

Unapproved Minutes
IEEE 802.3ba Task Force
March 18-20, 2007
Orlando, Florida

Prepared by: George Oulundsen

Meeting convened at 8:05 am, Tuesday, March 18, 2008.

Agenda & General Information

By – John D'Ambrosia

See – agenda_01_0308.pdf

- Introductions – Everyone introduced themselves and stated their affiliation.
- Chair asked if there were any reporters in the room. No one responded. Chair reminded everyone that photographs are not allowed.
- Chair went through his introduction presentation – agenda_01_0308.pdf
- Ground Rules
- IEEE Structure, Bylaws & Rules
- IEEE Patent policy
 - Chair advised the Task Force to review and read the updated Patent policy on the IEEE website.
 - Chair showed the five slides to the body, reading slides 1 and 5 aloud
 - Chair advised the Task Force
 - The IEEE's patent policy is consistent with the ANSI patent policy and 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 encouraged;
 - There may be Essential Patent Claims of which the IEEE is not aware. Additionally, neither the 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.
 - The chair 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) that the participant believes may be essential for the use of that standard. No one came forward.
- Chair presented the agenda for this meeting
- Appointed Secretary – George Oulundsen appointed by Chair as Task Force Secretary
 - There was no objection from the Task Force
- Motion to approve the agenda
 - Motion moved to accept the agenda by Steve Trowbridge, 2nd by Thananya Baldwin.
 - Meeting agenda was approved by voice vote without objection

- Motion to approve the January Interim minutes
 - Motion moved to accept minutes, with change to add Chris Di Minico, Chris Cole and Zhongfeng Wang to the attendee list, by Hugh Barass, 2nd by Pete Anslow.
 - January Interim Meeting Minutes were approved by voice vote without objection.
- Goals for meeting
 - Hear presentations related to objectives and 5 Criteria, and proposals for standardization solutions and specifications.
 - Task Force objectives will be reviewed and possibly modified.
 - Start developing consensus on:
 - Specifics of objectives
 - Solution proposals
- Presented possible Task Force Schedule and Timeline.
- Present list of presentations and some rules to keep us on-time
 - Chair received a request from Chris Cole to add material to one of his presentations, "cole_02_0308.pdf". Chair asked if there were any objections to allowing Chris to add this material. There were no objections. Chris will be held to the same presentation time.
 - Chair may need to restrict discussion to a given time period in order to keep the meeting on schedule. If necessary, the Chair will define the time limit for discussion.
- OIF Communication – George Young gave a verbal update regarding OIF activity and the Chair volunteered to prepare an informal response letter to OIF.

Liaison Letter Updates

Title – LAN Technologies Liaison Letter - ISO/IEC JTC 1/SC 25/WG 3
 By – Alan Flatman
 See – 3n869 liaison to SC86A on OM4.pdf
Discussion - none

Ad Hoc Update #1

Title – Cu Cable Test Point Ad Hoc Update
 By – Chris DiMinico, MC Communications
 See – diminico_02_0308.pdf

Discussion

- Clarification questions were asked and answered regarding the use and position of the test points.
- Chair asked Chris if the Ad Hoc was finished. Chris stated that it was, so the Chair disbanded the Cu Cable Test Point Ad Hoc.

Ad Hoc Update #2

Title – 40G SMF PMD Ad Hoc Update
 By – Alessandro Barbieri, Cisco
 See – barbieri_01_0308.pdf

Discussion

- Presenter will update presentation with extended list of supporters and the Chair will upload it to the website.

- Clarifying questions were asked and answered.
- A question was asked regarding modification of 5 Criteria. Chair explained that if the 40 GbE SMF PMD objective was added that the 5 Criteria should be modified to reflect the state of the project with the new objective. There was discussion regarding the timing of bringing the new objective and the modified 5 Criteria in front of the 802.3WG.

Presentation #1

Title – Action Plan to a Technically Complete Draft
By – Ilango Ganga, Intel
See – ganga_02_0308.pdf
Discussion - none

Break at 9:44 AM
Reconvened at 10:00 AM

Presentation #2

Title – Interface Classifications
By – Howard Frazier, Broadcom
See – frazier_01_0308.pdf

Discussion - none

Presentation #3

Title – 40/100G Architecture and Interfaces Update
By – Ilango Ganga, Intel
See – ganga_01_0308.pdf

Discussion

- Presenter will update presentation with extended list of supporters and the Chair will upload it to the website.
- Clarifying questions were asked and answered.

Presentation #4

Title – Bit Matrix Implementation for 40GE and 100GE Block Muxing
By – WB Jiang, Huawei
See – jiang_02_0308.pdf

Discussion

- Presentation has been updated with editorial corrections. The Chair will upload the updated presentation to the website.
- Clarifying questions were asked and answered.

Presentation #5

Title – 100GE and 40GE PCS and MLD Proposal
By – Mark Gustlin, Cisco
See – gustlin_01_0308.pdf

Discussion

- Clarification questions were asked and answered.
- A mistake was identified on one of the slides. The error will be corrected and the updated presentation will be uploaded to the website.

Lunch Break at 12:00 PM

Reconvened at 1:05 PM

Presentation #6

Title – MLD (CTBI) Updates - MTTFPA for 40G Backplane
By – Mark Gustlin, Cisco
See – gustlin_02_0308.pdf

Discussion - none

Presentation #7

Title – Technical Feasibility of 100G/40G MLD
By – Farhad Shafai, Sarance
See – shafai_01_0308.pdf

Discussion

- Clarifying questions were asked and answered.

Presentation #8

Title – Proposal for a Unifying MLD
By – Frank Chang, Vitesse
See – chang_02_0308.pdf

Discussion

- Clarifying questions were asked and answered.

Presentation #9

Title – 100GE and 40GE Skew
By – Dimitris Giannakopoyulos, AMCC
See – giannakopoulos_01_0308.pdf

Discussion

- Clarifying questions were asked and answered.

Presentation #10

Title – 40GBASE-KR4 backplane PHY proposal
By – Rich Mellitz, Intel
See – mellitz_01_0308.pdf

Discussion

- Clarifying questions were asked and answered.

Break at 3:05 PM

Reconvened at 3:30 PM

Presentation #11

Title – 40Gbe Backplane Considerations
By – Ilango Ganga, Intel presenting on behalf of Andre Szczepanek, Texas Instruments
See – szczepanek_01_0308.pdf

Discussion

- Clarifying questions were asked and answered.

Presentation #12

Title – Test Points and Elect. Interfaces
By – Tom Palkert, Luxtera
See – palkert_01_0308.pdf

Discussion

- Some editorial changes were made to the presentation. The Chair will upload the updated presentation to the website.
- Clarifying questions were asked and answered.

Presentation #13

Title – 10Gb/s Electrical Interface Proposal for 40GbE and 100GbE
By – Ryan Latchman, Gennum
See – latchman_01_0308.pdf

Discussion

- Clarifying questions were asked and answered.

Presentation #14

Title – 40/100G CEI Feasibility
By – Hiroshi Takatori, PhyCore
See – takatori_01_0308.pdf

Discussion

- Clarifying questions were asked and answered.

Presentation #15

Title – OAM Rrequirements for 40/100GE Ethernet AIS?
By – Gary Nicholl, Cisco
See – nicholl_01_0308.pdf

Discussion

- Clarifying questions were asked and answered.

Presentation #16

Title – High Speed Ethernet OTN Support
By – WB Jiang, Huawei
See – jiang_03_0308.pdf

Discussion

- Clarifying questions were asked and answered.

Presentation #17

Title – 40 GbE MTTFPA when using transcoding
By – Steve Trowbridge, Alcatel-Lucent
See – trowbridge_01_0308.pdf

Discussion

- Clarifying questions were asked and answered.

Presentation #18

Title – Flavors of AIS (Alarm Indication Signal) applicable to 40 GbE and 100 GbE
By – Steve Trowbridge, Alcatel-Lucent
See – trowbridge_02_0308.pdf

Discussion - none

Presentation #19

Title – OTN mapping of MLD LAN interfaces and thoughts on MLD stack
By – Steve Trowbridge, Alcatel-Lucent
See – trowbridge_03_0308.pdf

Discussion - none

Meeting breaks for the day at 6:21 PM

Meeting reconvenes at 8:10 AM, Wednesday, March 19, 2008.

Chair reminded everyone of the patent policy and asked if there were any patents that need to be brought forward. No one brought patents forward.

There will be two tracks today. Track 1 will focus on optical fiber topics and will meet in this room (Caribbean Ballroom 3) and Track 2 will focus on copper topics and will meet in ??????.

Track 1 (Optical fiber focus)

Presentation #20

Title – Channel Coverage in Data Centers

By – Paul Kolesar, Commscope

See – kolesar_01_0308.pdf

Discussion

- Clarifying questions were asked and answered.

Presentation #21

Title – Conditions for 100m and >100m reaches on OM3 and OM4 MMF at @10Gb/s/ch

By – Jack Jewell, JDSU

See – jewell_01_0308.pdf

Discussion

- Clarifying questions were asked and answered.

Presentation #22

Title – Performance of OM3 and OM4 fibers with Relaxed Transceivers

By – Robert Lingle, OFS

See – sun_01_0308.pdf

Discussion

- Some editorial changes have been made to the presentation. The Chair asked if there were any objections to allowing the changes. There were none. The updated presentation will be uploaded to the website.
- Clarifying questions were asked and answered.

Presentation #23

Title – Multilane MM Optics: Considerations for 802.3ba

By – John Petrilla, AvagoTechnnologies

See – petrilla_01_0308.pdf

Discussion

- Clarifying questions were asked and answered.

Power went down for a few seconds and caused the network and projector to stop functioning. Chair decided to take a break and give time for the network and projector to recover from the power outage.

Break at 9:50 PM

Reconvened at 10:05 PM

Presentation #24

Title – Multilane MM Optics: Eye Safety Categories
By – John Petrilla, AvagoTechnologies
See – petrilla_02_0308.pdf

Discussion

- Clarifying questions were asked and answered.

Presentation #25

Title – 1x40Gbit/s and 4x25Gbit/s Transmission at 850nm on Multimode Fiber
By – Jorg Kropp, V-I-Systems Gmbh
See – kropp_01_0308.pdf

Discussion

- Clarifying questions were asked and answered.

Presentation #26

Title – Proposal for a Limiting, Non-retimed PMD for 100Gb/s and 40 Gb/s Ethernet and Related Specifications
By – Ken Jackson, Emcore on behalf of Petar Pepeljugoski, IBM
See – pepeljugoski_01_0308.pdf

Discussion

- Clarifying questions were asked and answered.

Presentation #27

Title – Japan High-speed 16-QAM for serial PMDs
By – Tetsuya Kawanishi, NICT
See – kawanishi_01_0308.pdf

Discussion - none

Presentation #28

Title – Polarisation Mode Dispersion in 100GbE links
By – Pete Anslow, Nortel
See – anslow_01_0308.pdf

Discussion

- Clarifying questions were asked and answered.

Track 2 (Related to Cu Cabling Objectives)focus

Prepared by: Gourgen Oganessyan

Meeting convened at 8:15 AM, Wednesday, March 19, 2008.

- Welcome and Introductions – Everyone introduced themselves
- Passed around the sign-in sheet
- Chair went through the patent policy
- Call for patents – no claims

Presentation #1

Title – SFF-8470 (CX4) / Copper Concepts for 802.3bq
By – Bob Thornton – Fujitsu, Ed Sayre - NESA
See – thornton_01_0308.pdf

Discussion: measurement methodology, test point locations, active cable voltages, shorter cable performance.

Presentation #2

Title – SFF-8470 – 802.3ba Cu Specification
By – John Sawdy - Meritec
See – sawdy_01_0308.pdf

Discussion: eye diagram sims, ICR, nature of enhanced connector.

Presentation #3

Title – 400/100G Copper Feasibility -2
By – Hiroshi Takatori - Phycore
See – takatori_02_0308.pdf

Author asks for permission to present new data. Chair asks the group if there are any objections. No objections.

Discussion: Questions on measurement, whether the displayed results are real or measurement artifact.

Break at 9:50 AM, resumed at 10:10 am

Presentation #4

Title – 802.3ba Copper Cable Assembly Proposal
By – Chris DiMinico – MC Communications
See – diminico_01_0308.pdf

Discussion: What EQ was assumed on the eye contour sims? How to handle active cables? Doubts whether SNR margins are sufficient. Chris asks the group if there can be a consensus of going forward with KR-like approach, with the possible addition of CX4 mechanical compatibility. Group seems to want mechanical compatibility option, it would be nice to be able auto-negotiate and talk to CX4 boxes.

Chair summarizes: different connector options were presented and mechanical compatibility issues were discussed. Chair encourages people to work on consensus and come up with a baseline proposal.

End Track 2 Copper Focus Minutes

Lunch Break at 12:10 PM

Reconvened at 1:01 PM

Presentation #29

Title – 100GE 10km SMF WDM Grid Alternatives

By – Chris Cole, Finisar

See – cole_01_0308.pdf

Discussion

- Clarifying questions were asked and answered.

Presentation #30

Title – 100GE SMF WDM Grid Q&A

By – Chris Cole, Finisar

See – cole_02_0308.pdf

Discussion

- Clarifying questions were asked and answered.

Presentation #31

Title – Uncooled CWDM 25-Gbps EA/DFB Lasers for Cost-Effective 100GbE transceiver for 10km SMF

By – Kiyoo Hiramoto, Opnext

See – traverso_02_0308.pdf

Discussion

- Clarifying questions were asked and answered.

Presentation #32

Title – Merits of Selecting CWDM for 10km SMF PMD - Impact of Wavelength Grid on Optical MUX/DMUX

By – Masato Shishikura, Opnext

See – traverso_03_0308.pdf

Discussion

- Clarifying questions were asked and answered.

Break at 3:05 PM

Reconvened at 3:20 PM

Presentation #33

Title – Merits of Selecting CWDM for 10km SMF PMD

By – Matt Traverso, Opnext

See – traverso_01_0308.pdf

Discussion

- Presenter will update presentation with extended list of supporters and the Chair will upload it to the website.
- Clarifying questions were asked and answered.

Presentation #34

Title – 25Gb/s 10km Transmission performance Using 1.3-um DML

By – Youichi Akasaka Fujitsu

See – isono_01_0308.pdf

Discussion

- Clarifying questions were asked and answered.

Presentation #35

Title – PHY Layer Monitoring

By – WB Jiang, Huawei

See – jiang_01_0308.pdf

Discussion

- Clarifying questions were asked and answered.

Presentation #36

Title – Comments on Multi-Lane PMD Reliability

By – Hidenori Takahashi, KDDI Labs

See – takahashi_01_0308.pdf

Discussion

- Clarifying questions were asked and answered.

Presentation #37

Title – Eye mask statistical significance and practicality
By – Piers Dawe, AvagoTechnnologies
See – dawe_01_0308.pdf

Discussion

- Definitions of the abbreviations used in the presentation were added at the end of the presentation. The Chair will upload the updated presentation to the website.
- Clarifying questions were asked and answered.

Straw Poll #1: Regarding dawe_01_0308.pdf, the following should be done:

- A. IEEE P802.3ba takes this work on as part of the project.
- B. The work should be done, but not as part of the IEEE P802.3ba project.
- C. Nothing should be done.
- D. Further evaluation is necessary.

Results:

- A. 23
- B. 21
- C. 0
- D. 38

Choice D wins. A “Statistical Eye Ad Hoc” will be formed and Chaired by Piers Dawe to further evaluate findings presented in dawe_01_0308.pdf, and come back with a recommendation to the Task Force on how to handle.

Presentation #38

Title – Considering 40GbE MMF and SMF Reach Objectives
By – Frank Chang, Vitesse
See – chang_01_0308.pdf

Discussion

- Clarifying questions were asked and answered.

Presentation #39

Title – 40GE 10km SMF PMD Technical & Economic Feasibility
By – Chris Cole, Finisar
See – cole_03_0308.pdf

Discussion

- Clarifying questions were asked and answered.

Presentation #40

Title – 40GbE SMF for Carrier Applications
By – Jesse Simsarian, Alcatel-Lucent
See – simsarian_01_0308.pdf

Discussion - none

Presentation #41

Title – 40 GbE SMF Technical & Economic Feasibility
By – Matt Traverso, Opnext
See – traverso_04_0308.pdf

Discussion

- A clarifying question was asked and answered.

Meeting breaks for the day at 5:55 PM.

Meeting reconvenes at 8:47 AM, Thursday, March 20, 2008.

Chair outlined what needed to be covered today.

Chair appointed Ilango Ganga as the Chief Editor.

Motion #1: Move for confirmation of appointment:

-Ilango Ganga as Chief Editor, IEEE 802.3ba Task Force

Moved by: Alan Flatman

Second by: Mark Nowell

Procedural (>50%)

Results: Approved by voice vote without opposition

Motion Passes

Presentation #42

Title – IEEE 802.3ba Copper Track closing report
By – Ilango Ganga, Intel
See – ganga_03_0308.pdf

Discussion

- Presenter noted that the title incorrectly stated “HSSG” instead of “IEEE 802.3ba”. The correction will be made and uploaded to the website.
- Clarifying questions were asked and answered.

Chair reviewed the IEEE 802.3ba scope and statement LMSC 7.2.1. These two points are important for whether or not the Task Force moves forward with the 40 GbE SMF proposal. The 40 GbE SMF Ad Hoc had recommended that the Task Force will need to modify two of our current criteria responses, (e.g. Broad Market Potential and Economic Feasibility)

Presentation #43

Title – Proposal to add and objective to support 40GbE 10km SMF PMD
By – Alessandro Barbieri, Cisco
See – barbieri_02_0308.pdf

Discussion

- Clarifying questions were asked and answered.

Motion #2: Move that the IEEE 802.3ba Task Force adopt the following objective in replacement of existing 40Gb/s Physical Layer objectives:

Provide Physical Layer specifications that support 40 Gb/s operation over:

at least 10km on SMF

at least 100m on OM3 MMF

at least 10m over a copper cable assembly

at least 1m over a backplane

Moved by: Alessandro Barbieri

Second by: Howard Frazier

Technical ($\geq 75\%$)

Results:

Task Force

Yes: 124

No: 0

Abstain: 14

802.3 voters:

Yes: 55

No: 0

Abstain: 9

Motion Passes

Motion #3: Move that the IEEE 802.3ba Task Force adopt the modified Broad Market Potential response in barbieri_02_0308.pdf.

Moved by: Alessandro Barbieri
Second by: Howard Frazier

Technical ($\geq 75\%$)

Results:

Task Force:

Yes: 108

No: 1

Abstain: 11

802.3 voters:

Yes: 55

No: 2

Abstain: 8

Motion Passes

Motion #4: Move that the IEEE 802.3ba Task Force adopt the modified Economic Feasibility response in barbieri_02_0308.pdf.

Moved by: Alessandro Barbieri
Second by: Howard Frazier

Technical ($\geq 75\%$)

Results:

Task Force

Yes: 110

No: 0

Abstain: 12

802.3 voters:

Yes: 55

No: 0

Abstain: 4

Motion Passes

Motion #5: Move that the IEEE 802.3ba Task Force:

- Submit the updated project documentation (objectives and 5 Criteria in barbieri_02_0308.pdf) to the 802.3 Working Group for approval.
- Request that the 802.3 Working Group submit the updated 5 Criteria to the 802 Executive Committee for consideration at the July 2008 Plenary Session.

Moved by: Alessandro Barbieri

Second by: Howard Frazier

Technical ($\geq 75\%$)

Results:

Task Force

Yes: 121

No: 0

Abstain: 4

802.3 voters:

Yes: 58

No: 0

Abstain: 1

Motion Passes

Straw Poll #2 (Requested by Chris Cole and Matt Traverso):

I believe that a baseline proposal for the 100GE 10km SMF PMD should be based on:

- A) CWDM grid
- B) LAN-WDM grid
- C) I need more information and presentation material before deciding
- D) I will abstain now and later

Results:

Task Force

○ A - 28

○ B - 49

○ C - 35

○ D - 20

802.3 voters

○ A - 13

○ B - 29

○ C - 19

○ D - 5

Straw Poll #3 (Requested by Ryan Latchman):

I believe the IEEE802.3ba should specify a next-generation XAUI electrical interface (XLAUI / CAUI).

- A) I agree
- B) I disagree
- C) I need more information and presentation material before deciding
- D) I will abstain now and later

Results:

Task Force

- o A – 26
- o B - 1
- o C - 93
- o D - 6

802.3 voters

- o A – 8
- o B - 0
- o C - 53
- o D - 1

Chair asked Ilango Ganga to prepare a draft Liaison Letter to OIF. Ilango presented his draft to the Task Force and edits/modifications were made

Liaison Letter updates #2

Title – Response to OIF Liaison letter

By – Ilango Ganga, Intel

See – ganga_04_0308.pdf

Discussion

- Edits/modifications to the letter were made. The updated letter will be uploaded to the website.

Motion #6: Pending approval of 40G SMF Objective / Critters by 802.3WG, the 802.3ba Task Force approves the informal communication response (with editorial license granted to the Chair or his appointed agent) in ganga_04_0308.pdf

Moved by: Steve Trowbridge
Second by: Pete Anslow

Procedural (>50%)

Results: Approved by voice vote without opposition

Motion Passes

Chair discussed how the project has changed with adoption of the 40 GbE SMF objectives and how it impacts the timeline. The Chair stated that he would be weighing future presentations based on the number of supporters and how well they move the Task Force forward.

Motion #7: Move for adoption of timeline in agenda_01_0308.pdf (as modified during the meeting).

Moved by: Howard Frazier
Second by: Jeff Lynch

Technical ($\geq 75\%$)

Results:

- o Yes – 83
- o No – 0
- o Abstain - 25

Motion Passes

Straw Poll #4: New Attendees:

- a. How many new attendees are attending the March 802.3ba Task Force meeting? 25
- b. How many new people plan to continue attending 802.3ba Task Force meetings? 21
- c. Do any new attendees plan to attend other 802.3 TF meetings? 2

Straw Poll #5: May Interim in Munich:

- a. How many people plan to attend the May Interim in Munich (Monday, May 12th through Friday, May 16th, 2008)? 73
- b. How many may attend? 16
- c. How many will not attend? 19

Straw Poll #6: July Plenary in Denver, CO:

- a. How many people plan to attend the July Plenary in Denver, CO? 105
- b. How many may attend? 10
- c. How many will not attend? 0

Straw Poll #7: September Interim in Chengdu, China:

- a. How many people plan to attend the September Interim in Chengdu, China? 39
- b. How many may attend? 40
- c. How many will not attend? 30

Future Meetings:

May 2008 Interim

- Hosted by Linear Technology
- May 12 – 16
- Munich, Germany

July 2008 Plenary

- July 14 – 18
- Hyatt Regency Denver at the Colorado Convention Center
- Denver, CO, USA

Sept 2008 Interim

- Hosted by Huawei
- Sept 15 - 19
- ChengDu, China

Nov 2008 Plenary

- Nov 10 – 13
- Hyatt Regency Dallas at Reunion
- Dallas, Tx, USA

Motion to adjourn – moved by Thananya Baldwin; 2nd by Ilango Ganga. Motion approved by voice vote without objection.

Meeting adjourns at 11:59 AM on Thursday, March 20, 2008

			Track 1	Track 2		
			Optics	Copper		
IEEE 802.3ba Attendance Sheet			3/18/2008	3/19/2008	3/19/2008	3/20/2008
Last Name	First Name	Affiliation	Tues	Weds	Weds	Thurs
Abbas	Ghani	Ericsson, UK	X	X		X
Abbott	John	Corning	X	X		X
Abbott	Justin	Genum	X	X		X
Akasaka	Youichi	Fujitsu Labs	X	X		
Alping	Arne	Ericsson AB	X	X		X
Anslow	Pete	Nortel	X	X		X
Baldwin	Thananya	Ixia	X	X		X
Bandyopadhyay	Jaya	Juniper Networks	X	X		X
Barbieri	Alessandro	Cisco	X	X		X
Baumer	Howard	Mobius Semiconductor	X		X	
Belopolsky	Yakov	BEL			X	
Braun	Ralf-Peter	Deutsche Telekom, T-Systems	X	X		X
Braund	Ken	Meritec	X		X	
Breuer	Dirk	Deutsche Telekom, T-Systems	X	X		X
Cady	Ed	MERITEC	X		X	
Caldwell	Maurice	Broadcom	X	X		X
Carroll	Martin	Verizon	X	X		X
Carter	Adam	Cisco	X	X		X
Chalupsky	David	Intel			X	
Chang	Frank	Vitesse	X	X		X
Chen	Jian	Institute for Infocomm Research	X	X		X
Cheung	Taesik	ETRI				X
Cobb	Terry	Systimax		X		
Cole	Chris	Finisar	X	X		
Coleman	Doug	Corning	X	X		X
Congdon	Herb	Tyco Electronics	X	X		X
D'Ambrosia	John	Force 10 Networks	X	X		X
Dawe	Piers	Avago Technologies	X	X		X
Di Minico	Christopher	MC Communications/LEONI	X		X	
Dineen	Thomas	Self	X	X		X
Dudek	Mike	JDSU	X	X		X
Dupuis	Mark	Madison Cable			X	
Ellebracht	Ed	Mindspeed	X	X		X
Erickson	Chris	Gore Associates			X	
Estes	Dave	UNH - IOL	X			X
Ewen	John	IBM	X	X		X

Fiere	Julien	Merge Optics	X	X		X
Flatman	Alan	LAN Technologies	X	X		X
Folkens	Norbert	JDSU	X	X		X
Frazier	Howard	Broadcom	X			X
Frishkorn	Eric	Tyco Electronics		X		X
Ganga	Ilango	Intel	X		X	X
Giannakopoulos	Dimitris	AMCC	X	X		X
Granger	Russ	US Conec	X	X		X
Green	Larry	Ixia	X	X		X
Gustlin	Mark	Cisco	X	X		X
Hankins	Greg	Force 10 Networks	X	X		X
Helster	David	Tyco Electronics	X	X	X	X
Hiramoto	Kiyo	Opnext Japan	X	X		X
Hornbuckle	Craig	Sierra Monolithics	X	X		X
Horner	Rita	Avago Technologies	X	X	X	X
Hronik	Stan	IDT	X	X		X
Ishibe	Kazuhiko	Anristu	X	X		
Ishida	Osamu	NTT	X	X		
Isono	Hideki	Fujitsu Ltd.	X	X		
Jaeger	John	Infinera	X	X		X
Jewell	Jack	JDSU	X	X		X
Jiang	Wenbin	Consulting for Huawei	X	X		X
Jimenez	Andrew	Anixter Inc.	X			
Kamanishi	Tetsuya	NICT	X	X		
Kawatsu	Yasuaki	Hitachi-Cable	X	X		X
Keck	Steven	Stratalight	X	X		
Kevern	James	Tyco Electronics	X	X		X
Kimmitt	Myles	Emulex	X			
Kobayashi	Shoukei	NTT	X	X		X
Kojima	Keisuke	Mitsubishi Electric Res. Lab	X	X		X
Kolesar	Paul	CommScope	X	X		X
Kropp	Joerg	V.I. Systems GMBH	X	X		X
Kumamoto	Tadashi	Fujistu Component America	X			
Latchman	Ryan	Gennum	X	X	X	X
Li	David	Ligent		X		
Lingle, Jr.	Robert	OFS	X	X		
Lott	James	V.I. Systems GMBH	X	X		X
Louie	John	Broadcom	X	X		X
Lynch	Jeffrey	IBM				X
Macek	Michael	NIX.CXX.S.P.U	X	X		
MacKillop	William	Cinch	X		X	X
Maki	Jeffery	Juniper Networks	X	X		X
Martin	Arlon	Kotura	X	X		X
Mashimo	Daisuke	Hitachi				X
McClay	Phil	Zarlink Semiconductor	X	X		X

McDonough	John	NEC America	X	X		X
McSorley	Greg	Amphenol	X		X	X
Mei	Richard	Commscope	X	X		X
Mellitz	Richard	Intel	X		X	X
Meyer	Jeffrey	Centellax	X	X		X
Miao	Tremont	Analog Devices Inc.	X	X		X
Miyazawa	Hidzo	Fujistu Component	X			
Mori	Kazuyuki	Fujitsu Labs	X	X		
Muller	Shimon	Sun	X			
Murano	Adam	Ortronics / Legrand	X	X		X
Muscat	Angela	Force 10 Networks	X	X		X
Nebeling	Marcus	Fiber Network Engineering	X	X		
Neer	Jay	Molex	X		X	X
Nicholl	Gary	Cisco	X	X		X
Nishimura	Takeshi	Yamaichi Electronics		X		
Nordin	Ron	Panduit Corp.	X		X	
Nowell	Mark	Cisco	X	X		X
Obara	Satoshi	Fujitsu				X
Ofelt	David	Juniper Networks	X	X		X
Oganessyan	Gourgen	Quellan	X		X	X
Omathuna	Padraig	Gigoptix	X	X		X
Oulundsen	George	OFS	X			X
Palkert	Tom	Xilinx, Luxtera	X	X		X
Patel	Pravin	IBM	X	X		X
Patel	Shashi	Foundry Networks	X	X		X
Pavlovsky	Alex	Finisar	X	X		X
Pepper	Gerald	Ixia	X	X		X
Petrilla	John	Avago Technologies	X	X		X
Piede	Dave	Lightwire	X	X		X
Pillai	Velu	Broadcom	X	X		
Pimpinella	Rick	Panduit Corp.	X	X		
Pytel	Steve	Ansoft			X	
Quast	Holger	V.I. Systems GMBH	X	X		X
Rabinovich	Rick	T-Packets	X	X		X
Ressl	Mike	Hitachi Cable America		X		X
Ring	Bill	WSR Optical Device Soln's rep OIDA	X			
Rosengel	Gady	Corrigent		X		
Ryan	Bill	Foundry Networks	X	X		X
Sambasivan	Sam	AT&T	X	X		X
Sawdy	John	Meritec	X		X	
Sayer	Adam	UNH - IOL				X
Sayre	Edward	NESA	X			X
Schrans	Thomas	Santur	X	X		X
Sendelbaugh	Lee	IBM	X	X		
Shafai	Farhard	Sarance	X	X		X

Shigematsu	Masayuki	Innovation Core SEI, Inc.	X	X		X
Shimada	Shusaku	Yokogawa Co.				X
Shishikura	Masato	Opnext	X	X		X
Simsarian	Jesse	Alcatel-Lucent	X	X		X
Song	Steve	Excelight	X	X		X
Sparrowhawk	Bryan	Leviton		X		
Steenman	Henk	AMS-1X	X	X		X
Stook	Christopher	Avanex	X	X		X
Storaasli	Olaf	Draka Comteq	X	X		X
Strong	Stephen	Juniper Networks	X	X	X	X
Swanson	Steve	Corning	X	X		X
Tajima	Akio	NEC Corporation		X		
Takahashi	Hidenori	KDDI R&D Laboratories Inc.	X	X		X
Takashi	Arita	Fujitsu Component LTD.			X	
Takatori	Hinoshi	PhyCore Tech	X	X		X
Tanaka	Bert	Woven Systems	X	X		
Tavana	Sodry	Egenera Inc.	X			X
Tawa	Katsuhisa	Sumitomo Electric	X	X		X
Thiagarajan	Sashi	Ciena	X	X		X
Thornton	Bob	Fujitsu Component America	X		X	
Timmins	Ian	SMP Data Communications			X	
Toyoda	Hidehiro	Hitachi	X	X		X
Traverso	Matt	Opnext	X	X		X
Trowbridge	Steve	Alcatel-Lucent	X	X		X
Tsumura	Eddie	Excelight	X	X		X
Urricariet	Christian	Finisar	X	X		X
Vaden	Sterling	SMP			X	
Vanderlaan	Paul	Nexans	X	X		X
Vareljian	Albert	Altera Corp.	X	X		X
Veatch	Anthony	Siemon Company	X		X	
Wachsman	John	JASZ / Finisar	X	X		X
Wang	Chen Xi	Commscope		X		X
Wang	Zhongfeng	Broadcom	X	X		X
Weil	Jason	Cox Comm.	X	X		
Weitzner	Andy	Marvell	X	X	X	
Wertz	Jason	Sandia National Laboratories	X	X		X
White	Martin	Marvell Semiconductor	X	X		X
Wiren	Perera	Plato Networks			X	
Wise	Jeffrey	Emerson	X	X	X	X
Wong	Zhi	Altera Corp	X	X		X
Woodward	Ted	Telcordia	X	X		X
Yang	Frank	Commscope				X
Younce	Rick	Tellabs	X	X		X
Young	George	AT&T	X	X		X
Zhong	Charlie	LSI	X	X		X