Approved Minutes
IEEE 802.3 Next-Gen 40 Gigabit and 100 Gigabit Optical Ethernet Study Group Plenary meeting
July 17 – 19, 2012
San Diego, CA, USA

Prepared by: Kapil Shrikhande

July 17, 2012

The meeting was called to order at 11:15 a.m., on 17 July, 2012 by Dan Dove, Study Group Chair.

Documentation for the San Diego meeting can be found at:
http://www.ieee802.org/3/100GNGOPTX/public/jul12/index.html

Agenda and General Information
By: Dan Dove, SG Chair
See: dove_01a_0712_optx.pdf *(revised presentation dove_01b has since been posted)*

Kapil Shrikhande volunteered as Recording Secretary for this meeting.

Motion to approve agenda
Moved: Scott Kipp
Second: Pete Anslow
Passes

Review of unapproved minutes from the May 2012 interim meeting.

Motion to approve May 2012 interim minutes
Moved: John Abbott
Second: Pete Anslow
Passes without objection

The Chair presented the Study Group decorum.
The Study Group was reminded that photographs or recordings are not allowed without permission.
The Chair asked if any reporters or others who might report on the activities within the meeting was present. Scott Kipp stated he may blog about items within the SG.
The Chair presented the rest of the Agenda and General Information presentation

Start of presentations was at 11:45 a.m.

Presentation # 1
Title: 100GE Fiber and Optics Options
By: Tom Issenhuth, Microsoft
See: issenhuth_01a_0712_optx.pdf
Break for lunch at 12:15 p.m.

Reconvened at 1:35 p.m.

Presentation # 2
Title: LLDP for EEE: Tutorial from 802.3az and potential uses in Next Generation 40Gb/s and 100Gb/s Optical Ethernet
By: Wael Diab, Broadcom
See: diab_01_0712_optx.pdf

Presentation # 3
Title: EEE for 40G/100G NGOPTX: Open Issues and Objective Proposal
By: Mike Bennett, Lawrence Berkeley National Laboratory
See: bennett_01a_0712_optx.pdf

Break at 2:35 p.m.
Reconvened at 2:55 p.m.

Presentation # 4
Title: 100G Next Gen Optics MMF ad hoc meetings review
By: Jonathan King, Finisar
See: king_02_0712_optx.pdf

Presentation # 5
Title: Dynamic Behavior of Mode Partition Noise in MMF
By: Petar Pepeljugoski, IBM
See: pepeljugoski_01_0712_optx.pdf

Presentation # 6
Title: FEC for 100GBASE-SR4
By: Jonathan King, Finisar
See: king_01a_0712_optx.pdf *(updated presentation king_01b has since been posted)*

Presentation # 7
Title: Implementation Options for 150m 100GBASE-SR4 Links
By: Liang Qiu, Nexans
See: qiu_01_0712_optx.pdf

Presentation # 8
Title: Issues with Modeling Mode-Partition Noise (MPN) in VCSEL-MMF Links
By: Robert Lingle Jr., OFS
See: lingle_01_0712_optx.pdf

Recess for the day at 5:30 p.m.

July 18, 2012

Meeting resumed by the Chair at 9 a.m.

The chair presented the agenda for the day.
The chair covered study group decorum and ground rules.

Presentation # 9
Title: Update on Advanced Modulation for a Low Cost 100G Single Mode Fiber PMD
By: Gary Nicholl, Cisco
See: nicholl_01_0712_optx.pdf

Presentation # 10
Title: Measurements of VCSEL Mode Delays & Implications for System Performance
By: Abhijit Sengupta, Commscope
See: sengupta_01_0712_optx.pdf

Break at 10: 50 a.m.
Reconvened at 11:10 a.m.

Presentation # 11
Title: Low cost 25G PAM-4 solution for Next Gen 100GE PMD
By: Xiaolu Song, Huawei
See: cui_01_0712_optx.pdf

Presentation # 12
Title: WDM PICs for 100G nR4 using Silicon Photonics
By: Arlon Martin
See: martin_01_0712_optx.pdf

Presentation # 13
Title: WDM PICs for Optical Interfaces
By: Andy Weirich
See: weirich_01_0712_optx.pdf

Break for lunch at 12:10 p.m.
Reconvened at 1:30 p.m.

Presentation # 14
Title: Multipulse modulation schemes for 100 Gigabit Ethernet
By: Jonathan Igham, University of Cambridge
See: ingham_01a_0712_optx.pdf

Presentation # 15
Title: PAM SMF Transmitter testing
By: David Lewis, JDSU
See: lewis_01a_0712_optx.pdf

Presentation # 16
Title: Investigation of 100 GbE Serial PMDs Based on Advance Modulation
By: Ali Ghiasi, Broadcom
See: ghiasi_01_0712_optx.pdf

The Chair requested the SG to allow him to present schell_01_0712_optx.pdf on behalf of the author who could not travel to the meeting. There was no opposition from the group.

Presentation # 17
Title: Externally Modulated Laser for PAM at 28 GBaud
By: Martin Schell, Frauhofer Heinrich Hertz Institute
See: schell_01_0712_optx.pdf

Following the presentation, there were a number of questions from the floor requesting the author to provide additional details including: (i) the dispersion of the fiber; (ii) rise and fall times of plotted signals; (iii) modulator bandwidth; and (iv) receiver bandwidth. An additional question was why an optical amplifier was required in the setup?

The Chair presented the amended PAR and 5C criteria documents that were created to address comments received from the EC.
The amended draft PAR is captured in dove_03_0712_optx.pdf
The amended 5C responses are captured in dove_02_0712_optx.pdf

Both documents are posted to the meeting web-site at the bottom of the page
http://www.ieee802.org/3/100GNGOPTX/public/jul12/index.html

Break at 3:15 p.m.
Reconvened at 3:30 p.m.

Motions

Motion #1
Request 802.3 extend our Study Group for an additional period of 6 months
Moved: Steve Trowbridge
Second: Pete Anslow
Y: 45
N: 0
A: 0
Passes

Motion #2
Move that the Study Group adopt dove_02_0712_optx for our amended SG 5 Criteria submittal
Moved: Robert Lingle
Second: Pete Anslow
Y: 43
N: 0
A: 1
Passes

Motion #3
Move that the Study Group adopt dove_03_0712_optx for our amended SG PAR submittal
Moved: Kapil Shrikhande
Second: Steve Trowbridge
Y: 45
N: 0
A: 0
Passes

Motion #4
Move that the Study Group:
- Submit the amended project documentation to the 802.3 Working Group for approval.
- Request that the 802.3 Working Group chair submit the amended PAR and 5 criteria responses to the 802 Executive Committee for consideration at the July 2012 Plenary Session. Should the IEEE 802.3 Working Group not approve the submission at its July 2012 meeting, it will be removed from the IEEE 802 Executive Committee agenda.

Moved: Pete Anslow
Second: Peter Stassar
Y: 48
N: 0
A: 0
Passes

Straw-polls

How many people

- Are sure they will attend the ITU/802.3 Workshop? 12
- May attend the ITU/802.3 Workshop? 7
- Will not attend the ITU/802.3 Workshop? 18

- Prefer meeting on Monday, Tuesday, Wednesday ? 30
-Prefer meeting on Wednesday, Thursday, Friday ? 8

-Are sure they will attend the September Interim? 33
-May attend the September Interim? 15
-Will not attend the September Interim? 4

The Chair told the group that he plans to request 802.3 to provide schedule (dates) for the upcoming interim meeting in Geneva to help attendees plan their travel.

Motion to adjourn
Moved: John Petrilla
Second: Jonathan King
Passes

Next-gen 40G and 100G Optics Study Group – July 2012 Plenary Meeting Attendee List

Last Name	First Name	Affiliation	17-Jul	18-Jul
Abbas	Ghani	Ericsson	√	√
Abbott	John	Corning Inc	√	√
Anderson	Jon	Opnext	√	√
Anslow	Pete	Ciena	√	√
Baldwin	Thananya	Ixia	√	-
Bennett	Mike	LBNL	√	-
Berger	Chris	Luxtera	√	√
Bhoja	Sudeep	Inphi	√	-
Cady	Ed	Volex	√	-
Carroll	Martin	Verizon	√	-
Choudhury	Mabud	Commscope	√	√
Cole	Chris	Finisar	√	√
Cui	Kai	Huawei	√	√
Dabiri	Dariush	APM	√	√
Dawe	Piers	IPtronics	√	√
Farhoodfar	Arash	Cortina Systems	√	√
Flatman	Alan	LAN Technologies	√	√
Ghiasi	Ali	Broadcom	√	√
Hall	Eric	Aurrion	√	√
Hamano	Hiroshi	Fujitsu Labs	√	√
Ingham	Jonathan	University of Cambridge	√	√
Isono	Hideki	Fujitsu Optical Components	√	√
Jiang	Wenbin	Cosemi	√	√
Jimenez	Andrew	Anixter Inc.	√	-
Kaku	Shinkyo	Allied Telesis	√	√
Kimmtli	Myles	Emuley	-	√
King	Jonathan	Finisar	√	√
Kipp	Scott	Brocade	√	√
Kolesar	Paul	Commscope	√	√
Latchman	Ryan	Mindspeed	√	√
Lewis	Dave	JDSU	√	√
Lingle	Robert	OFS	√	√
Lucas	Rob	Bandwidth IO	√	√
Lutz	Sharon	US Conec Ltd	√	√
Maki	Jeffery	Juniper	√	√
Martin	Arlon	Kotura	√	√
McClay	Phil	TE Connectivity	√	√
McDermott	Tom	Fujitsu Labs	√	√

McDonough	John	NEC America	√	√
McSonley	Greg	Amphenol	-	√
Muth	Karl	Texas Instruments	√	-
Nicholl	Gary	Cisco	√	-
Nielson	Allan	TE Connectivity	√	√
Nishihara	Susumu	NTT	√	√
Nowell	Mark	Cisco	√	√
Palkert	Tom	Xilinx, Molex, Luxtera	√	√
Patel	Pravin	IBM	√	-
Pepper	Jerry	Ixia	√	-
Perrie	Randy	Onechip Photonics	√	√
Petrilla	John	Avago Technologies	-	√
Pimpinella	Rick	Panduit Corp	√	√
Ressl	Michale	Hitachi Cable America	√	√
Sprague	Ted	Infinera	√	√
Stassar	Peter	Huawei	√	√
Stevens	Daniel	Fujitsu Semiconductor Europe	√	√
Swanson	Steve	Corning Inc	√	√
Timmis	Jon	OCC	-	√
Tracy	Nathan	TE Connectivity	-	√
Tremblay	Francois	Semtech	√	√
Trowbridge	Steve	Alcatel Lucent	√	√
Vlasov	Yuri	IBM	√	√
Warren	David	HP	√	√
Way	Winston	Neophotonics	√	√
Wong	CK	FCI Mergeoptics	-	√
Szeto	William	Xtera	√	-
Sengupta	Abhijit	Commscope	√	√
Qiu	Liang	Nexans Inc	√	√
Maguire	Valerie	Siemon	√	-
Weirich	Andy	OneChip Photonics	√	√
Ulrichs	Ed	Sourcephotonics	√	√
Jewell	Jack	Independent	√	√
Bolig	Matthew	Broadcom	√	√
Yahsing	Yuan	Semtech	√	√
Song	Xiaolu	Huawei	√	√
Bae	Hyeon-Min	KAIST	√	-
Park	Jinho	TeraSquare	√	-
Kannan	Raj	Oracle	√	-
Braun	Ralf-Peter	Deutsche Telekom	√	√
Zhang	Kevin	JDSU	√	√

Pepeljugoski	Petar	IBM	√	√
Bozorgebrahimi	Kurosh	Uninett	√	√
Takahata	Kiyoto	NTT	√	√
Issenhuth	Tom	Microsoft	√	√
Coenen	Robert	Reflex Photonics	√	-
Swenson	Norman	Clariphy	√	√
Gill	Douglas	IBM	√	√
Kosima	Keisuke	Mitsubishi Electric	√	√
Cook	Charles	Centurylink	-	√
Sayana	Krishna	Samsung	√	√
Larsen	Wayne	Commscope	-	√
Law	David	HP	-	√