

Approved Minutes
IEEE 802.3ba Task Force
July 15-17, 2008
Denver, CO

Prepared by: George Oulundsen

Meeting convened at 8:05 am, Tuesday, July 15, 2008.

Agenda & General Information

By – John D'Ambrosia

See – agenda_01_0708.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 without permission.
- Adam Healey described the sign-in process for both the “Red” and “Blue” books. He also described the new on-line electronic attendance procedure. See the following link for instructions on how to use the electronic attendance tool – http://ieee802.org/3/minutes/jul08/0708_attendance_tool.pdf.
- Chair went through his introduction presentation – agenda_01_0708.pdf
- Motion to approve the agenda
 - Motion moved to accept the agenda by Thananya Baldwin, 2nd by Steve Trowbridge.
 - Meeting agenda was approved by voice vote without objection.
- Motion to approve the May Interim minutes
 - Motion moved to accept minutes by Pete Anslow, 2nd by Mark Gustlin, with following changes:
 - Attendance record for Dirk Breuer and David Law;
 - Editors report presentation link corrected from “ganga_04_0508.pdf” to “ganga_02_0508.pdf”;
 - Corrected discussion around Straw Poll #14 to reflect the intent of the discussion regarding that “the Chair believed that Distinct Identity would not be a problem”; not that “there would not be a problem with Distinct Identity”.
 - May Interim Meeting Minutes were approved by voice vote without objection.
- Ground Rules
- IEEE Structure, Bylaws & Rules
- IEEE Patent Policy
 - Chair read and presented the IEEE Patent Policy slide set
 - 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.
- Inappropriate Topics for IEEE meetings read to the body by Chair.
- Goals for this meeting
 - Progress towards generating D1.0
 - Hear Proposals
 - Hear Technical Presentations
 - Review liaisons
 - Lay groundwork for the next meeting.
- Presented Task Force Schedule and Timeline, and items to be addressed this week.
- Presented list of presentations and some rules to keep us on-time
 - Chair received a new proposal by Piers Dawe called “dawe_01_0708.pdf”. This is a new proposal and per the adopted task force schedule, all new proposals were to be presented at the last meeting. The Chair asked if there were any objections to hearing “dawe_01_0708.pdf”. There were no objections.
 - Chair also received a late request for a presentation, “balasubramanian_01_0708”. Due to time constraints, it was thought that there would not be enough time for another presentation, but the Chair is willing to fit it in, if there is time. The Chair asked if there were any objections to adding the presentation to Wednesday’s afternoon schedule if time permits. There were no objections.
 - Chair asked that everyone be succinct in their presentations and comments. If necessary, the Chair will define the time limit for discussion.
- The Chair discussed May Interim Task Force amended Motion #8. In regards to this motion, the Chair asked Steve Trowbridge to draft a response liaison statement to the ITU-T SG15.
- The Chair asked Joel Goergen to draft a response informal communication to the OIF, regarding the liaison sent to the Task Force in May, for consideration by the Task Force, pending adoption of a baseline proposal for XLAUI / CAUI and the PMD Service Interface.
- Chair reminded everyone of their responsibilities to maintain their 802.3 voting rights.
- Chair reminded everyone to declare his or her affiliation.

Presentation #1 (Editorial Update)

Title – Chief Editor’s Report
 By – Mark Gustlin, Cisco Systems
 See – gustlin_01_0708.pdf

Discussion

- Clarifying questions were asked and answered.

Presentation #2

Title – T.11 Liaison
By – Mike Dudek, JDSU
See – dudek_01_0708.pdf

Discussion

- Clarifying questions were asked and answered.

Presentation #3

Title – Statistical Eye Ad Hoc
By – Piers Dawe, Avago
See – dawe_04_0708.pdf

Discussion

- Clarifying questions were asked and answered.
- Clarifying comments will be added to the presentation and the updated presentation will be sent to the Chair and uploaded to the website.

Presentation #4

Title – Extended Reach over Parallel Fiber Ad Hoc
By – John Petrilla, Avago
See – petrilla_02_0708.pdf

Discussion

- Clarifying questions were asked and answered.

Presentation #5

Title – OM4 standardization update
By – Paul Kolesar, Systimax
See – kolesar_01_0708.pdf

Discussion – None

Break at 9:43 AM

Reconvened at 10:00 AM

Presentation #6

Title – Miscellaneous PCS Issues
By – Mark Gustlin, Cisco Systems
See – gustlin_02_0708.pdf

Discussion

- Clarification questions were asked and answered.

Presentation #7

Title – 40/100 GbE PCS/PMA Testing
By – Mark Gustlin, Cisco Systems
See – gustlin_03_0708.pdf

Discussion

- Clarifying questions were asked and answered.

Presentation #8

Title – 100//40 GbE PMA Proposal
By – Steve Trowbridge, Alcatel-Lucent
See – trowbridge_01_0708.pdf

Discussion

- Clarifying questions were asked and answered.

Presentation #9

Title – FEC Update
By – Piers Dawe, Avago
See – dawe_02_0708.pdf

Discussion

- Clarifying questions were asked and answered.

Lunch Break at 11:58 AM

Reconvened at 1:00 PM

Chair noted that he had previously received a request to correct the attendance of Luc Duplessis for the May Interim meeting, which had been left off the correction to the minutes earlier in the day. The Chair asked if there was any opposition to adding Luc Duplessis to the list of attendance corrections for the May minutes. No opposition was voiced.

Presentation #10

Title – Clause 74 FEC and MLD interactions
By – Magesh Valliappan, Broadcom
See – valliappan_01_0708.pdf

Discussion

- Clarifying questions were asked and answered.

Presentation #11

Title – OTN Support - OAM Signaling
By – Ralf-Peter Bruan, T-Systems
See – braun_01_0708.pdf

Discussion

- Clarifying questions were asked and answered.

Presentation #12

Title – 100GE/40GE skew budget for MLD
By – Dimitris Giannakopoulos, AMCC
See – giannakopoulos_01_0708.pdf

Discussion

- Clarifying questions were asked and answered.

Presentation #13

Title – Distance requirements for XLAUI/CAUI and PMD Service Interfaces
By – Gary Nicholl, Cisco Systems
See – nicholl_01_0708.pdf

Discussion

- Clarifying questions were asked and answered.

Presentation #14

Title – XLAUI/CAUI Electrical Specification
By – Ali Ghiasi, Broadcom
See – ghiasi_01_0708.pdf

Discussion

- Clarifying questions were asked and answered.

Break at 3:15 PM

Reconvened at 3:30 PM

Presentation #15

Title – XLAUI / CAUI Measured Results
By – Ryan Latchman, Gennum
See – latchman_01_0708.pdf

Discussion

- Clarifying questions were asked and answered.

Presentation #16

Title – PMD Clocking Discussion
By – Matt Traverso, Opnext
See – traverso_01_0708.pdf

Discussion

- Clarifying questions were asked and answered.

Presentation #17

Title – 40GBASE-SR4 & 100gBASE-SR10: PMD Service Interface Update
By – John Petrilla, Avago
See – petrilla_01_0708.pdf

Discussion

- Clarifying questions were asked and answered.

Chair stated that we are behind schedule and that he sees no way for us to have time at the end of today for discussion and/or Straw Polls. He asked how many TF members would and would not be willing to start at 7:30 AM tomorrow. The majority said that they would be willing to start at 7:30 AM tomorrow. The Chair decided to start at 7:30 AM on Wednesday, July 16, 2008.

Presentation #18

Title – Compatibility of Different Port Types at a Big IC
By – Piers Dawe, Avago
See – dawe_03_0708.pdf

Discussion

- Clarifying questions were asked and answered.

Presentation #19

Title – 40G/100G Implementations with 10G FPGA
By – Mike Li, Altera
See – li_01_0708.pdf

Discussion

- Clarifying questions were asked and answered.

Presentation #20

Title – 802.3ba copper cable assembly baseline proposal
By – Chris DiMinico, MC
See – diminico_01_0708.pdf

Discussion

- Clarifying questions were asked and answered.

Presentation #21

Title – SFF-8470 (CX4) / Copper Concepts for 802.3ba
By – Bob Thornton, Fujitsu
See – thornton_01_0708.pdf

Discussion

- Clarifying questions were asked and answered.

Presentations ended at 5:35 PM.

The Chair thought we had time for one Straw Poll.

Mark Gustlin and Steve Trowbridge offered the following Straw Poll.

Straw Poll #1: Are you ready to adopt the PMA baseline proposal as defined in “trowbridge_01_0708.pdf” on pages 5-15, and as verbally discussed, this week?

Yes: 118

No: 1

Abstain: 31

Meeting breaks for the day at 5:55 PM

Meeting reconvenes at 7:30 AM, Wednesday, July 16, 2008.

Chair began the meeting by reviewing the IEEE patent policy. He showed the patent slides. The Chair called for patents and no one came forward with any patents.

The first half-hour this morning was dedicated to Straw Polls. The following Straw Polls were taken.

Straw Poll #2: Are you ready to adopt ghiasi_01_0708.pdf pages 17, 18, 19, 20, and 29 as the baseline proposal for the XLAU/CAUI Electrical Interface with the following addition: All links are AC Coupled with maximum single ended voltage difference from -0.3V to 4.0V.

Submitted by: Joel Goergen and Ali Ghiasi

Yes: 103

No: 0

Abstain: 27

Straw Poll #3: Is the task force ready to adopt the PMD service interface proposal for SR4 and SR10 as defined in petrilla_01_0708, 'The specification approach as outlined in the tables in pages 24 & 25, and associated templates in pages 22, 26, 27 & 28'.

Submitted by: John Petrilla

Yes: 80

No: 0

Abstain: 44

Straw Poll #4: Are you ready, this week, to adopt the 802.3ba copper cable assembly baseline proposal in diminico_01_0708 with the additional consideration of specifying the PCB loss between the transmit function and TP1 and the PCB loss between the receiver function block and TP4 in Figure xx-x.

Submitted by: Chris Diminico

Yes: 38

No: 19

Abstain: 83

Presentation #22

Title – Comparison of options for 40 Gb/s PMD for 10 km duplex SMF and recommendations

By – Piers Dawe, Avago

See – dawe_01_0708.pdf

Discussion

- Clarifying questions were asked and answered.

Presentation #23

Title – 40GbE Serial for the 10km SMF objective

By – Matt Traverso, Opnext

See – traverso_02_0708.pdf

Discussion

- The presentation has been updated with more supporters and grammatical corrections. The presenter will send the updated presentation to the Chair and it will be posted to the website.
- Clarifying questions were asked and answered.

Break at 9:25 AM
Reconvened at 9:40 AM

Presentation #24

Title – 40GBASE-LR4 Specification Proposal
By – Chris Cole, Finisar
See – cole_03_0708.pdf

Discussion

- Clarifying questions were asked and answered.

Presentation #25

Title – 40GE 10km SMF PMD Alternatives Historical Cost Comparison
By – Chris Cole, Finisar
See – cole_04_0708.pdf

Discussion

- Clarifying questions were asked and answered.

Presentation #26

Title – Comparison of 4x10G vs Serial 40G
By – Ali Ghiasi, Broadcom
See – ghiasi_02_0708.pdf

Discussion

- Clarifying questions were asked and answered.

Presentation #27

Title – 10km SMF 40GbE PMD Analysis
By – Ryan Latchman, Gennum
See – latchman_02_0708.pdf

Discussion

- Clarifying questions were asked and answered.

Presentation #28

Title – 40Gb Ethernet-SMF: Choice of 4x10Gb or Serial
By – Paul Gavrilovic, Cisco Systems
See – gavrilovic_01_0708.pdf

Discussion

- The presentation has been updated with more supporters. The presenter will send the updated presentation to the Chair and it will be posted to the website.
- Clarifying questions were asked and answered.

The Chair recommended that we have limited discussion to help make sure we have time for Straw Polls.

After some discussion the following Straw Polls were taken.

Straw Poll #5: Submitted by: Piers Dawe, Chris Cole and Matt Traverso (Chicago Rules)

Is the Task Force ready to adopt a solution this week based on:

- A. 2x20 as in dawe_01_0708.pdf
- B. 4x10 as in cole_03_0708.pdf
- C. 40 G-Serial as in traverso_02_0708.pdf
- D. Need more information
- E. Will not make a decision

Results:

- A - 32
- B - 83
- C - 41
- D - 10
- E - 10

Straw Poll #6: Submitted by: Piers Dawe, Chris Cole and Matt Traverso

Is the Task Force ready to adopt a solution this week based on:

- A. 4x10 as in cole_03_0708.pdf
- B. 40 G-Serial as in traverso_02_0708.pdf
- C. Need more information
- D. Will not make a decision

Results:

- A - 79
- B - 41
- C - 12
- D - 9

Lunch Break at 11:59 AM

Reconvened at 1:00 PM

The Chair received a request for a late presentation by Pete Anslow, which summarized off-line discussions regarding Isono_01_0708 and cole_01_0708. The Chair asked if there were any objections to allowing this presentation. There were no objections. The presentation will be permitted and will be uploaded to the website as "anslow_01_0708.pdf". To help catch up some time, the Chair asked the Task Force if one Q&A session could be held after hearing Isono_01_0708, cole_01_0708, and Anslow_01_0708.

Presentation #29

Title – Compact Optical Multiplexers for LAN WDM
By – Thomas Paatzsch, Cube Optics
See – paatzsch_01_0708.pdf

Discussion - None

Presentation #30

Title – TDP estimation for 100GBASE-LR4
By – Hideki Isono, Fujitsu
See – isono_01_0708.pdf

Discussion

- Clarifying questions were asked and answered.

Presentation #31

Title – Update to Adopted 100GE 10km SMF PMD Baseline
By – Chris Cole, Finisar
See – cole_01_0708.pdf

Discussion

- Clarifying questions were asked and answered.

Presentation #32

Title – 100GBASE-xR4 Discussion
By – Pete Anslow, Nortel
See – anslow_01_0708.pdf

Discussion

- Clarifying questions were asked and answered.

Presentation #33

Title – Update to Adopted 100GE 40km SMF PMD Baseline
By – Chris Cole, Finisar
See – cole_02_0708.pdf

Discussion - None

Presentation #34

Title – 100GE 40km SMF PMD SOA-Receiver Performance
By – Yuri Vandyshchev, Finisar
See – vandyshchev_01_0708.pdf

Discussion - None

Presentation #35

Title – 40Gbit/s Transmission on OM3 Duplex fiber
By – Joerg Kropp, VI Systems
See – kropp_01_0708.pdf

Discussion

- The presenter mentioned during his presentation that he had a new slide that he would like to show. He asked the Chair if it was ok. The Chair asked the Task Force if there was any objection to allowing the new slide. There was no objection.
- Clarifying questions were asked and answered.

Presentation #36

Title – Extended Link Lengths on MMF
By – John Abbott, Corning
See – abbott_01_0708.pdf

Discussion

- Clarifying questions were asked and answered.

Presentation #37

Title – Specifications for a linear system with 10G per lane to achieve 250m on OM3
By – Mike Dudek, JDSU
See – dudek_02_0708.pdf

Discussion

- The presenter asked if he could show a new additional slide. The Chair asked the Task Force if there was any objection to seeing the new data. There were no objections. The updated presentation will be sent to the Chair and it will be uploaded to the website.
- Clarifying questions were asked and answered.

Presentation #38

Title – Update on IEEE P802.3az Energy Efficient Ethernet
By – Mike Bennett, LBNL
See – bennett_03_0708.pdf

Discussion

- Clarifying questions were asked and answered.

Straw Poll #7: Submitted by: Holger Quast, and Joerg Kropp

- A. I would support:
Adopting the following objective: "Provide Physical Layer specifications which support 40 Gb/s operation over at east 100m on dual OM3 MMF"
- B. Continued development of a dual fiber based Standard outside of 802.3ba for short reach MMF 40GbE
- C. I need more information
- D. I will abstain now and later
- E. No dual MMF solution is needed

Results:

- A - 24
- B - 52
- C - 9
- D - 34
- E - 16

Discussion led by Alessandro Barbieri, Co-Chair of Extended Reach MMF Ad Hoc, regarding informal discussions about Extended Reach over Parallel MMF proposal.

Meeting breaks for the day at 5:40 PM

Meeting reconvenes at 8:06 AM, Thursday, July 17, 2008.

Chair began the meeting by reviewing the IEEE patent policy. He showed the patent slides. The Chair called for patents and no one came forward with any patents.

Chair discussed the importance of coming to consensus, getting motions passed, and working towards draft 1.0, in order to maintain the adopted schedule.

Discussion and Motions:

Motion #1: Move to adopt slides 9 to 11 of “anslow_01_0708.pdf” as the baseline proposal for the 100GE 10km SMF PMD in place of “cole_01_0508.pdf”.

Moved by: Pete Anslow
Second by: Hideki Isono

Technical ($\geq 75\%$)

Results:

Task Force

Yes: 116

No: 0

Abstain: 8

802.3 voters:

Yes: 61

No: 0

Abstain: 3

Motion Passes

Motion #2: Move to adopt the proposals in “cole_02_0708.pdf” as the baseline proposal for the 100GE 40km SMF PMD in place of “cole_02_0508.pdf”.

Moved by: Chris Cole
Second by: Pete Anslow

Technical ($\geq 75\%$)

Results:

Task Force

Yes: 121

No: 0

Abstain: 11

802.3 voters:

Yes: 68

No: 0

Abstain: 4

Motion Passes

Motion #3: Move to adopt the PMA baseline proposal described in slides 5-15 of “trowbridge_01_0708.pdf” for the first draft of 802.3ba with the following amendments:

- Remove the word “logical” from the PMD service interface on slides 5 and 6.
- Remove the word “abstract” from the PMD service interface on slide 10 and 13.
- Replace “clock source” with “clock information” on slides 10, 12, 13, 14.

Moved by: Steve Trowbridge
Second by: Mark Gustlin

Technical ($\geq 75\%$)

Results:

Task Force

Yes: 119

No: 0

Abstain: 17

802.3 voters:

Yes: 62

No: 0

Abstain: 6

Motion Passes

Motion #4: Adopt ghiasi_01_0708.pdf pages 17, 18, 19, 20, and 29 as the baseline proposal for the XLAUI/CAUI Electrical Interface with the following addition: All links are AC Coupled with maximum single ended voltage difference from -0.3V to 4.0V.

Moved by: Joel Goergen
Second by: Ali Ghiasi

Technical ($\geq 75\%$)

Results:

Task Force

Yes: 121

No: 0

Abstain: 13

802.3 voters:

Yes: 63

No: 0

Abstain: 6

Motion Passes

Motion #5: Move to adopt the PMD service interface proposal for 40GBASE-SR4 and 100GBASE-SR10 as defined in petrilla_01_0708 pages 24 & 25 with the following additions: 1) Use associated templates in pages 26, 27 & 28, and 2) use the template in page 22 with limit characteristics using 802.3ap KR channel equations (coefficients TBD) referencing nicholl_01_0708 for guidance.

Moved by: John Petrilla
Second by: Joel Goergen

Technical ($\geq 75\%$)

Results:

Task Force

Yes: 129

No: 0

Abstain: 16

802.3 voters:

Yes: 72

No: 0

Abstain: 5

Motion Passes

Motion #6: Move to adopt "diminico_01_0708.pdf" as the baseline for 40GBASE-CR4 and 100GBASE-CR10 with the revision to bullet 2 slide 19 in "diminico_02_0708.pdf".

Moved by: Dan Dove
Second by: Shimon Muller

Technical ($\geq 75\%$)

Results:

Task Force

Yes: 107

No: 7

Abstain: 33

802.3 voters:

Yes: 69

No: 6

Abstain: 16

Motion Passes

Motion #7: Move to amend Motion #6:

Move to adopt “diminico_01_0708.pdf” as the baseline for 40GBASE-CR4 and 100GBASE-CR10 with the revision to bullet 2 slide 19 in “diminico_02_0708.pdf” to:

Move to adopt “diminico_01_0708.pdf” as the baseline for 40GBASE-CR4 and 100GBASE-CR10 with the revision to bullet 2 slide 19 in “diminico_02_0708.pdf” but with the exclusion of all information related to specific connector types.

Moved by: Piers Dawe
Second by: Larry Green

Technical ($\geq 75\%$)

Results:

Task Force

Yes: 15

No: 52

Abstain: 74

802.3 voters:

Yes: 7

No: 27

Abstain: 45

Motion Fails

Break at 10:00 PM

Reconvened at 10:20 PM

Motion #8: Move to adopt 4x10G CWDM as per “cole_03_0708.pdf” as the baseline proposal for the 40GE 10km SMF PMD objective.

Moved by: Chris Cole
Second by: Pete Anslow

Technical ($\geq 75\%$)

Results:

Task Force

Yes: 81

No: 38

Abstain: 31

802.3 voters:

Yes: 52

No: 22

Abstain: 8

Motion Fails

Motion #9: Request that the 802.3ba editorial team create a draft based on adopted baseline proposals for circulation prior to the September 2008 interim meeting.

Moved by: Hugh Barrass
Second by: Matt Traverso

Technical ($\geq 75\%$)

Results:

Task Force

Yes: 150

No: 0

Abstain: 1

802.3 voters:

Yes: 80

No: 0

Abstain: 0

Motion Passes

The Chair asked Steve Trowbridge to present his draft liaison response to ITU-T SG15. The draft statement can be found in [trowbridge_02_0708.pdf](#).

Motion #10: Move that the 802.3ba Task Force approve the liaison statement to the ITU-T SG15 in "[trowbridge_02_0708.pdf](#)".

Moved by: Steve Trowbridge
Second by: Pete Anslow

Technical ($\geq 75\%$)

Results:

Task Force

Yes: 121

No: 0

Abstain: 8

802.3 voters:

Yes: 69

No: 0

Abstain: 5

Motion Passes

The Chair asked Joel Goergen to present his draft informal communication response to the OIF. The draft statement can be found in "goergen_01_0708.pdf".

Motion #11: Move that 802.3ba approve the text in goergen_01_0708.pdf with editorial license granted to the Chair (or his appointed agent) as an informal communication by the Chair to the OIF.

Moved by: Joel Goergen
Second by: Mark Gustlin

Procedural ($\geq 50\%$)

Results:

Motion passes by voice vote

The Chair requested the following Straw Polls.

Straw Poll #8: I will be attending the IEEE P802.3ba September Interim?

Yes – 64
No – 25
Maybe - 43

Straw Poll #9: I will be attending the 802.3ba Task Force meetings at the IEEE 802 November Plenary?

Yes – 108
No – 6
Maybe - 23

Straw Poll #10: At future TF meetings, I will be participating in the following:

A. Copper Sub-TF

- a) Cu assembly: 31
- b) Backplane: 31
- c) Both: 28

B. Optics Sub-TF

- a) SMF: 65
- b) MMF: 58
- c) Both: 55

C. Logic Sub-TF: 47

D. XLAUI/CAUI and PMD service interface: 57

Total present: 159

Future Meetings:

Sept 2008 Interim

- Sept. 15 – 19
- Hosted by LG/Nortel
- Seoul, Korea

Nov 2008 Plenary

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

Jan 2009 Interim

- Dates TBD
- Hotel TBD
- New Orleans, LA, USA

Motion to adjourn - moved by Steve Trowbridge; 2nd by Thomas Dineen. Motion approved by voice vote without objection.

Meeting adjourns at 12:03 PM on Thursday, July 17, 2008.

Attendee List:

IEEE 802.3ba Attendance Sheet - Plenary Meeting, July 14-18, Denver, CO			7/15/2008	7/16/2008	7/17/2008
Last Name	First Name	Affiliation	Tues	Weds	Thurs
Abbas	Ghani	Ericsson, UK	X	X	
Abbott	John	Corning	X	X	X
Aherne	Thomas	JDSU	X	X	X
Alie	Stephen	Cortina Systems	X	X	X
Alping	Arne	Ericsson AB	X	X	X
Alush	Yehuda	Nokia Siemens Networks	X	X	
Anslow	Pete	Nortel	X	X	X
Balasubramanian	Vittal	FCI	X	X	X
Baldwin	Thananya	Ixia	X	X	
Bandyopadhyay	Jaya	Juniper Networks	X	X	X
Barbieri	Alessandro	Cisco	X	X	X
Barnette	Jim	Vitesse	X	X	X
Barrass	Hugh	Cisco			X
Bois	Sharon	Corning	X	X	X
Braun	Ralf-Peter	Deutsche Telekom, T-Systems	X	X	X
Breuer	Dirk	Deutsche Telekom, T-Systems		X	X
Budd	Lloyd	Nexans		X	X
Caggioni	Francesco	AMCC	X	X	X
Caldwell	Maurice	Broadcom	X	X	
Chalupsky	David	Intel	X	X	X

Chang	Frank	Vitesse	X		X
Chen	Jian	Institute for Infocomm Research	X	X	X
Chung	Hwan-Seok	ETRI	X	X	X
Cobb	Terry	Systimax			X
Cole	Chris	Finisar	X	X	X
Coleman	Doug	Corning	X	X	X
Congdon	Herb	Tyco Electronics	X		X
Cook	Charles	Qwest		X	
Dallesasse	John	Emcore Corp.	X		X
D'Ambrosia	John	Force 10 Networks	X	X	X
Dawe	Piers	Avago Technologies	X	X	X
Dikken	Frank	Spirent Communications	X	X	X
DiMinico	Christopher	MC Communications/LEONI	X		X
Dineen	Thomas	Self	X		
Dove	Dan	DoveNetworking - Procurve by HP			X
Drolet	Patrick	EXFO		X	X
Dudek	Mike	JDSU	X	X	X
Duplessis	Luc	EXFO	X	X	X
Ellebracht	Ed	Mindspeed	X	X	X
Enteshori	Ali	Penn State	X		
Estes	Dave	UNH - IOL	X	X	X
Ewen	John	IBM	X	X	X
Filip	Jan	Maxim Integrated Products Inc.		X	
Firoozmand	Farzin	SMI			X
Flatman	Alan	LAN Technologies	X	X	X
Fogg	Michael	Tyco Electronics	X		X
Folkens	Norbert	JDSU	X		X
Foster	Guy	Synthesys Research	X	X	
Frazier	Howard	Broadcom		X	
Frishkorn	Eric	Tyco Electronics	X	X	X
Fromm	Galen	Molex		X	X
Gavrilovic	Paul	Cisco	X		X
Geng	Dongyu	Huawei		X	X
Gentieu	Paul	Finisar Corp.	X	X	X
Ghiasi	Ali	Broadcom	X		X
Giannakopoulos	Dimitris	AMCC	X		X
Goergen	Joel	Force 10 Networks	X	X	X
Green	Larry	Ixia	X	X	X
Gustlin	Mark	Cisco	X	X	X
Hamidy	Farid	Pulse	X	X	X
Hammond	Bernie	ADC Telecommunications	X		
Hankins	Greg	Force 10 Networks	X	X	X
Hatano	Tadashi	Opnext Japan	X	X	X

Hays	Robert	Intel			X
Healey	Adam	LSI			X
Hiramoto	Kiyo	Opnext Japan	X	X	X
Horner	Rita	Avago Technologies	X	X	X
Hronik	Stan	IDT	X	X	X
Hughes	Mike	US Conec LTD.	X	X	X
Hunt	Leigh	Infinera	X		
Ishibe	Kazuhiko	Anristu	X	X	X
Ishida	Osamu	NTT	X	X	X
Isono	Hideki	Fujitsu Ltd.	X	X	X
Jiang	Wenbin	Consulting for Huawei	X	X	X
Jimenez	Andrew	Anixter Inc.	X	X	X
Jorgensen	Thomas	Vitesse	X	X	X
Kaku	Shineyo	Allied Telesis	X	X	
Kawatsu	Yasuaki	Hitachi-Cable	X	X	X
Kim	Seung-Hwan	ETRI	X	X	X
King	Jonathan	Finisar Corp.	X	X	X
Kipp	Scott	Brocade	X	X	
Kobayashi	Shoukei	NTT	X	X	X
Kolesar	Paul	CommScope	X	X	X
Kropp	Joerg	V.I. Systems GMBH	X	X	X
Kumamoto	Tadashi	Fujistu Component America	X	X	X
Kuo	Chien-Yu	Transillion Technologies, Inc.		X	
Latchman	Ryan	Gennum	X	X	X
Lee	Kyo Sang	ICU	X	X	X
Lee	Sang-Soo	ETRI	X	X	X
Lenkisch	Andreas	Schroff Gmbh Germany	X	X	X
Li	Mike	Altera	X	X	
Li	Jing	Huawei		X	X
Lindner	Alan	Pulse	X	X	X
Lingle, Jr.	Robert	OFS	X	X	X
Look	Chris	PMC-Sierra	X	X	
Lott	James	V.I. Systems GMBH	X	X	X
Lutz	Sharon	US Conec LTD.	X	X	X
Magee	Anthony	ADVA Optical Networking		X	X
Maki	Jeffery	Juniper Networks	X	X	X
Mariotti	Carlo	Cisco	X	X	X
Marris	Arthur	Cadence	X	X	X
Martin	Arlon	Kotura	X	X	X
McClay	Phil	Zarlink Semiconductor	X	X	X
McDonough	John	NEC America	X	X	X
McGrath	Jim	Cinch Connectors	X	X	X
McSorley	Greg	Amphenol			X

Mellitz	Richard	Intel	X	X	X
Meyer	Jeffrey	Centellax	X	X	X
Misek	Brian	Avago Technologies	X	X	
Monson	John	Inphi	X	X	X
Mooney	Paul	Spirent Communications	X	X	X
Moore	Charles	Avago Technologies	X	X	X
Moorwood	Andy	Infinera Corp	X		
Mori	Kazuyuki	Fujitsu Labs	X	X	X
Muller	Shimon	Sun	X		
Muscat	Angela	Force 10 Networks	X	X	X
Muth	Karl	Texas Instruments	X	X	
Nakamoto	Edward	Spirent Communications	X	X	X
Nicholl	Gary	Cisco	X		X
Noh	George	Vitesse Semiconductors	X	X	X
Nordin	Ron	Panduit Corp.	X	X	X
Nowell	Mark	Cisco	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
Oren	Eyal	Compass EOS	X	X	
Oulundsen	George	OFS	X	X	X
Paatzsch	Thomas	Cube Optics		X	X
Palkert	Tom	Xilinx, Luxtera		X	X
Patel	Shashi	Foundry Networks	X	X	X
Pavlovsky	Alex	Finisar			X
Peeters Weem	Jan	Aprius	X		
Pepeljugoski	Petar	IBM	X	X	X
Pepper	Gerald	Ixia	X	X	
Perera	Wiren	Plato Networks		X	X
Petrilla	John	Avago Technologies	X	X	X
Pillai	Velu	Broadcom	X		
Pimpinella	Rick	Panduit Corp.	X	X	X
Quast	Holger	V.I. Systems GMBH	X	X	X
Rabinovich	Rick	Alcatel-Lucent	X	X	X
Rausch	Dan	Avago Technologies	X	X	X
Rhee	J.-K. Kevin	ICU	X		X
Ross	Floyd	Independent Consultant	X		X
Roth	Moran	Corrington Systems	X		
Roy	Tanmoy	Extreme Networks	X	X	X
Sambasivan	Sam	AT&T	X	X	X
Sawdy	John	Meritec	X	X	X
Sayre	Edward	NESA	X		X

Schrans	Thomas	Santur	X	X	X
Searles	Shawn	Advanced Micro Devices	X		
Seely	Ted	Sprint	X	X	X
Serbay	Murat	MergeOptics	X	X	X
Shafai	Farhard	Sarance			X
Shang	Song	Sierra Monolithics	X	X	
Shigematsu	Masayuki	Innovation Core SEI, Inc.	X	X	X
Shigoyuki	Takizawa	Fujitsu Component LTD.	X		
Shin	Jong-Yoon	ETRI	X	X	X
Shinji	Shibao	Mitsubishi Electric	X	X	
Shioiri	Satomi	NEC	X	X	X
Simsarian	Jesse	Alcatel-Lucent	X	X	
Smith	Alexander	Bay Microsystems	X	X	
Southworth	Robert	Fulcrum Microsystems	X	X	X
Sparrowhawk	Bryan	Leviton	X	X	X
Stook	Christopher	Avanex	X	X	X
Storaasli	Olaf	Draka Comteq	X	X	X
Sugg	Alan	Vega Wave Systems, Inc.	X	X	
Swenson	Norm	Clariphy Communications	X	X	
Synder	Mel	Safenet	X	X	X
Szczepanek	Andre	Texas Instruments		X	X
Takahashi	Hidenori	KDDI R&D Laboratories Inc.	X	X	X
Tatum	Jim	Finisar	X	X	
Taylor	Bret	Leviton	X	X	X
Thiagarajan	Sashi	Ciena	X	X	X
Thornton	Bob	Fujistu Component America	X	X	X
Tipper	Alan	Gennum	X	X	X
Toyoda	Hidehiro	Hitachi	X	X	X
Traverso	Matt	Opnext		X	X
Trowbridge	Steve	Alcatel-Lucent	X	X	X
Tsukahara	Tomo	Hirose	X	X	
Tsumura	Eddie	Excelight	X	X	X
Umnov	Alexander	Fujitsu	X	X	X
Valliappan	Magesh	Broadcom	X		
Van Deusen	Herb	Gore Associates	X		
Vanderlaan	Paul	Nexans	X	X	X
Vandyshev	Yuri	Finisar			X
Vareljian	Albert	Altera Corp.	X	X	X
Weitzner	Andy	Marvell	X	X	X
White	Martin	Marvell Semiconductor	X	X	X
Wise	Jeffrey	Emerson Network Power EC	X	X	X
Wong	Zhi	Altera Corp	X	X	
Yao	Shing-Shwang	Mitsubishi Electric	X	X	

Yashiki	Kenichiro	NEC	X	X	X
Younce	Rick	Tellabs			X
Zivny	Pavel	Tektronix	X	X	X