions



Milestones – approaching Working Group Ballot

TF D0.3 Generated – April 14, 2016
TF Ballot (1st) – April 2016
Comment Resolution – May 25th 2016, week of May Interim
TF D1.0 Generated – June 12th 2016
Comment Resolution at June Interim – June 27th 2016
TF D1.2 Generated – pre-circulated to WG on July 15th 2016

IEEE P802.3cb 2.5 Gb/s & 5 Gb/s Backplane Task Force Plans

Next Steps

- Proceed with Working Group Ballot
- Expected turnout for Sept Interim: ~ 15 regulars
- Comment Resolution to perfection (dream big!)

Questions?

Thank you!