

# Meeting Minutes

**Group:** IEEE P802.3ca 100G-EPON Task Force

**Event:** Interim meeting

**Date:** **From:** 9-12-17      **To:** 9-13-17

**Location:** Charlotte, North Carolina, USA

**Recording Secretary:** Jun Shan Wey, ZTE Corporation

## Opening

**9/12/2017 9:00AM**      The meeting was called to order by the Chair. Jun Shan Wey volunteered to serve as recording secretary. The Chair held Introductions and gave the opening report. Glen Kramer, Broadcom, was temporarily appointed Chair until Curtis Knittle could arrive (delayed due to weather).

**Motion #1**

Approve the agenda for 802.3ca September 2017 Task Force meeting as shown in agenda\_3ca\_1\_0917.pdf, with the following changes:

- 1) Start with presentations in this order: Wavelengths, PMD, 50G
- 2) Allow post-deadline presentations powell\_3ca\_2\_0917.pdf and liu\_3ca\_5\_0917.pdf

Moved: Marek Hajduczenia      Second: Dekun Liu  
Procedural (> 50%)      Motion Passed by voice without opposition

**Motion #2**

Approve the Minutes of 802.3ca Task Force meeting held July 2017, in Berlin, Germany as shown in minutes\_unapproved\_3ca\_0717.pdf and post the approved minutes as minutes\_approved\_3ca\_0717.pdf

Moved: Mark Laubach      Second: Bill Powell  
Procedural (> 50%)      Motion Passed by voice without opposition

The chair reviewed the Task Force Web site / password, IEEE rules, and the IEEE patent policy.

**9/12/2017 9:27AM**      The chair made a call for patents, no response was made.

The Chair reviewed the IEEE Participation guidelines, process, and project timeline. Future meeting polls were taken.

The TF reviewed and discussed a liaison letter received from ITU-T Q2.

## Presentations

All presentations are in the following format:

<b>Title</b>	<b>Author/Presenter</b>	<b>Affiliation</b>
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Comments  
FileRef

**Problems with The Two-colors 25G Wavelength Plan And A Solution**

Eugene Dai Cox Communication

This presentation discussed drawbacks of the 2-color wavelength option and proposed a solution.  
dai\_3ca\_2a\_0917

**.3ca 10G US channels in greenfield**

Ed Harstead Nokia

This presentation proposed to allow two upstream wavelength options in greenfield.  
harstead\_3ca\_1\_0917

**9/12/2017 10:47AM**

**BREAK**

**Universal Wavelength Plan (Brownfield, Greenfield, and Seamless Evolution)**

Glen Kramer Broadcom

This presentation proposed downstream wavelengths for plans BfG and BfX.  
kramer\_3ca\_2\_0917

**Comments on two DS wavelengths for Greenfield**

Ed Harstead Nokia

This presentation provided comments to kramer\_3ca\_2\_0917 and proposed to use one single downstream wavelength.  
harstead\_3ca\_4b\_0917

**9/12/2017 12:30PM**

**Lunch. Reconvened at 2:00PM**

**25G PON lasers: vendor survey**

Ed Harstead Nokia

This presentation provided the outcome of a survey on 25G laser capabilities in 2021 from 10 component vendors.  
harstead\_3ca\_3\_0917

**Sensitivity definition and TDP in 802.3ca discussion**

Dekun Liu Huawei Technologies

This presentation proposed to unify the definition and measurement methodology on receiver sensitivity in IEEE and ITU-T standards after 10G.  
liu\_3ca\_1\_0917

**Improving 25G-EPON sensitivity**

Junwen Zhang ZTE

This presentation provided three options to improve receiver sensitivity to close the optical power budget gap.  
guo\_3ca\_1\_0917

**9/12/2017 3:35PM**

**BREAK**

The normal Chair of 802.3ca, Curtis Knittle, arrived and assumed meeting responsibilities.

**802.3ca At Crossings** Eugene Dai Cox Communications  
This presentation proposed three options for way forward in the TF regarding capacity.  
dai\_3ca\_1a\_0917

**PON technology evolution discussion** Dekun Liu Huawei  
This presentation discussed technology trends and proposed to consider single channel 50G instead of 2x25G.  
liu\_3ca\_3a\_0917

**50G technical feasibility analysis** Dekun Liu Huawei  
This presentation analyzed technologies based on different modulation formats to implement single wavelength 50G.  
liu\_3ca\_2a\_0917

**Options for Single wavelength 50G TDM-PON** Vincent Houtsma Nokia  
This presentation provided the options for 50Gbs line rate TDM-PON and showed experimental results.  
houtsma\_3ca\_1\_0917

**25G wavelength plan in 50G single lane scenario** Ed Harstead Nokia  
This presentation provided several coexistence scenarios for 25G, 50G, and 100GE-PON.  
harstead\_3ca\_2\_0917

**9/12/2017 7:00PM** Recessed for the day.  
**9/13/2017 8:30AM** Reconvened.

**Received comments against D0.4** Marek Hajduczenia Charter  
Reviewed comments against Draft 0.4 and agreed on resolution.  
802d3ca\_D0\_4\_received.pdf

**The necessity of enhanced FEC for low cost 25G PON** Dekun Liu Huawei  
This presentation provided analysis on the benefit of using advanced FEC to overcome the optical power budget gap.  
liu\_3ca\_4a\_0917

**FEC Proposal status** Mark Laubach Broadcom  
This presentation provided an update on their LDPC studies.  
laubach\_3ca\_1a\_0917

**Reconsideration of 100G-EPON FEC** Jun Shan Wey ZTE  
This presentation discussed potential issues of LDPC codes and proposed to use RS code at 25G.  
wey\_3ca\_1a\_0917

**9/13/2017 10:27AM** **BREAK**

**Latency challenges for 25/50/100G EPON**

Bill Powell

Nokia

This presentation discussed potential impacts of latency critical service and network realizations on 802.3ca standard.

powell\_3ca\_1a\_0917

**Latency & complexity for various 25/50/100GEPON FEC code proposals**

Bill Powell

Nokia

This presentation provided a summary of various FEC proposals.

powell\_3ca\_2a\_0917

**Clarification on LDPC**

Dekun Liu

Huawei

This presentation provided analysis to address concerns raised in wey\_3ca\_1a\_0917 and powell\_3ca\_1\_0917.

liu\_3ca\_5\_0917

9/13/2017 12:05PM

Lunch. Reconvened at 1:15PM

**Channel capability report during registration for 100G-EPON**

Junwen Zhang

ZTE

This presentation addressed comments on geng\_3ca\_1\_0717 during the Berlin meeting sand proposed two methods to perform channel capability reporting.

geng\_3ca\_1\_0917

9/13/2017 3:05PM

BREAK

**MPRS Enhancement for Improved Error Handling**

Glen Kramer

Broadcom

This presentation proposed to define two new envelope headers and modifications to state diagrams for improving error handling capability.

kramer\_3ca\_1a\_0917

Motions and Straw Polls

Motion #3			
Accept LDPC as FEC method for 802.3ca			
Moved:	Glen Kramer	Second:	Marek Hajduczenia
For:	18	Against:	9
		Abstain:	1
Technical ( $\geq 75\%$ )		Motion Failed	



**Straw Poll #4**

1. Define wavelength plan that includes mixed rate wavelengths as illustrated in slide 3 of Kramer\_3ca\_3\_0917.pdf (as an example)
2. Remove 100G-EPON from objectives
3. Initiate a separate project on 50G/wavelength PMD

I support the above proposal

Yes: 13

No: 3

Don't care: 3

**Motion #6**

IEEE P802.3ca Task Force instructs the Editor to produce draft version D0.5 from current draft version D0.4 by incorporating changes as recorded in 802d3ca\_D0\_4\_approved.pdf and other changes as approved during the meeting.

Moved: Earl Parsons

Second: Alan Brown

For: Against: Abstain:

Technical (≥ 75%)

Motion Passed by voice vote

Closing

**Motion #7**

Move to adjourn.

Moved: Glen Kramer

Second: Ed Walter

Procedural (> 50%)

Motion Passed by voice without opposition

9/13/2017 6:38PM

The meeting was adjourned.

## Attendance

Full Name	Affiliation	12-Sept	13-Sept
Alan M. Brown	ADTRAN	X	X
Hualin Zhang	AOI	X	X
Xin Chang	Huawei	X	
Barry Colella	Source Photonics	X	X
Eugene Dai	Cox	X	X
Frank Effenberger	Huawei	X	X
Mike Emmendorfer	Arris	X	X
Marek Hajduczenia	Charter	X	X
Ed Harstead	Nokia	X	X
Vincent Houtsma	Nokia	X	X
John Johnson	Broadcom	X	X
Glen Kramer	Broadcom	X	X
Curtis Knittle	Cable Labs	X	X
Mark Laubach	Broadcom	X	X
Bernard Lee	SENKO	X	X
Huafeng Lin	Huawei	X	
Dekun Liu	Huawei	X	X
Phil Miguelez	Comcast	X	X
Hiroshi Miura	Mitsubishi		X
Tiger Ninomiya	SENKO		X
Sebnem Ozer	Comcast	X	X
Earl Parsons	CommScope	X	X
Bill Powell	Nokia	X	X
Ken-Ichi Suzuki	NTT	X	X
Naoki Suzuki	Mitsubishi		X
Daisuke Umeda	Sumitomo	X	X
Ed Walter	AT&T	X	X
Hai Fei Wang	Huawei		X
Yi Wang	AOI		X
Jun Shan Wey	ZTE	X	X
Junwen Zhang	ZTE	X	X