Unapproved Minutes
IEEE 802.3bm 40 Gb/s and 100 Gb/s Fiber Optic Task Force
Plenary meeting
Mar 19-21, 2013
Orlando, FL

Prepared by: Kapil Shrikhande

Mar 19, 2013

The meeting was called to order at 9:00 a.m. on Mar 19.
Kapil Shrikhande volunteered as Recording Secretary.

Round of introductions

All meeting materials for the Mar 2013 plenary meeting can be found at:
http://www.ieee802.org/3/bm/public/mar13/index.html

Agenda and General Information presentation
By: Dan Dove, Chair
See: http://www.ieee802.org/3/bm/public/mar13/dove_01_0313_optx.pdf

The Chair asked if there was any opposition to approving the agenda for the meeting. The agenda was approved by voice vote without opposition.

The Chair asked if there was any opposition to approving the minutes from the January 2013 Task Force meeting. The January 2013 meeting minutes were approved by voice vote without opposition.

The Task Force decorum was presented.
The Task Force was reminded that photographs or recordings are not allowed without permission.
The Chair asked if there were any reporters or if someone present might report on the activities of the meeting. Dan Dove indicated that he may discuss the progress of the Task Force in broad terms in his role as a Chair.

The Chair read the IEEE patent policy. The Chair made a call for potentially essential patents. No one responded to the call for patents.

Start of technical presentations

Presentation # 1

Title: SMF Ad Hoc report

By: Pete Anslow, Ciena (SMF Ad Hoc Chair)
See: http://www.ieee802.org/3/bm/public/mar13/anslow_01_0313_optx.pdf

Presentation # 2
Title: Editor's report

By: Pete Anslow, Ciena (Chief Editor, 802.3bm)
See: http://www.ieee802.org/3/bm/public/mar13/anslow_02_0313_optx.pdf

Presentation # 3
Title: Loss Budgeting for Single-mode Channels
By: Paul Kolesar, Commscope
See: http://www.ieee802.org/3/bm/public/mar13/kolesar_02_0313_optx.pdf

Break at 10:45 a.m.
Reconvened at 11 a.m.

Presentation # 4
Title: 100Gb/s SMF PMDs
By: Jonathan King, Finisar
See: http://www.ieee802.org/3/bm/public/mar13/cole_01_0313_optx.pdf

Presentation # 5
Title: Broad Market Potential and Economic Feasibility of PSM4
By: Paul Kolesar, Commscope
See: http://www.ieee802.org/3/bm/public/mar13/kolesar_01a_0313_optx.pdf (revised version uploaded after the presentation)

Break for Lunch at 12:15 p.m.
Reconvened 1:30 p.m.

Presentation # 6
Title: PSM4 broad market potential
By: Tom Palkert, Luxtera
See: http://www.ieee802.org/3/bm/public/mar13/palkert_01_0313_optx.pdf

Presentation # 7
Title: PSM4 system cost analysis
By: Tom Palkert, Luxtera
See: http://www.ieee802.org/3/bm/public/mar13/palkert_02a_0313_optx.pdf (revised version uploaded after the presentation)

Presentation # 8
Title: 100G PSM4 Link Model Results Update
By: John Petrilla, Avago
See: http://www.ieee802.org/3/bm/public/mar13/petrilla_02_0313_optx.pdf

Presentation # 9
Title: 500m SMF Objective Baseline Proposal
By: Jon Anderson, Oclaro
See: http://www.ieee802.org/3/bm/public/mar13/anderson_01a_0313_optx.pdf

Break at 3:05 p.m.
Reconvened at 3:20 p.m.

Presentation # 10
Title: CWDM Solution for 500m SMF Economic Feasibility
By: Tek Ming Shen, Huawei
See: http://www.ieee802.org/3/bm/public/mar13/shen_01_0313_optx.pdf

Presentation # 11
Title: Cost reference and technical spec. revision proposal for 4x25G CWDM Solutions
By: Rang-Chen Yu, Oplink (Presented by Dan Dove; Rang-Chen could not make it to the meeting)
See: http://www.ieee802.org/3/bm/public/mar13/yu_01_0313_optx.pdf

There were a few questions from the floor and Dan Dove suggested that questions should be emailed to the author directly (or via the reflector).

Presentation # 12
Title: 100GBASE-CWDM Baseline Proposal
By: Yurii Vlasov, IBM
See: http://www.ieee802.org/3/bm/public/mar13/vlasov_01a_0313_optx.pdf

Meeting recessed at 5:30 p.m., to be resumed on Wednesday March 20.

Mar 20, 2013

Round of introductions

The Chair presented the agenda and general information
http://www.ieee802.org/3/bm/public/mar13/dove_01_0313_optx.pdf

The Task Force decorum was presented.
The Task Force was reminded that photographs or recordings are not allowed without permission.
The Chair asked if there were any reporters or if someone present might report on the activities of the meeting. Dan Dove indicated that he may discuss the progress of the Task Force in broad terms in his role as a Chair.

The Chair read the IEEE patent policy. The Chair made a call for potentially essential patents. No one responded to the call for patents.

Start of technical presentations

Presentation # 13
Title: PSM4 vs. WDM: A Silicon Photonics Perspective
By: Brian Welch, Luxtera
See: http://www.ieee802.org/3/bm/public/mar13/welch_01_0313_optx.pdf

Presentation # 14
Title: Nonlinearity Penalty for 100G DMT Based on 25G-class DFB Transmitter
By: Ilya Lyubomirsky, Finisar (presented by Jonathan King)
See: http://www.ieee802.org/3/bm/public/mar13/lyubomirsky_01_0313_optx.pdf

Break at 10:22
Reconvened at 10:40

Presentation # 15
Title: RIN Impact on Power Budget in Optical 100GbE DMT
By: Toshiki Tanaka, Fujitsu Lab
See: http://www.ieee802.org/3/bm/public/mar13/tanaka_01_0313_optx.pdf

Presentation # 16
Title: DMT power budget discussion
By: Tomoo Takahara, Fujitsu Lab
See: http://www.ieee802.org/3/bm/public/mar13/takahara_01a_0313_optx.pdf

Presentation # 17
Title: A CAUI-4 Chip-to-Chip Link Study: Presentation 2
By: Mike Li, Altera
See: http://www.ieee802.org/3/bm/public/mar13/li_01_0313_optx.pdf

Break for lunch at 11:30 a.m.
Reconvened at 12:45 p.m.

Presentation # 18
Title: MMF ad hoc report
By: Jonathan King, Finisar (MMF Ad Hoc Chair)
See: http://www.ieee802.org/3/bm/public/mar13/king_01a_0313_optx.pdf

Presentation # 19
Title: 100G MMF 20m & 100m Link Model Comparison
By: John Petrilla, Avago Technologies
See: http://www.ieee802.org/3/bm/public/mar13/petrilla_01_0313_optx.pdf

End of technical presentations for the day.
The floor was opened for straw polls and motions

Straw Polls and Motions

The Chair indicated that he intends to make a motion to approve the draft response to the OIF liaison, found at http://www.ieee802.org/3/bm/public/mar13/IC_802p3bm_oif_0313_optx.pdf if there were no changes recommended by the Task Force.

Motion # 1
Move to adopt the response to OIF liaison letter "IC_802p3bm_oif_0313_optx.pdf"
Mover: Dan Dove
Seconded: John Abbott
Procedural 50%
Passes by voice vote, without opposition

The Chair then brought up the proposed response to the comments received on the draft PAR modification as well as the modified draft PAR document (to be resubmitted to 802.3 and 802 EC for

approval) for review by the Task Force. Upon receiving no comments, the Chair proceeded to making a motion

Motion #2
Move to adopt the response to 802.11 PAR review comments "PAR_Response_01_0313_optx.pdf" and amend our PAR as described on page 6, then resubmit that PAR "P802_3bm_PAR_0313.pdf" to 802.3 and the 802 EC for approval at the March 2013 meeting.
Mover: Dan Dove
Seconded: Pete Anslow
Technical >= 75%
Yes: 61 No: 0 Abstain: 5
Passes

The response to the comments on the draft PAR modification can be found at
http://www.ieee802.org/3/bm/public/mar13/PAR_Response_01_0313_optx.pdf
The modified draft PAR was uploaded to the March 2013 meeting page at
http://www.ieee802.org/3/bm/public/mar13/P802_3bm_PAR_0313_optx.pdf

Straw Poll #1
I would support a baseline proposal for a SMF PMD based on:
a) CWDM
b) C-BAND
c) DMT
d) PSM4
e) PAMn
f) none of the above - rely on LR4 with CAUI-4.
Pick one of the above only
a) 15 b) 0 c) 8 d) 25 e) 12 f) 11
Room count = 98

Straw Poll #2
I would support a baseline proposal for a SMF PMD based on:
a) CWDM
b) C-BAND
c) DMT
d) PSM4
e) PAMn
f) none of the above - rely on LR4 with CAUI-4.
Chicago Rules
a) 26 b) 0 c) 20 d) 36 e) 22 f) 37

Straw Poll #3
I would NOT support a baseline proposal for a SMF PMD based on:
a) CWDM
b) C-BAND
c) DMT
d) PSM4
e) PAMn
f) none of the above - rely on LR4 with CAUI-4.

Chicago Rules
a) 25 b) 60 c) 35 d) 23 e) 30 f) 5

Straw Poll #4
Do you believe this proposal is technically feasible:
a) CWDM Y: 55 N: 4
b) DMT Y: 18 N: 38
c) PSM4 Y: 59 N: 0
d) PAMn Y: 19 N: 38

Straw Poll #5
Do you believe this proposal is economically feasible:
a) CWDM Y: 26 N: 21
b) DMT Y: 12 N: 35
c) PSM4 Y: 47 N: 8
d) PAMn Y: 18 N: 32
e) LR4 Y: 26 N: 22

Straw Poll #6
Do you believe this proposal has broad market potential :
a) CWDM Y: 23 N: 27
b) DMT Y: 11 N: 27
c) PSM4 Y: 32 N: 24
d) PAMn Y: 18 N: 29
e) LR4 Y: 24 N: 20

Straw Poll # 7
I believe that the 20 m PMD proposal discussed in king_01a_0313_optx meets the requirements for:
a) Technical feasibility Y: 19 N: 2
b) Economic feasibility Y: 11 N: 6
c) Broad market potential Y: 12 N: 12
d) Distinct identity Y: 10 N: 12

Straw Poll # 8
If a 20m PMD proposal were to be adopted, it would have to be interoperable with the 100m PMD for reach < 20m
Y: 21
N: 2
A: 38

Straw Poll # 9
Would you support a 20m un-retimed FEC-enabled MMF PHY based upon king_01a_0313_optx

Y: 13
N: 6
A: 42

Recessed for the day

March 21, 2013

Round of introductions

The Chair presented the agenda and general information
http://www.ieee802.org/3/bm/public/mar13/dove_01_0313_optx.pdf

The Task Force decorum was presented.
The Task Force was reminded that photographs or recordings are not allowed without permission.
The Chair asked if there were any reporters or if someone present might report on the activities of the meeting. Dan Dove indicated that he may discuss the progress of the Task Force in broad terms in his role as a Chair.

The Chair read the IEEE patent policy. The Chair made a call for potentially essential patents. No one responded to the call for patents.

Start of technical presentations

Presentation # 20
Title: CAUI-4 ad-hoc Report
By: Ryan Latchman, Mindspeed (CAUI-4 Ad Hoc Chair)
See: http://www.ieee802.org/3/bm/public/mar13/latchman_01_0313_optx.pdf

Presentation # 21
Title: Simulations and Methodology Addressing CAUI-4 C2C
By: Ali Ghiasi, Broadcom (presented by Ryan Latchman, Mindspeed)
See: http://www.ieee802.org/3/bm/public/mar13/ghiasi_01_0313_optx.pdf

Presentation # 22
Title: CAUI-4 chip-chip baseline proposal
By: Ryan Latchman, Mindspeed
See: http://www.ieee802.org/3/bm/public/mar13/latchman_02_0313_optx.pdf

The technical presentations on the agenda were over. The floor was opened for motions, straw polls and discussion.

Motions and Straw Polls

Motion #1
Move to adopt the proposal in slides 4 to 10 of latchman_02_0313_optx as the baseline for "a re-timed 4-lane 100G PMA to PMA electrical interface for chip to chip applications" (with the insertion loss listed as To Be Confirmed)
Mover: Ryan Latchman
Seconded: Mike Dudek
Technical >= 75%
Yes: 49 No: 0 Abstain: 20
Passes
(Room count = 93)

Motion # 2
Move to adopt the changes to CAUI naming on slide 5 of anslow_02_0313_optx
Mover: Pete Anslow
Seconded: John D'Ambrosia
Technical >= 75%
Yes: 67 No: 2 Abstain: 11
Passes

Straw Poll # 10
I plan to attend 802.3bm at the following meetings
May 2013 – Victoria, BC __57___
July 2013 – Geneva, CH __52___
Sept 2013 – York, UK __48___
Nov 2013 – Dallas, TX, USA __61___

With no more polls or motions, the Chair opened the floor for discussion.

There was a short discussion on how to start incorporating text for a 500m SMF proposal into the draft document being created by the Editing team, with the assumption that the Task Force will pick a baseline that meets the objective. Pete Anslow suggested that he would volunteer to incorporate one of the potential proposals into the draft standard, and since PSM4 was the proposal with the most support per straw polls in this meeting, he would work on creating the draft text for PSM4. Arash Farhood volunteered to produce draft text for a PAM8 baseline proposal. Peter Stassar volunteered to produce draft text for a CWDM baseline proposal.

Towards the end of the meeting, Jon Rosdahl (Chair 802.11) brought up the comments submitted to the draft PAR modification. Dan Dove reviewed the responses to the comments that were approved by the Task Force on Wednesday with the 802.11 Chair.

With the agenda completed, the Chair asked if there was any opposition to adjourning the meeting. Seeing none, the meeting was adjourned.

IEEE 802.3bm March 2013 Plenary meeting attendance list

Last Name	First Name	Affiliation	19-Mar	20-Mar	21-Mar
Abbas	Ghani	Ericsson	Y	Y	Y
Abbott	John	Corning Inc	Y	Y	Y
Anderson	Jon	Oclaro	Y	Y	Y
Anslow	Pete	Ciena	Y	Y	
Barrass	Hugh	Cisco			Y
Bates	Stephen	PMC-Sierra	Y	Y	Y
Bhatt	Vipul	Cisco	Y	Y	Y
Bliss	Will	Broadcom		Y	
Bo	Li	Huawei	Y		
Braun	Ralf-Peter	Deutsche Telekom	Y	Y	Y
Brown	Dave	Semtech	Y	Y	
Brown	Matt	Applied Micro			Y
Burt	Kevin	Semtech		Y	
Cady	Ed	Volex	Y		
Chang	Jacky	HP	Y		
Chang	Xin	Huawei Tech	Y	Y	Y
Chiu	Ngo	Samsung		Y	
Conroy	Keith	Multi-Phy	Y	Y	Y
Cornejo	Ed	Independent	Y	Y	Y
Cui	Kai	Huawei	Y	Y	
Dawe	Piers	IPtronics	Y	Y	Y
Donahue	Curtis	UNH-IOL			Y
Dudek	Mike	Qlogic	Y	Y	Y
Eiriksson	Hsgeir	Chelsio	Y	Y	Y
Erba	Simone	ST Microelectronics		Y	
Estes	Dave	UNH-IOL			Y
Ewen	John	IBM	Y		Y
Farhood	Arash	Cortina Systems	Y	Y	Y
Flatman	Alan	LAN Technologies	Y	Y	Y
Forbes	Harry	Nexans Inc		Y	
Foucens	Norbert	JDSU	Y	Y	
Frazier	Howard	Broadcom		Y	
Green	Malcolm	Binoptics	Y	Y	Y
Grow	Bob	RMG Consulting	Y		
Gustlin	Mark	XILINX	Y	Y	Y
Healey	Adam	LSI			Y
Hidaka	Yasuo	Fujitsu Laboratories		Y	Y
Huang	Xi	Huawei	Y	Y	Y

Irwin	Scott	Mosys	Y	Y	
Isono	Hideki	Fujitsu Optical Components	Y	Y	
Jewell	Jack	Independent	Y	Y	
Junyi	Xu	Marvell Semiconductor		Y	Y
Kawatsu	Yasuaki	Hitachi Cable		Y	Y
Keshavan	Kumar	Cadence Design	Y	Y	Y
King	Jonathan	Finisar		Y	Y
Kish	Paul	Belden	Y	Y	
Kolesar	Paul	Commscope		Y	
Kvist	Bengt	Ericsson		Y	Y
Lackner	Hans	QosCom		Y	Y
Larsen	Wayne	Commscope		Y	Y
Law	David	HP	Y		
Lewis	Dave	JDSU	Y	Y	Y
Li	Mike	Altera	Y	Y	
Lindsay	Tom	Clariphy	Y	Y	Y
Malkiman	Yonatan	Mellanox	Y		Y
McDermott	Tom	Fujitsu Labs	Y	Y	Y
McDonough	John	NEC America	Y	Y	Y
Meier	Wolfgang	Emerson		Y	Y
Melitz	Rich	Intel			Y
Meyer	Jeffrey	Centellax	Y	Y	Y
Mooney	Paul	Spirent	Y		
Moore	Charles	Avago		Y	Y
Moorwood	Andy	Infinera	Y	Y	Y
Muth	Karl	Texas Instruments	Y	Y	
Nakamoto	Ed	Spirent	Y	Y	Y
Nishihara	Susumu	NTT		Y	Y
Nowell	Mark	Cisco	Y	Y	Y
Ofelt	David	Juniper	Y	Y	
Ogura	Ichiro	PETRA	Y	Y	Y
Palkert	Tom	Xilinx, Molex, Luxtera	Y	Y	Y
Patel	Pravin	IBM	Y	Y	Y
Petrilla	John	Avago Technologies		Y	Y
Pimpinella	Rick	Panduit Corp	Y	Y	
Rabinovich	Rick	Alcatel Lucent	Y	Y	Y
Ressl	Michael	Hitachi Cable America			Y
Sayre	Edward	NESA		Y	Y
Shanbag	Megha	TE Connectivity		Y	Y
Shaoan	Dai	Marvell Semiconductor			Y
Shaohua	Li	Brocade	Y	Y	Y
Shen	Tek-Ming	Huawei Technologies	Y	Y	Y

Shrikhande	Kapil	Dell	Y		
Sommers	Scott	Molex	Y	Y	
Stassar	Peter	Huawei	Y	Y	
Stevens	Daniel	Fujitsu Semiconductor Europe	Y	Y	Y
Suping	Zhan	Huawei	Y	Y	Y
Szeto	William	Xtera	Y	Y	
Tajima	Akio	NEC Corporation	Y	Y	Y
Takahata	Kiyoto	NTT	Y	Y	Y
Tanaka	Toshiki	Fujitsu Laboratories	Y	Y	Y
Tawa	Katsuhisa	Sumitomo Electric	Y	Y	Y
Teixeira	Antonio	NSN Networks		Y	Y
Timmins	Ian	OCC	Y		
Tomoo	Takahara	Fujitsu Lab	Y	Y	Y
Toyoda	Hidehiro	Hitachi	Y	Y	Y
Trowbridge	Steve	Alcatel Lucent	Y	Y	Y
Vanderlaan	Paul	Nexans Inc		Y	
Vijn	Arien	AMS-IX	Y	Y	Y
Vlasov	Yuri	IBM	Y	Y	
Wang	Robert	Intel	Y	Y	Y
Wang	Zhongfeng	Broadcom	Y	Y	
Welch	Brian	Luxtera		Y	Y
Xinjuan	Wans	Huawei	Y	Y	Y
Xu	Yu	Huawei	Y	Y	Y
Zeng	Li	Huawei	Y	Y	Y
Zhao	Wenyu	CATR China	Y	Y	Y
Zhenyu	Liu	Marvell Semiconductor		Y	Y
Zimmerman	George	CME consulting		Y	Y