

# Unapproved Minutes

## IEEE P802.3cn / IEEE P802.3ct Joint Task Force Meeting (7/16 – 7/17) IEEE P802.3cn Task Force Meeting (7/17) IEEE P802.3ct Task Force Meeting (7/17)

IEEE 802 July 2019 Plenary Interim

Prepared by John D'Ambrosia

All times CEST

Location: Austria Center Vienna, Vienna, Austria

### IEEE P802.3cn / IEEE P802.3ct Joint Task Force Meeting

The meeting called to order at 1:00 pm, July 16, 2019

- The IEEE P802.3cn Task Force and IEEE P802.3ct Task Force will meet jointly starting Tuesday at 1pm.
- The IEEE P802.3cn Task Force will meet Wednesday @ 1pm (Note – Task Force meeting will happen no earlier than this time but may be delayed due to schedule.)
- The IEEE P802.3ct Task Force will meet Wednesday @ 2pm (Note – Task Force meeting will happen no earlier than this time but may be delayed due to schedule.)
- This agenda deck addresses the 1) joint; 2) IEEE P802.3cn Task Force; and 3) the IEEE P802.3ct Task Force Meetings.
- Joint Task Force Meeting, P802.3cn, P802.3ct Task Force meetings will adjourn by Wed 6pm

General Introductions were made by participants.

**Presentation #1 –** Agenda and General Information  
Presenter: John D'Ambrosia  
URL: [http://www.ieee802.org/3/ct/public/19\\_07/agenda\\_3cnct\\_0719.pdf](http://www.ieee802.org/3/ct/public/19_07/agenda_3cnct_0719.pdf)

**Motion #1:** Move to approve the Joint Task Force Agenda (noted on Page 3)  
Moved: Steve Trowbridge  
Second: Pete Anslow  
Results: Approved by voice vote without opposition

**Motion #2:** Move to approve the following minutes –  
Moved: Jeff Maki  
Second: Peter Stassar  
Results: Approved by voice vote without opposition

Chair showed IEEE 802 Participation slide.

Chair reviewed Task Force Decorum slide. Chair asked if there were any press in the room. Nobody identified themselves as representing the press.

Chair reviewed P802.3cn and P802.3ct Task Force information. Chair introduced the two editorial teams

Chair noted attendance tools.

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 –

- Joint P802.3cn / P802.3ct Task Force Meeting
  - Tues (1pm – 6pm) / Wed (8am to noon)
  - Consider comments (presentations) submitted against IEEE P802.3cn D2.1
  - Hear 10 (.3ct) technical presentations / baseline proposals
- P802.3cn Task Force Meeting
  - Wed 1pm to 2pm
  - Approve responses to comments submitted against D2.1
  - Approve generation of D2.2
  - Anticipate requesting to proceed to Standards Association Ballot
- P802.3ct Task Force Meeting –
  - Wed 2pm to 6pm
- Additional time for .3ct presentations / strawpolls
- Baseline proposals adoption
- Motions & Closing Business

Chair reviewed liaisons:

- Incoming to consider -
  - OIF to IEEE 802.3 regarding progress on the OIF 400ZR project
- Overview of the changes to the 400ZR draft was discussed.
- Chair noted he had asked Steve Trowbridge to generate proposed response. Chair asked any individuals with comments regarding the 400ZR draft to provide comments to Steve for possible consideration for inclusion in the proposed liaison response.

Chair reviewed the schedule for the joint task force meeting and noted the start times for the IEEE P802.3cn and IEEE P802.3ct Task Force meetings. Chair noted that he had sent an email to the Task Force indicating that he had received a late presentation from John DeAndrea, which had been generated at the request of the chair. Chair indicated that the presentation would be heard Tuesday afternoon after the last presentation.

**Presentation #2 -** P802.3cn Chief Editor's Report  
Presenter: Pete Anslow  
URL: [http://www.ieee802.org/3/cn/public/19\\_07/anslow\\_3cn\\_01\\_0719.pdf](http://www.ieee802.org/3/cn/public/19_07/anslow_3cn_01_0719.pdf)

Chief Editor asked if anyone wished to revisit any proposed responses to comments submitted against D2.1. No one expressed any interest to revisit any proposed responses.

Final Responses to comments against D2.1:

URL: [http://www.ieee802.org/3/cn/comments/P802d3cn\\_D2p1\\_comments\\_final\\_ID.pdf](http://www.ieee802.org/3/cn/comments/P802d3cn_D2p1_comments_final_ID.pdf)

Tom Issenhuth assumed chairing the meeting @ 1:39pm, so D'Ambrosia could present.

**Presentation #3 -** Terminology Review

Presenter: John D'Ambrosia

URL: [http://www.ieee802.org/3/ct/public/19\\_07/dambrosia\\_3ct\\_01\\_0719.pdf](http://www.ieee802.org/3/ct/public/19_07/dambrosia_3ct_01_0719.pdf)

There was general discussion about the presentation.

D'Ambrosia resumed chairing the Joint Task Force meeting @ 2:08 pm.

Schmitt informed the chair that the presentation had been updated with new supporters, and that he had sent the presentation to the chair for posting.

**Presentation #4 -** System Operator Input for Configurable DWDM System

Presenter: Matt Schmitt

URL: [http://www.ieee802.org/3/ct/public/19\\_07/schmitt\\_3ct\\_01\\_0719.pdf](http://www.ieee802.org/3/ct/public/19_07/schmitt_3ct_01_0719.pdf)

There was general discussion about the presentation.

**Presentation #5 -** Suggestion on channel frequency of 100GbE/400GbE

Presenter: Song Chen

URL: [http://www.ieee802.org/3/ct/public/19\\_07/chen\\_3ct\\_01\\_0719.pdf](http://www.ieee802.org/3/ct/public/19_07/chen_3ct_01_0719.pdf)

There was general discussion about the presentation.

Chair noted that the time was  $\approx$  2:45pm. Chair indicated that he would allow the Q&A to go to 3:10pm, at which point there would be a break, and that discussion of the presentation would continue after the break.

**Presentation #6 -** 802.3ct wavelength grid considerations

Presenter: David Lewis

URL: [http://www.ieee802.org/3/ct/public/19\\_07/lewis\\_3ct\\_01\\_0719.pdf](http://www.ieee802.org/3/ct/public/19_07/lewis_3ct_01_0719.pdf)

Discussion about the presentation begin.

Meeting break @ 3:10pm

Meeting reconvened @ 3:37pm.

Discussion about the Lewis presentation continued.

**Presentation #7 -** Wavelength Support

Presenter: Jeff Maki

URL: [http://www.ieee802.org/3/ct/public/19\\_07/maki\\_3ct\\_01\\_0719.pdf](http://www.ieee802.org/3/ct/public/19_07/maki_3ct_01_0719.pdf)

There was general discussion about the presentation.

**Presentation #8 -** Black Link Channel edge impairments and channel plan impacts for WDM Links

Presenter: John DeAndrea

URL: [http://www.ieee802.org/3/ct/public/19\\_07/deandrea\\_3ct\\_01\\_0719.pdf](http://www.ieee802.org/3/ct/public/19_07/deandrea_3ct_01_0719.pdf)

There was general discussion about the presentation.

Chair thanked Mr. DeAndrea for producing the presentation at short notice at his request.

### Straw Poll #1

In order to enable defining a single PHY for each rate objective, I would support the development of "Configured DWDM link" PHYs

- For DWDM links these are the three key characteristics that need to match:
- Transmit Frequency (wavelength, channel)
- Rx Oscillator Frequency (wavelength, channel)
- Ports on Mux (i.e. link wavelength)

Y: 39

N: 0

Need more information: 1

### Straw Poll #2

I am prepared to select the minimum and maximum frequency of the grid for 100GbE and 400GbE in this plenary meeting

Y: 6

N: 29

### Straw Poll #3

I am interested in hearing more information related to supporting a 75 GHz grid spacing for 400 GbE

Y: 26

N: 6

### Discussion:

Chair noted that if group decided to pursue a PHY to support 75 GHz grid spacing for 400GbE, he would explore splitting the P802.3ct project by data rate, as he believed that the 100 GbE and 400GbE efforts would be on subsequently different timelines.

Meeting broke at 5:15pm.

Meeting reconvened at 8:30am.

### **Presentation #9 -** Error Marking for 100GBASE-ZR

Presenter: Steve Trowbridge

URL: [http://www.ieee802.org/3/ct/public/19\\_07/trowbridge\\_3ct\\_01\\_0719.pdf](http://www.ieee802.org/3/ct/public/19_07/trowbridge_3ct_01_0719.pdf)

There was general discussion about the presentation.

### **Presentation #10 -** Specification methodology for 100GBASE-ZR & 400GBASE-ZR

Presenter: Peter Stassar

URL: [http://www.ieee802.org/3/ct/public/19\\_07/stassar\\_3ct\\_01\\_0719.pdf](http://www.ieee802.org/3/ct/public/19_07/stassar_3ct_01_0719.pdf)

There was general discussion about the presentation.

### **Presentation #11 -** Further baseline considerations and proposals for 100G and 400G DWDM objectives

Presenter: Peter Stassar

URL: [http://www.ieee802.org/3/ct/public/19\\_07/stassar\\_3ct\\_02\\_0719.pdf](http://www.ieee802.org/3/ct/public/19_07/stassar_3ct_02_0719.pdf)

There was general discussion about the presentation.

Meeting break @ 9:50am

Meeting reconvened @ 10:35am

**Presentation #12 -** EVM<sub>RMS</sub> Measurements for DP-DQPSK and DP-16QAM Format  
Presenter: Fabio Pittala  
URL: [http://www.ieee802.org/3/ct/public/19\\_07/pittala\\_3ct\\_01a\\_0719.pdf](http://www.ieee802.org/3/ct/public/19_07/pittala_3ct_01a_0719.pdf)

There was general discussion about the presentation.

#### Attendance straw polls

- For IEEE P802.3cn / P802.3ct Meetings at the Sept 2019 Interim
  - I will attend –  $13+8 = 21$
  - I may attend –  $3 + 6 = 9$
  - I won't attend  $2+0 = 2$
- For IEEE P802.3cn / P802.3ct Meetings at the Nov 2019 Plenary
  - I will attend -  $6+13 = 19$
  - I may attend –  $6+ 5 = 11$
  - I won't attend –  $0 + 2 = 2$

#### Straw Poll #4

- I support the parameter list and corresponding values in the proposed strawman column on slides 8, 9 and 11 of stassar\_3ct\_02\_0719 for the 100GBASE-ZR PMD specification.
- Y:  $11+ 16 = 27$

N:  $0 + 0 = 0$

#### Straw Poll #5

- I support the parameter list on slides 4 to 6 of stassar\_3ct\_02\_0719 for the 400GBASE-ZR PMD specification.
- Y:  $13+9 = 22$
- N:  $1+0 = 1$

#### Straw Poll #6

- I support the methodology and approach described on slide 6 of maki\_3ct\_01a\_0719.
- Y:  $19+11 = 30$
- N:  $0$

#### Straw Poll #7

- I support the ability (not a requirement) to have a different Tx and Rx frequency in a single transceiver (for either rate)
- Y:  $17+12 = 29$
- N:  $0$

Meeting Break @ 11:53am

# IEEE P802.3cn Task Force Meeting

The meeting called to order at 1:00pm, May 21, 2019 Chaired by John D'Ambrosia

**Presentation #1 –** Agenda and General Information  
Presenter: John D'Ambrosia  
URL: [http://www.ieee802.org/3/ct/public/19\\_07/agenda\\_3cnct\\_b\\_0719.pdf](http://www.ieee802.org/3/ct/public/19_07/agenda_3cnct_b_0719.pdf)

**Motion #1:** Move to approve the P802.3cn Task Force Agenda (noted on Page 5 of agenda\_3cnct\_01b\_0719.pdf)  
Moved by: Steve Trowbridge  
Second by: Matt Schmitt  
Result: Approved by voice vote without opposition

Chair showed IEEE 802 Participation Slide

**Motion #2:** Motion to approve minutes  
1. May 2019 Joint TF Meeting (IEEE P802.3cn noted) –  
[http://www.ieee802.org/3/ct/public/19\\_05/minutes\\_3cnct\\_01\\_0519\\_unapproved.pdf](http://www.ieee802.org/3/ct/public/19_05/minutes_3cnct_01_0519_unapproved.pdf)  
Moved by: Steve Trowbridge  
Second by: Pete Anslow  
Result: Approved by voice vote without opposition

Chair presented the Patent Policy Slides for IEEE-SA meetings.  
There were no responses to the Chair's Call for Potentially Essential Patents

**Presentation #2 -** P802.3cn Chief Editor's Closing Report  
Presenter: Pete Anslow  
URL: [http://www.ieee802.org/3/cn/public/19\\_07/anslow\\_3cn\\_02\\_0719.pdf](http://www.ieee802.org/3/cn/public/19_07/anslow_3cn_02_0719.pdf)

Chief Editor asked if anyone wished to revisit any proposed responses to comments. No one responded.

**Motion #3:** Move to:  

- Adopt responses to comments as closed in this meeting.
- Generate Draft 3.0, from D2.1 and closed comments, for IEEE Standards Association ballot.

Technical >= 75%  
Moved by: Pete Anslow  
Second by: Peter Stassar  
Result (all): Y: 31 N: 0 A: 0  
Motion Passes

Chair showed IEEE P802.3cn's approved CSD (<https://mentor.ieee.org/802-ec/dcn/18/ec-18-0248-00-ACSD-p802-3cn.pdf>) to Task Force for review.

**Motion #4:** Move to re-affirm the CSD responses in <https://mentor.ieee.org/802-ec/dcn/18/ec-18-0248-00-ACSD-p802-3cn.pdf> and request approval to progress the P802.3cn draft to IEEE Standards Association ballot.

Technical >= 75%  
Moved by: Pete Anslow  
Second by: Peter Stassar  
Result (all): Y: 33 N: 0 A: 0  
Motion Passes

Meeting broke at 1:31pm

# IEEE P802.3ct Task Force Meeting

The meeting called to order at 2:00pm, Jul 16, 2019 Chaired by John D'Ambrosia

**Presentation #1 –** Agenda and General Information  
Presenter: John D'Ambrosia  
URL: [http://www.ieee802.org/3/ct/public/19\\_07/agenda\\_3cnct\\_b\\_0719.pdf](http://www.ieee802.org/3/ct/public/19_07/agenda_3cnct_b_0719.pdf)

**Motion #1:** Move to approve the P802.3ct Task Force Agenda (noted on Page 7 of agenda\_3cnct\_01b\_0719.pdf)  
Moved by: Steve Trowbridge  
Second by: Pete Anslow  
Results: Approved by voice vote without opposition

**Motion #2:** Motion to approve minutes  
1. May 2019 Joint TF Meeting (IEEE P802.3ct noted) – [http://www.ieee802.org/3/ct/public/19\\_05/minutes\\_3cnct\\_01\\_0519\\_unapproved.pdf](http://www.ieee802.org/3/ct/public/19_05/minutes_3cnct_01_0519_unapproved.pdf)  
Moved by: Jeff Maki  
Second by: Tom Issenhuth  
Results: Approved by voice vote without opposition

Chair showed IEEE 802 Participation Slide

Chair presented the Patent Policy Slides for IEEE-SA meetings.  
There were no responses to the Chair's Call for Potentially Essential Patents

**Motion #3** Move to update the 100G FEC and Frame Format baseline (Motion #8, Long Beach, trowbridge\_3cn\_01a\_0119 slides 9-16) by adding error marking of uncorrectable SC FEC codewords:

- All 66B blocks fully or partially contained within an uncorrectable SC FEC codeword are replaced with error control blocks (block type 0x1E and eight /E/ control characters)
- The probability that the SC FEC decoder fails to replace 66-bit blocks in an uncorrectable codeword is expected to be less than 10<sup>-<sup>TBD</sup></sup>

Technical >= 75%  
Moved by Steve Trowbridge  
Second by: Pete Anslow  
Results (all): Y: 25            N: 0            A; 2  
Motion Passes

**Motion #4** Move to adopt the parameter list and corresponding values in the proposed strawman column on slides 8, 9 and 11 of stassar\_3ct\_02\_0719 for the 100GBASE-ZR PMD specification.

Technical >= 75%  
Moved by Peter Stassar  
Second by: Pete Anslow  
Results (all): Y: 24            N: 0            A; 3  
Motion Passes

**Motion #5** Move to adopt the parameter list on slides 4 to 6 of stassar\_3ct\_02\_0719 for the 400GBASE-ZR PMD specification.

Technical >= 75%  
Moved by Peter Stassar  
Second by: Pete Anslow  
Results (all): Y: 25            N: 0            A; 3  
Motion Passes

Discussion of splitting up IEEE P802.3ct in relation to 100GbE and 400GbE objectives was discussed.

Meeting break at 2:46pm  
Meeting reconvened at 3:20pm

David Law, IEEE 802.3WG chair, discussed rules and timing issues related to possible splitting of the IEEE P802.3ct PAR.

Chair noted that during discussions with Steve Trowbridge on liaison to OIF, keeping both the ITU-T SG15 and OIF informed of IEEE P802.3ct, as all three of these groups were developing similar technology, would probably be in the best interest of the industry.

Steve Trowbridge brought forward proposed text for liaison to ITU-T SG15 and OIF, and it was reviewed and updated per task force discussion.

**Motion #6**                      Move that the IEEE P802.3ct Task Force approve:  
  • IEEE\_802d3\_to\_ITU\_OIF\_3ct\_0719\_draft  
with editorial license granted to the Chair (or his appointed agent) as a liaison communication from the IEEE 802.3 Working Group to ITU-T SG15 and OIF.

Technical                              >= 75%  
Moved by                              Steve Trowbridge  
Second by:                             Peter Stassar  
Results (all):                         Approved by voice vote without opposition

**Motion #7**                      **Motion to adjourn joint IEEE P802.3cn / IEEE P802.3ct Task Force meeting, IEEE P802.3cn Task Force meeting, and IEEE P802.3ct Task Force Meeting**

Moved by                              Matt Schmitt  
Second by:                             Jeff Maki  
Results (all):                         Approved by voice vote without opposition

Meeting adjourned at 3:46pm.

Meeting Attendees

IEEE P802.3cn / IEEE P802.3ct Joint Task Force Meeting (3/11 – 3/12)

IEEE P802.3cn Task Force Meeting (3/12)

IEEE P802.3ct Task Force Meeting (3/12)

Last Name	First Name	Employer	Affiliations	Tues	Wed
Anslow	Pete	Ciena Corporation	Ciena Corporation	x	x
Braun	Ralf-Peter	Deutsche Telekom	Deutsche Telekom	x	x
Brooks	Paul	Viavi Solutions	Viavi Solutions		x
Chang	Frank	Source Photonics	Source Photonics	x	
Chengbin	Wu	ZTE	ZTE	x	x
Cole	Chris	Finisar	Finisar	x	x
D'Ambrosia	John	Futurewei, subsidiary of Huawei	Futurewei, subsidiary of Huawei	x	x
DeAndrea	John	Finisar	Finisar	x	x
Du	Liang	Google	Google	x	
Ferretti	Vincent	Corning	Corning	x	x
Fiwo	Yons	ZTE	ZTE	x	
Ghiasi	Ali	Ghiasi Quantum, Ghiasi Quantum	Ghiasi Quantum, Ghiasi Quantum		x
Gong	Zhigang	D-Net	D-Net	x	
Gorshe	Steve	Microchip	Microchip		x
Gustlin	Mark	Cisco	Cisco		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
Johnson	John	Broadcom	Broadcom	x	x
Kawatsu	Yasuaki	Apresia Systems	Apresia Systems	x	x
Kimber	Mark	Semtech	Semtech		x
LeCheminant	Greg	Keysight Technologies	Keysight Technologies	x	x
Lewis	David	Lumentum	Lumentum	x	x
Maki	Jeffery	Juniper Networks	Juniper Networks	x	x
Maniloff	Eric	Ciena	Ciena	x	x
Marques	Flavio	Furukawa Electric	Furukawa Electric		x
Mi	Guangcan	Huawei	Huawei	x	x
Nicholl	Gary	Cisco	Cisco	x	
Nikolich	Paul	Self	Self		x

Nowell	Mark	Cisco	Cisco	x	x
Ofelt	David	Juniper Networks	Juniper Networks		x
Ogawa	Dabuke	NTT Electronics	NTT Electronics	x	
Parsons	Earl	Commscope	Commscope	x	
Pittala	Fabio	Huawei	Huawei	x	x
Pozzebon	Dino	Microsemi	Microsemi	x	
Ryo	Okabe	Fujitsu Optical Components	Fujitsu Optical Components	x	x
Schmitt	Matt	Cablelabs	Cablelabs	x	x
Shuai	Jialong	Huawei	Huawei	x	
Sluyski	Mike	Acacia Communications	Acacia Acommunications	x	x
Sou	Chengbin	ZTE	ZTE	x	x
Sprague	Ted	Infinera	Infinera	x	x
Stassar	Peter	Huawei	Huawei	x	x
Takahara	Tomoo	Fujitsu	Fujitsu	x	x
Takefman	Michael	Inphi	Inphi		x
Trowbridge	Steve	Nokia	Nokia	x	x
Ulrichs	Ed	Source Photonics	Source Photonics		x
Xu	Yu	Huawei	Huawei	x	x
Yamamoto	Shuto	NTT	NTT		x
Young	James	CommScope	CommScope	x	x