

Unapproved Minutes

IEEE P802.3cn 50 Gb/s, 100 Gb/s, 200 Gb/s, and 400 Gb/s over Single-Mode Fiber and DWDM Task Force

Interim Meeting

Jan 14 - 15, 2019

Prepared by John D'Ambrosia

All times PT

Location: Hilton Long Beach

The meeting called to order at 9:00am, Jan 14, 2019

Chaired by John D'Ambrosia

General Introductions were made by participants.

Presentation #1 – Agenda and General Information

Presenter: John D'Ambrosia, Futurewei, Subsidiary of Huawei

URL: http://www.ieee802.org/3/cn/public/19_01/agenda_3cn_01_0119.pdf

Motion #1: Move to approve the agenda

Moved by: Steve Trowbridge

Second by: Pete Anslow

Results: Approved by voice vote without opposition

Chair asked if there were any reporters in the room. Nobody identified themselves as representing the press.

Chair showed IEEE 802 Participation slide.

Chair reviewed 802.3cn and 802.3ct Task Force information. Chair introduced the two editorial teams.

Chair noted attendance tools.

Motion #2: Approval of noted minutes

- Nov Plenary

- http://www.ieee802.org/3/cn/public/18_11/minutes_3cn_01_1118_unapproved.pdf

- Jan 3 Task Force Ad hoc Call

- http://www.ieee802.org/3/cn/public/adhoc/19_0103/minutes_3cn_190103_unapproved.pdf

Moved by: Steve Trowbridge

Second by: Pete Anslow

Results: Approved by voice vote without objection

Chair presented the Patent Policy Slides for IEEE-SA meetings.

Chair advised the Task Force of the following:

- IEEE's patent policy is described in Clause 6 of the *IEEE-SA Standards Board Bylaws*;
- Early identification of patent claims which may be essential for the use of standards under development is strongly encouraged;

- There may be Essential Patent Claims of which IEEE is not aware. Additionally, neither IEEE, the WG, nor the WG Chair can ensure the accuracy or completeness of any assurance or whether any such assurance is, in fact, of a Patent Claim that is essential for the use of the standard under development.

Chair noted

- That the foregoing information was provided and that slides 1 through 4 (and this slide 0, if applicable) were shown;
- That the chair or designee provided an opportunity for participants to identify patent claim(s)/patent application claim(s) and/or the holder of patent claim(s)/patent application claim(s) of which the participant is personally aware and that may be essential for the use of that standard

There were no responses to the Chair's Call for Potentially Essential Patents

Chair reviewed Ground rules and the role of the chair.

The Chair reviewed important bylaws, rules, & references, and gave an overview of the IEEE 802.3 Standards Process.

Chair reviewed goals for week -

- Modified IEEE P802.3cn (pending PAR approval)
 - Review Draft 0.1
 - Technical Presentations
 - Approve Generation of Draft 1.0
 - Timeline Approval
- IEEE P802.3ct (pending PAR approval)
 - Technical Presentations
 - Baseline Proposals Consideration
 - Timeline Approval
- Consider Liaisons from ITU-T SG15, and OIF

Chair reviewed rules regarding "Division of Project" and noted that the safest course of action would be upon creation of new IEEE P802.3ct Task Force – to hold motion to reaffirm any decisions made before task force creation. Chair encouraged the Task Force to make as much progress as possible at this meeting.

Chair reviewed liaisons:

- **ITU-T SG15**
 - http://www.ieee802.org/3/minutes/nov18/incoming/ITU_SG15_LS-150_to_IEEE_802d3.pdf
 - [Attachments](#) (Password protected)
- **OIF**
 - [OIF to IEEE 802.3 regarding 400ZR Interop Project](#)
 - [Attachment](#) (Password protected)

Chair noted that proposed liaisons would be generated based on meeting results and would be considered at closing business on Tuesday for review.

Chair reviewed Task Force Ad Hoc meetings.

- Two Task Force Ad Hoc Meetings
 - Jan 3
 - http://www.ieee802.org/3/cn/public/adhoc/19_0103/index.html
 - Dec 11
 - http://www.ieee802.org/3/cn/public/adhoc/18_1211/index.html

Chair reviewed the schedule for the interim.

Presentation #2 - [P802.3cn] Chief Editor's Report

Presenter: Pete Anslow

URL: http://www.ieee802.org/3/cn/public/19_01/anslow_3cn_04_0119.pdf

General Discussion

During the presentation it was noted that since the IEEE “fastwake” functionality is already provided by the existing 50G, 200G and 400G sublayers used by the new 40 km PHYs, this has been included in D0.1. This was highlighted to the Task Force, and no one objected.

Pete Anslow took over chairing the meeting @ 9:58am.

Presentation #3 - Proposed Timeline IEEE P802.3cn (Modified PAR)
Presenter: John D’Ambrosia
URL: http://www.ieee802.org/3/cn/public/19_01/dambrosia_3cn_01_0119.pdf

General Discussion

It was noted that it was anticipated that there would be no TBDs by the end of the meeting.

D’Ambrosia resumed chairing the meeting @ 10:04am

Break @ 10:06am

Meeting reconvened at 10:37am

Presentation #4 - TDECQ related changes for existing 200 Gb/s and 400 Gb/s PMDs
Presenter: Pete Anslow
URL: http://www.ieee802.org/3/cn/public/19_01/anslow_3cn_01_0119.pdf

General Discussion

Presentation #5 - P802.3cn optical reflection limits (updated)
Presenter: Pete Anslow
URL: http://www.ieee802.org/3/cn/public/19_01/anslow_3cn_02_0119.pdf

General Discussion

Presentation #6 - P802.3cn DGD penalty
Presenter: Pete Anslow
URL: http://www.ieee802.org/3/cn/public/19_01/anslow_3cn_03_0119.pdf

General Discussion

Presentation #7 - Comment Entry Tutorial
Presenter: Pete Anslow
URL: http://www.ieee802.org/3/cn/public/19_01/p802d3_comment_entry_tutorial_v1p1.pdf

General Discussion

Break @ 12:10pm

Meeting reconvened at 1:35 pm

P802.3cn (mod) Related - Discussion, Strawpolls, Motions

Motion #3

- Move to adopt the project timeline specified on Slide #3 of dambrosia_3cn_01a_0119.pdf for IEEE P802.3cn, pending approval of modified PAR by IEEE-SA Std Board.
- Moved by: Ali Ghiasi
- Second by: Jeff Maki
- Technical (>=75%)
- Results (all): Yes: 37 No: 0 Abstain: 2
- Motion Passes

Motion #4

- Move to adopt P802.3cn Draft 0.1 with noted changes -
 - Make the changes proposed on pages 5 to 7 of anslow_3cn_02_0119 to generate Draft 1.0 and circulate for Task Force review
- Moved by: Pete Anslow
- Second by: Peter Stassar
- Technical ($\geq 75\%$)
- Results (all): Yes: 38 No: 0 Abstain: 2
- Motion Passes

Motion #5

- Pre-submit Draft 1.0 to IEEE 802.3 for consideration for advancement to WG Ballot in Mar 2019, pending approval of modified PAR by IEEE-SA Std Board.
- Moved by: Pete Anslow
- Second by: Peter Stassar
- Technical ($\geq 75\%$)
- Results (all): Yes: 38 No: 0 Abstain: 4
- Motion Passes

Anslow chaired the meeting \approx 1:50pm

Presentation #8 - Proposed IEEE P802.3ct Timeline
Presenter: John D'Ambrosia
URL: http://www.ieee802.org/3/cn/public/19_01/dambrosia_3cn_03_0119.pdf

General Discussion

D'Ambrosia noted that he would update the slide deck and bring back additional alternative timelines based on feedback from Task Force for further discussion.

Presentation #9 - Proposed Draft Structure: IEEE P802.3ct
Presenter: John D'Ambrosia
URL: http://www.ieee802.org/3/cn/public/19_01/dambrosia_3cn_04_0119.pdf

General Discussion

Presentation #10 - 80km Objectives Progress
Presenter: John D'Ambrosia
URL: http://www.ieee802.org/3/cn/public/19_01/dambrosia_3cn_02_0119.pdf

General Discussion

Meeting break at 2:40pm

Meeting reconvened at 3:12pm

D'Ambrosia resumed chairing meeting.

Presentation #11 - 400GBASE-ZR PCS/PMA Baseline Proposal
Presenter: Ilya Lyubomirsky
URL: http://www.ieee802.org/3/cn/public/19_01/lyubomirsky_3cn_01a_0119.pdf

General Discussion

Straw Poll #1

. I would support adopting 100 GHz channel spacing for 400GBASE-ZR

- Yes – 43
- No - 0
- Need more info - 0
- Abstain – 6

Straw Poll #2

- I would support adopting the baseline for 400GBASE-ZR PCS/PMA described in lyubomirsky_3cn_01_0119
- Yes – 40
- No - 0
- Need More Info – 3
- Abstain – 3

Break for the day at 5:52pm

Meeting reconvened Tuesday, Jan 15 at 9:00am

Chair made opening comments and welcomed participants from 802.3ck Task Force to discuss the CGMII Extender.

Chair showed 802 Participation Slide.

Chair did call for essential patents. There were no responses to the Chair's Call for Potentially Essential Patents

Chair noted that he wanted to allow straw poll regarding CGMII Extender Sublayer while participants from the 802.3ck Task Force could participate. There were no objections.

Chair noted that material had been submitted from Matt Schmitt with copyright permission from Cablelabs.

Presentation #12 - Baseline for CGMII Extender, CGMII Extender Sublayer (100GXS)

Presenter: Shawn Nicholl

URL: http://www.ieee802.org/3/cn/public/19_01/nicholl_3cn_01a_0119.pdf

General Discussion

Straw Poll #3

- "I would support adopting the CGMII Extender baseline as proposed in slide 9 of nicholl_3cn_01a_0119.pdf"
- Yes – 36
- No – 0
- Need more info – 13
- Abstain - 9

Break at 9:58am

Meeting reconvened @ 10:30am

Presentation #13 - High level decisions for 100 Gb/s over 80 km DWDM

Presenter: Steve Trowbridge

URL: http://www.ieee802.org/3/cn/public/19_01/trowbridge_3cn_01_0119.pdf

General Discussion

Presentation #14 - Baseline Proposal for 100G / 80km Objective

Presenter: Matt Schmitt

URL: http://www.ieee802.org/3/cn/public/19_01/schmitt_3cn_01b_0119.pdf

General Discussion

Attendance Strawpolls

- Attend Mar 2019 Plenary, Vancouver, BC, CA
- Y: 53 N: 5 M: 9
- Attend May 2019 Interim, Salt Lake City, UT, USA
- Y: 52 N: 4 M: 10

Motion #6

- Move to adopt the baseline proposal for 400GBASE-ZR PCS/PMA described in lyubomirsky_3cn_01b_0119
- Moved by: Ilya Lyubomirsky
- Second by: Mike Sluyski
- Technical ($\geq 75\%$)
- Results (all): Yes: 43 No: 0 Abstain: 13
- Motion Passes

Motion #7

- Move to adopt DP-DQPSK modulation format for the 100 GbE 80km objective
- Moved by: Peter Stassar
- Second by: John DeAndrea
- Technical ($\geq 75\%$)
- Results (all): Yes: 46 No: 0 Abstain: 10
- Motion Passes

Motion #8

- Move to adopt the FEC and frame format defined on slides 9 - 16 in trowbridge_3cn_01a_0119 for 100GbE 80km Objective
- Moved by: Steve Trowbridge
- Second by: Matt Schmitt
- Technical ($\geq 75\%$)
- Results (all): Yes: 44 No: 0 Abstain: 10
- Motion Passes

Break for lunch at 11:45am

Reconvened at 1:38pm

Prior presentation given to IEEE 802.3 Beyond 10km Study Group in Nov 2017

(http://www.ieee802.org/3/B10K/public/17_11/stassar_b10k_01a_1117.pdf) was briefly reviewed.

Straw Poll #4

- I support the specification methodology used for 100 Gb/s coherent optics specified in G.698.2.
- Yes - 18
- No - 0
- Need more info - 2
- Abstain - 3

Straw Poll #5

- I support the development of 100GBASE-ZR / 400GBASE-ZR that defines operation over both amplified and (shorter reach) unamplified DWDM systems.
- Yes - 24
- No - 0
- Need more info - 0
- Abstain - 0

D'Ambrosia reviewed the updated timelines for the IEEE P802.3ct project, based on the earlier discussion. Chair noted he would do straw poll on the three timelines, then look for a motion based on the option getting the most support.

Presentation #15 - Proposed IEEE P802.3ct Timeline (Updated per Task Force Discussion)

Presenter: John D'Ambrosia

URL: http://www.ieee802.org/3/cn/public/19_01/dambrosia_3cn_03a_0119.pdf

General Discussion

Straw Poll #6

- I support the proposed timeline for IEEE P802.3ct proposed on Slide ____ of dambrosia_3cn_03a_0119
- Slide 3 - 1
- Slide 4 - 3
- Slide 5 – 16
- Abstains – 2

Motion #9

- Move to adopt the project timeline specified on Slide #5 of dambrosia_3cn_03a_0119.pdf for IEEE P802.3ct, pending approval of PAR by IEEE-SA Std Board.
- Moved by: Pete Anslow
- Second by: Peter Stassar
- Technical ($\geq 75\%$)
- Results (all): Yes: 18 No: 2 Abstain: 3
- Motion Passes

Proposed liaison text, which included summary of meeting results, was provided by Trowbridge / D'Ambrosia and was reviewed and updated per Task Force discussion.

Proposed Response to ITU-T SG 15 regarding SG15 work on G.709.3 and G.698.2 -

http://www.ieee802.org/3/cn/public/19_01/IEEE_802d3_to_ITU_3cn_0119_draft.pdf

Proposed Response to OIF regarding 400ZR Interop Project Attachment -

http://www.ieee802.org/3/cn/public/19_01/IEEE_802d3_to_OIF_3cn_0119_draft.pdf

Motion #10

- Move that the IEEE P802.3cn Task Force approve:
 - IEEE_802d3_to_ITU_3cn_0119_draft
 - IEEE_802d3_to_OIF_3cn_0119_draft
- with editorial license granted to the Chair (or his appointed agent) as liaison communications from the IEEE 802.3 Working Group to ITU-T and OIF.
- Technical ($\geq 75\%$)
- M: Steve Trowbridge
- S: John DeAndrea
- Results: Passed by voice vote without objection

Chair announced the upcoming face-to-face meetings, and that ad hoc calls before the January interim would be scheduled.

Motion #11

- Motion to adjourn
- M: Steve Trowbridge
- S: Jeff Maki
- Results: Passed by voice vote without objection

Meeting adjourned at 3:15pm.

Meeting Attendees

Last Name	First Name	Employer	Affiliations	Mon	Tues
Anslow	Pete	Ciena Corporation	Ciena Corporation	X	X
Baca	Rich	Microsoft	Microsoft	x	x
Bains	Amrik	Cisco	Cisco	x	
Braun	Ralf-Peter	Deutsche Telekom	Deutsche Telekom	x	x
Brooks	Paul	Viavi Solutions	Viavi Solutions	X	X
Brown	Matt	Macom	Macom	X	X
Butter	Adrian	Avago Semi	Avago Semi	X	
Carlson	Craig	Marvell	Marvell		x
Chang	Frank	Source Photonics	Source Photonics	x	
Chen	Henry	Broadcom	Broadcom		x
Choudhury	Mabud	OFS	OFS		x
Cole	Chris	Finisar	Finisar		x
D'Ambrosia	John	Futurewei, subsidiary of Huawei	Futurewei, subsidiary of Huawei	x	x
Dawe	Piers	Mellanox	Mellanox	x	x
DeAndrea	John	Finisar	Finisar	x	x
Estes	Dave	Spirent Communications	Spirent Communications	x	x
Fau	David	Huawei	Huawei	x	x
Ferretti	Vincent	Corning	Corning	x	
Ghiasi	Ali	Ghiasi Quantum, Ghiasi Quantum / Huawei	Ghiasi Quantum, Ghiasi Quantum / Huawei	x	x
Gorshe	Steve	Microsemi	Microsemi	x	x
Gustlin	Mark	Cisco	Cisco	x	
Hajduczenia	Marek	Charter	Charter	x	
Hasharoni	Kobi	Dust Photonics	Dust Photonics		x
Hiraki	Kukia	Yamaichi	Yamaichi	x	
Holden	Brian	Kandou Bus	Kandou Bus		x
Horner	Rita	Synopsys	Synopsys	x	
Irwin	Scott	Mosys	Mosys		x
Isono	Hideki	Fujitsu Optical Components	Fujitsu Optical Components	x	x
Issenhuth	Tom	Issenhuth Consulting	Issenhuth Consulting, Huawei	x	x

Jackson	Kenneth	Sumitomo	Sumitomo	x	x
Jensen	Jesper	Bifrost Communications	Bifrost Communications	x	
Johnson	John	Broadcom	Broadcom	x	
Kim	Inho	Marvell	Marvell	x	x
Kimber	Mark	Semtech	Semtech	x	x
Klempa	Mike	UNH-IOL	UNH-IOL	x	x
Knittle	Curtis	Cablelabs	Cablelabs	x	x
Kochuparambil	Beth	Cisco Systems	Cisco Systems		x
Konno	Ryo	Senko Advanced Components	Senko Advanced Components		x
Law	David	HPE	HPE		x
LeCheminant	Greg	Keysight Technologies	Keysight Technologies	x	x
Lewis	David	Lumentum	Lumentum	x	x
Li	Mike	Intel	Intel		x
Lim	Jane	Cisco	Cisco	x	x
Liu	Hai-Feng	Intel	Intel		x
Liu	Karen	Lightwave Logic	Lightwave Logic	x	
Liu	Samuel	Inphi	Inphi	x	x
Lyubomirsky	Ilya	Inphi	Inphi	x	x
Maki	Jeffery	Juniper Networks	Juniper Networks	x	x
Malicoat	David	Malicoat Networking Solutions / Senko	Malicoat Networking Solutions / Senko	x	x
Marris	Arthur	Cadence	Cadence	x	x
McMillian	Larry	Western Digital	Western Digital	x	
McSorley	Greg	Amphenol	Amphenol		x
Nakamoto	Edward	Spirent Communications	Spirent Communications	x	x
Nicholl	Gary	Cisco	Cisco	x	x
Nicholl	Shawn	Xilinx	Xilinx	x	x
Nikolich	Paul	Self	Self	x	
Ofelt	David	Juniper Networks	Juniper Networks	x	x
Parsons	Earl	Commscope	Commscope	x	
Pham	Phong	US Conec Ltd	US Conec Ltd	x	
Piehler	David	Dell EMC	Dell EMC	x	x
Quan	Mingran	Huawei	Huawei	x	x
Rotolo	Salvatore	STM Microelectronics	STM Microelectronics	x	x

Schmitt	Matt	Cablelabs	Cablelabs	x	x
Sekel	Steve	Keysight Technologies	Keysight Technologies		x
Shuai	Jialong	Huawei	Huawei	x	x
Slavick	Jeff	Broadcom, Ltd.	Broadcom, Ltd.		x
Sluyski	Mike	Acacia Communications	Acacia Acommunications	x	x
Snvartona	Atul	NEL-A	NEL-A	x	x
Sommers	Scott	Molex	Molex	x	x
Sprague	Ted	Infinera	Infinera	x	x
Stassar	Peter	Huawei	Huawei	x	x
Sun	Junging	Credo Semiconductor	Credo Semiconductor	x	
Swanson	Steve	Corning	Corning		x
Takahara	Tomoo	Fujitsu Laboratories	Fujitsu Laboratories	x	x
Takefman	Michael	Inphi	Inphi	x	x
Terada	Masaru	OFS	OFS	x	x
Tooyserkani	Pirooz	Cisco	Cisco	x	x
Tracy	Nathan	TE Connectivity	TE Connectivity	x	x
Trowbridge	Steve	Nokia	Nokia	x	x
Wang	Xinyuan	Huawei	Huawei		x
Welch	Brian	Luxtera	Luxtera		x
Xu	Yu	Huawei	Huawei	x	
Yamamoto	Shuto	NTT	NTT	x	x
Yang	Zhuana	Huawei	Huawei	x	
Young	James	CommScope	CommScope	x	
Zivny	Pavel	Tektronix	Tektronix	x	