

Approved Minutes  
IEEE 802.3 Next-Gen 100 Gigabit Optical Ethernet Study Group  
Interim meeting  
Sept 14-15, 2011  
Chicago, IL, USA

Prepared by: Kapil Shrikhande

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**Wednesday, Sept 14, 2011**

The meeting was called to order at 9 a.m., Wed Sept 14, 2011 by David Law, IEEE 802.3 chair.

Kapil Shrikhande volunteered as Recording Secretary for this meeting.

David Law indicated that he would like to appoint Dan Dove as Study Group chair.

Motion to confirm Dan Dove as Study Group Chair:

M: Pete Anslow

S: Alan Flatman

For: 45; Against: 0; Abstain: 0

Motion Passes

Dan Dove returned to the room to chair the remainder of the meeting.

Round of introductions

Documentation for the Chicago meeting can be found at:

<http://www.ieee802.org/3/100GNGOPTX/public/sept11/index.html>

Agenda and General Information

By: Dan Dove, SG Chair

See: dove\_01\_0911\_NG100GOPTX.pdf

Motion to approve the agenda:

M: Steve Trowbridge

S: Paul Kolesar

Passes by voice without opposition

The Chair presented the Study Group decorum. The Chair asked if there are any reporters in the room. No one responded – no one reporting publicly at the meeting. The Study Group was reminded that photographs or recordings are not allowed without permission.

The Chair presented the rest of the Agenda and General Information presentation

The Chair pointed out that the SG meeting will continue in the evening with a slot from 5:15 – 6:30 p.m. when P802.3bj attendees can join the SG meeting. The possibility of similar common time in November to coincide with the plenary meeting week was also mentioned (details TBD)

Start of technical presentations, 9:30 a.m.

Presentation #1

Title: Objectives for Next Generation 100GbE Optical Interfaces

By: Pete Anslow

See: anslow\_01\_0911\_NG100GOPTX.pdf

Presentation #2

Title: 100G-Optics Next Gen Possible PMD Set

By: Ali Ghiasi

See: ghiasi\_01\_0911\_NG100GOPTX.pdf

The presenter had minor edits to a couple of slides. Edited presentation is uploaded as ghiasi\_01\_a\_0911\_NG100GOPTX.pdf.

*Break 10:35 a.m.*

*Reconvened at 10:50 am*

Presentation #3

Title: Investigation Topics

By: Chris Cole

See: cole\_01\_0911\_NG100GOPTX.pdf

*Lunch 12:01 p.m.*

*Reconvened at 1:15 p.m.*

Presentation #4

Title: Next-Gen 100G PMDs: Considerations when defining objectives

By: Mark Nowell

See: nowell\_01\_0911\_100GOPTX.pdf

Presentation #5

Title: Considerations for Electrical Objectives

By: Ryan Latchman

See: latchman\_01\_0911\_NG100GOPTX.pdf

Presentation #6

Title: Application Space of CAUI-4 / OIF-VSR and cPPI-4

By: Ali Ghiasi

See: ghiasi\_02\_0911\_NG100GOPTX.pdf

*Break at 3:04 pm*

*Reconvened at 3:30pm*

### Presentation #7

Title: Feasibility of Unretimed 4x25G Host to Module “cPPI-4”

By: Ali Ghiasi

See: ghiasi\_03\_0911\_NG100GOPTX.pdf

The Chair presented the agenda for the second day of the meeting (Sept 15 2011)

The Chair makes the following appointments to the Study Group leadership:

- 1) Kapil Shrikhande as Vice Chair
- 2) Pete Anslow as Single-Mode Lead
- 3) Ryan Latchman as Electrical Lead
- 4) Jonathan King as Multi-Mode Lead

The Chair opened the floor for discussion and motions

Steve Trowbridge suggested bringing to the floor some motions to adopt the “boiler-plate” objectives from anslow\_01\_0911\_NG100GOPTX.pdf

#### Motion to adopt the following objectives:

- Support full-duplex operation only
- Preserve the IEEE 802.3 / Ethernet frame format utilizing the IEEE 802.3 MAC
- Preserve minimum and maximum FrameSize of current IEEE 802.3 standard

See: motions\_01\_0911\_NG100GOPTX.pdf

M: Steve Trowbridge

S: Pete Anslow

For: 43; Against: 0; Abstain: 1

Motion passes

#### Motion to adopt the following objective:

- Support a BER better than or equal to  $10^{-12}$  at the MAC/PLS service interface

See: motions\_01\_0911\_NG100GOPTX.pdf

M: Pete Anslow

S: Steve Trowbridge

For: 43; Against: 0; Abstain: 2

Motion passes

John Petrilla (Avago) suggested that the chair create a list of work items for the group to apply effort towards. The Chair said he would take that suggestion into consideration.

*Break at 4:15 pm*

*Reconvened at 5:15 p.m.*

### Presentation # 8

Title -- Discussion: areas of common interest to IEEE 802.3bj and Next Gen 100GbE Optics SG

By: John D'Ambrosia

See: dambrosia\_01\_0911.pdf

D'Ambrosia asks the group to start thinking about presentations for common time meeting in November. There was discussion on procedure for future presentations (where to upload presentations, common area for web-site, etc.). The 100G Optics SG Chair and P802.3bj Chair will get together to address these questions.

Straw polls taken to measure attendance at future meetings

Meeting recessed for the day.

### **Thursday, Sept 15, 2011**

Meeting resumed by the Chair

Study group decorum, ground rules covered.  
There was no one reporting publicly at the meeting.

The Chair announced that Chris Cole had requested some time to present revisions to his presentation from Wed, Sept 14 (cole\_01\_0911\_NG100GOPTX.pdf) to address received feedback. This request has been accepted by the Chair and time will be provided towards the end of the technical presentations scheduled for Thu, Sept 15.

Start of technical presentations, 9:10 a.m.

#### Presentation #8

Title: Portfolio of short-reach link types, retimed and unretimed electrical interfaces  
By: Piers Dawe  
See: dawe\_01\_0911\_NG100GOPTX.pdf

#### Presentation #9

Title: 100G Next Gen Multi-Mode Optics  
By: John Petrilla  
See: petrilla\_01\_0911\_NG100GOPTX.pdf

*Break at 10:45 a.m.*

*Reconvened at 11:03 a.m.*

#### Presentation #10

Title: Data Centre Link Lengths & Deployment of Optical Fibre  
By: Alan Flatman  
See: flatman\_01\_0911\_NG100GOPTX.pdf

Technical presentations for the morning session finish ahead of schedule

Draft letter for informal communication to the OIF was presented

By: John D'Ambrosia  
See: dambrosia\_02\_0911\_NG100GOPTX.pdf

Minor editorial comments received; document to be updated and sent to the Chair for further consideration.

*Break for lunch at 11:30 am  
Reconvened at 1:00 pm*

Presentation #11

Title: Fiber Cabling Trends in Data Centers  
By: Paul Kolesar  
See: kolesar\_02\_0911\_NG100GOPTX.pdf

Presentation #12

Title: 100G-SR4 Link Modeling  
By: Paul Kolesar  
See: kolesar\_01\_0911\_NG100GOPTX.pdf

Presentation #13

Title: Extend 100GBASE-SR4 Wavelength to 980 nm  
By: Cosemi Technologies  
See: Wenbin Jiang

Presentation #14

Title: Investigation Topics (revised)  
By: Chris Cole  
See: cole\_02\_0911\_NG100GOPTX.pdf

*Break at 3:10 p.m.  
Reconvened at 3:30 p.m.*

Wrap-up and future discussions

By: Dan Dove, SG Chair  
See: dove\_02\_0911\_NG100GOPTX.pdf

The Chair provided a list of work items for future study as per the suggestion from John Petrilla (Avago). The group reviewed the list and offered edits and additions. The presentation also includes a straw-man SG time-frame, and schedule for future meetings.

Motion to send the informal communication letter to the OIF

See: ic\_OIF\_0911\_final.pdf  
Also see: motions\_01\_0911\_NG100GOPTX.pdf  
M: John D'Ambrosia  
S: Pete Anslow  
For: 46; Against: 0; Abstain: 2

The chair asked if there were further motions. There were none.  
The chair asked if there were any straw polls. There were none.

Motion to adjourn

M: Mike Dudek

S: John D'Ambrosia  
 Motion passes by voice vote

**List of attendees**

<b>Last Name</b>	<b>First Name</b>	<b>Affiliation</b>	<b>Wednesday 9/14/2011</b>	<b>Thursday 9/15/2011</b>
Abbas	Ghani	Ericsson	Y	Y
Abbott	John	Corning Inc	Y	
Alre	Stephen	Cortina	Y	
Amezcuca	Adrian	Prysmian	Y	
Anderson	Jon	Opnext	Y	Y
Anslow	Pete	Ciena	Y	Y
Anstex	Mike	Altera		Y
Balasubramanian	Vittal	FCI		Y
Baldwin	Thananya	Ixia	Y	Y
Barrass	Hugh	Cisco		Y
Bennett	Mike	LBNL		Y
Bernstein	Gary	Leviton	Y	Y
Booth	Brad	Dell		Y
Braun	Ralf-Peter	Deutsche Telekom	Y	Y
Brown	Matt	Applied Micro		Y
Bugg	Mark	Molex	Y	
Chalupsky	David	Intel	Y	Y
Chang	Frank	Vitesse	Y	Y
Chen	Chung	Broadcom	Y	
Cheng	Wheling	Juniper Networks	Y	Y
Coenen	Robert	Reflex Photonics	Y	
Cole	Chris	Finisar	Y	Y
Cui	Kai	Huawei	Y	Y
Dawe	Piers	Iptronics	Y	Y
Diminico	Chris	MC Communications	Y	
Dove	Dan	HP	Y	Y
Dudek	Mike	Qlogic		Y
Elbakousy	Hesham	Huawei		Y
Ewen	John	IBM	Y	Y
Flatman	Alan	LAN Technologies	Y	Y
Ghazisaidi	Navid	Ericsson	Y	Y
Ghiasi	Ali	Broadcom	Y	Y
Gustlin	Mark	Cisco	Y	
Hajduczenia	Marek	ZTE		Y
Hamano	Hiroshi	Fujitsu Labs	Y	Y

Healey	Adam	LSI		Y
Hidaka	Yasuo	Fujitsu Lab of America		Y
Hu	Kerry	Huawei	Y	
Isono	Hideki	Fujitsu Optical Components	Y	Y
Iwadate	Hirotake	Sumitomo Electric	Y	Y
Jiang	Wenbin	Cosemi	Y	Y
Jimenez	Andrew	Anixter Inc.		Y
Katz	Walter	Si Soft	Y	Y
Kimmtli	Myles	Emuley	Y	
King	Jonathan	Finisar	Y	Y
Kipp	Scott	Brocade	Y	Y
Kodama	Satoshi	NTT	Y	Y
Kolesar	Paul	Commscope	Y	Y
Kono	Masahi	Hitachi	Y	Y
Kvist	Bengt	Ericsson		Y
Larsen	Wayne	Commscope	Y	
Latchman	Ryan	Mindspeed	Y	Y
Law	David	HP	Y	
Lawrence	Eric	Nexans Inc	Y	Y
LeCheminant	Greg	Agilent Technologies	Y	Y
Lewis	Dave	JDSU	Y	Y
Lingle	Robert	OFS		Y
Lusted	Kent	Intel		Y
Lutz	Sharon	US Conec Ltd	Y	Y
Maggis	Arthur	Cadence		Y
Maki	Jeffery	Juniper	Y	Y
Malette	Edwin	BrightHouse Networks		Y
Martin	Arlon	Kotura	Y	Y
McDonough	John	NEC America	Y	Y
Meier	Wolfgang	Emerson		Y
Mohan	Jitendra	National Semiconductor		Y
Moore	Charles	Avago Technologies	Y	
Nowell	Mark	Cisco	Y	
Ofelt	David	Juniper	Y	
Oomoni	Hirotake	Sumitomo Electric		Y
Palkert	Tom	Xilinx/Molex	Y	Y
Pepper	Jerry	Ixia	Y	Y
Petrilla	John	Avago Technologies	Y	Y
Pimpinella	Rick	Panduit Corp	Y	Y
Rabinovich	Rick	Alcatel Lucent	Y	Y
Rategh	Hamid	Inphi		Y

Regev	Eran	Marvel		Y
Remein	Duane	Huawei		Y
Sambasivan	Sam	AT&T	Y	Y
Sela	Oren	Mellanox	Y	
Shanbhag	Megha	TE Connectivity		Y
Shrikhande	Kapil	Dell	Y	Y
Sprague	Ted	Infinera	Y	Y
Stassar	Peter	Huawei	Y	Y
Swanson	Steve	Corning Inc	Y	
Szczepanek	Andre	Inphi	Y	Y
Tanaka	Naruto	Sumitomo Electric	Y	Y
Thaker	Pat	Broadcom		Y
Tracy	Nathan	TE Connectivity	Y	Y
Tremblay	Francois	Gennum	Y	Y
Trowbridge	Steve	Alcatel Lucent	Y	
Vaden	Sterling	Optical Cable	Y	Y
Vanderlaan	Paul	Nexans Inc	Y	Y
Vareljian	Albert	Xilinx		Y
Walkman	?	Mellanox	Y	
Wang	Xiaofeng	PMC Sierra	Y	
Wang	Zhongfeng	Broadcom	Y	
Warland	Tim	Applied Micro	Y	Y
Wong	CK	FCI Mergeoptics	Y	Y
Woodruff	Bill	Broadcom	Y	
Wu	Wendy	Netlogic	Y	
Xi	Huang	Huawei	Y	Y
Zhao	Wenyu	CATR China	Y	Y
Zivny	Pavel	Tektronix	Y	