IEEE 802.3 Beyond 400 Gb/s Ethernet (B400G) Study Group, May 2021 Electronic Interim Series
Unapproved Meeting Minutes, Prepared by Tom Issenhuth, John D'Ambrosia

Session called to order at 10:02 am ET (all times ET), 26 Apr 2021

Meeting called to order by John D'Ambrosia, SG Chair.

Chair showed IMAT information and asked everyone to sign-in as meeting attendance would be taken from IMAT.

Presentation #1 **Agenda and General Information**
Presenter: John D'Ambrosia
URL: https://www.ieee802.org/3/B400G/public/21_05/agenda_b400g_b_210426.pdf

Chair noted a mistake in the agenda, an updated version will be posted. Chair asked if there were any objections to the agenda, there were none, and the agenda (Slide #2) was considered approved.

Minutes - https://www.ieee802.org/3/B400G/public/21_04/minutes_b400g_b_2104_unapproved.pdf

Chair asked if there were any other corrections, there were none. The minutes were considered approved.

Chair noted that the information regarding the procedures had been sent out, and requested that individuals review the following IEEE SA policies prior to the interim meeting –

- IEEE SA Pre-PAR patent policy
- IEEE SA Copyright Policy
- IEEE SA Participation Policy

Chair showed the IEEE SA Pre-PAR Patent Policy slides.
Chair showed the IEEE SA Participation Policy slides.
Chair showed the IEEE SA Copyright Policy slides.

Chair asked if anyone needed to review the policies at that time – there were no requests to do so.

Chair asked Tom Issenhuth to chair the meeting, so he could present. Tom Issenhuth assumed chairing meeting at 10:16 am.

Presentation #2 **Study Group Timeline**
Presenter: John D'Ambrosia
URL: https://www.ieee802.org/3/B400G/public/21_05/dambrosia_b400g_01_210426.pdf

There was general discussion about the presentation.

Presentation #3 **Development of Project Documentation**
Presenter: John D'Ambrosia
URL: https://www.ieee802.org/3/B400G/public/21_05/dambrosia_b400g_02_210426.pdf

There was general discussion about the presentation.

D'Ambrosia resumed chairing meeting at 10:48 am.

Presentation #4 **Thoughts on the BER objective**
Presenter: Mark Gustlin
URL: https://www.ieee802.org/3/B400G/public/21_05/gustlin_b400g_01_210426.pdf

There was general discussion about the presentation.

Presentation #5 **FEC Architectures of B400GbE to Support BER Objective**
Presenter: Xiang He
URL: https://www.ieee802.org/3/B400G/public/21_05/he_b400g_01_210426.pdf

There was general discussion about the presentation.
Chair called a break at 11:55.

Meeting restarted at 12:00.

Chair asked if there were any objections in using the new objective formatting as shown on page 5 of https://www.ieee802.org/3/B400G/public/21_05/dambrosia_b400g_02_210426.pdf

There were none.

Straw poll #1 - BER

For the following proposed objective, I would support the following – • Support a BER of better than or equal to _____ at the MAC/PLS service interface (or the frame loss ratio equivalent)	Results
a) 10^{-13}	47
b) 10^{-14}	22
c) 10^{-15}	4
d) Better than 10^{-15}	1
e) Need more information	3
f) Abstain	10

Motion #1 – BER

Motion	**Move to adopt the following objective**: • Support a BER of better than or equal to 10 -13 at the MAC/PLS service interface (or the frame loss ratio equivalent)
M:	Mark Nowell
S:	Adee Ran
Technical (>=75%)	
All (y/n/a)	70 / 8 / 10
Results	Motion passes

Session recessed for the day @ 12:39 pm.

Session reconvened at 10:02 am ET (all times ET), 03 May 2021

Meeting called to order by John D'Ambrosia, SG Chair.

Chair noted that the information regarding the procedures had been sent out, and requested that individuals review the following IEEE SA policies prior to the interim meeting –

- IEEE SA Pre-PAR patent policy
- IEEE SA Copyright Policy
- IEEE SA Participation Policy

Chair showed the IEEE SA Pre-PAR Patent Policy slide.

Chair presented IEEE SA Participation Policy slides. Chair noted – "Participants in the IEEE-SA "individual process" shall act independently of others, including employers. By participating in standards activities using the "individual process", you are deemed to accept these requirements; if you are unable to satisfy these requirements then you shall immediately cease any participation."

Chair presented the IEEE SA Copyright Policy slides. Chair noted – "By participating in this activity, you agree to comply with the IEEE Code of Ethics, all applicable laws, and all IEEE policies and procedures including, but not limited to, the IEEE SA Copyright Policy."

Chair showed IMAT information and asked everyone to sign-in as meeting attendance would be taken from IMAT.

Presentation #6	**Status of the technical feasibility of optical 200G/lane**
Presenter	Maxim Kuscherov
URL:	https://www.ieee802.org/3/B400G/public/21_05/kuschnerov_b400g_01_210503.pdf

There was general discussion about the presentation.

Presentation #7	**On the Broad Market Potential of the 800 Gb/s 4 wavelength up to 2km on single mode fiber objective**
Presenter	Rob Stone
URL:	https://www.ieee802.org/3/B400G/public/21_05/stone_b400g_01_210503.pdf

There was general discussion about the presentation.

Presentation #8	**8x100G Objectives**
Presenter	Scott Schube
URL:	https://www.ieee802.org/3/B400G/public/21_05/schube_b400g_01_210503.pdf

There was general discussion about the presentation.

Presentation of liaison from ITU-T Study Group 15 titled "LS on OTN support of Ethernet clients beyond 400 Gb/s" by Steve Gorshe, Rapporteur Q11/15.

URL: https://www.ieee802.org/3/minutes/may21/incoming/SG15-LS314.pdf

Clarified there is no need to respond to this liaison prior to the May meeting.

Presentation #9	**Further considerations regarding OTN support for Beyond 400 Gb/s Ethernet**
Presenter	Tom Huber
URL:	https://www.ieee802.org/3/B400G/public/21_05/trowbridge_b400g_01a_210503.pdf

There was general discussion about the presentation.
It was noted that an updated presentation will be provided with additional supporters and a new reference to 10Gb LR on slide 13.

Meeting break at 12:06.

Meeting restarted at 12:15.

Straw poll #2

I would support adopting the following objective: • Define a physical layer specification that supports 800 Gb/s operation over 8 pairs of SMF with lengths up to at least 2 km	Results
a) Yes	44
b) No	13
c) Need more information	8
f) Abstain	15

The chair asked Tom Issenhuth to run the queue while he set up straw poll.

Straw poll #3

I would support adopting the following objective: • Define a physical layer specification that supports 800 Gb/s operation over 8 wavelengths over a single SMF in each direction with lengths up to at least 2 km	Results
a) Yes	25
b) No	17
c) Need more information	23
f) Abstain	14

The chair asked Tom Issenhuth to run the queue while he set up straw poll.

Straw poll #4 (Chicago Rules)

I would support adopting the following objective:	Results
a) Provide appropriate support for OTN	37
b) Provide support to enable mapping over OTN	39
c) Neither	8
d) Need More Information	12
f) Abstain	16

The chair asked Tom Issenhuth to run the queue while he set up straw poll.

Motion #2

Motion	**Move to adopt the following objective**: • Provide support to enable mapping over OTN
M:	Tom Huber
S:	Mark Nowell
Technical (>=75%)	
All (y/n/a)	55 / 5 / 13
Results	Motion passes

The chair asked Tom Issenhuth to run the queue while he set up motion.

Session recessed for the day @ 1:01 pm.

Session reconvened at 10:02 am ET (all times ET), 17 May 2021

Chair showed IMAT information and asked everyone to sign-in as meeting attendance would be taken from IMAT.

Chair noted that the information regarding the procedures had been sent out, and requested that individuals review the following IEEE SA policies prior to the interim meeting –

- IEEE SA Pre-PAR patent policy
- IEEE SA Copyright Policy
- IEEE SA Participation Policy

Chair showed the IEEE SA Pre-PAR Patent Policy slide.

Chair presented IEEE SA Participation Policy slides. Chair noted – "Participants in the IEEE-SA "individual process" shall act independently of others, including employers. By participating in standards activities using the "individual process", you are deemed to accept these requirements; if you are unable to satisfy these requirements then you shall immediately cease any participation."

Chair presented the IEEE SA Copyright Policy slides. Chair noted – "By participating in this activity, you agree to comply with the IEEE Code of Ethics, all applicable laws, and all IEEE policies and procedures including, but not limited to, the IEEE SA Copyright Policy."

Presentation #10	**LN-on-Insulator modulator Technology for B400G Application**
Presenter	Guangcan Mi
URL:	https://www.ieee802.org/3/B400G/public/21_05/mi_b400g_01a_210517.pdf

Chair noted an updated presentation will be posted as an additional slide was included in the presentation.
There was general discussion about the presentation.

Presentation #11	**Technical Feasibility of Copper Cables for 4-lane 800 Gb/s operation**
Presenter	Leesa Noujeim
URL:	https://www.ieee802.org/3/B400G/public/21_05/noujeim_b400g_01_210517.pdf

There was general discussion about the presentation.

Presentation #12	**Electrical Objective Wording**
Presenter	Kent Lusted
URL:	https://www.ieee802.org/3/B400G/public/21_05/lusted_b400g_01a_210517.pdf

An updated presentation with additional supporters will be uploaded.
There was general discussion about the presentation.

Presentation #13	**Consideration on electrical interface objectives**
Presenter	Yunchun (Louis) Lu
URL:	https://www.ieee802.org/3/B400G/public/21_05/lu_b400g_01_210517.pdf

There was general discussion about the presentation.

Straw poll #5

I would support adopting the following objective: • Support optional eight-lane 800 Gb/s attachment unit interfaces for chip-to-module and chip-to-chip applications	Results
a) Yes	74
b) No	2
c) Need more information	9
d) Abstain	15

Straw poll #6

I would support adopting the following objective: • Support optional four-lane 800 Gb/s attachment unit interfaces for chip-to-module and chip-to-chip applications	Results
a) Yes	76
b) No	0
c) Need more information	12
d) Abstain	15

Motion #3

Motion	**Move to adopt the following objectives**: • Support optional eight-lane 800 Gb/s attachment unit interfaces for chip-to-module and chip-to-chip applications • Support optional four-lane 800 Gb/s attachment unit interfaces for chip-to-module and chip-to-chip applications
M:	Kent Lusted
S:	Adam Healey
Technical (>=75%)	
All (y/n/a)	88 / 1 / 14
Results	Motion passes

Session recessed for the day @ 12:54 pm.

Session reconvened at 10:02 am ET (all times ET), 24 May 2021

Chair showed IMAT information and asked everyone to sign-in as meeting attendance would be taken from IMAT.

Chair noted that the information regarding the procedures had been sent out, and requested that individuals review the following IEEE SA policies prior to the interim meeting –

- IEEE SA Pre-PAR patent policy
- IEEE SA Copyright Policy
- IEEE SA Participation Policy

Chair showed the IEEE SA Pre-PAR Patent Policy slide.

Chair presented IEEE SA Participation Policy slides. Chair noted – "Participants in the IEEE-SA "individual process" shall act independently of others, including employers. By participating in standards activities using the "individual process", you are deemed to accept these requirements; if you are unable to satisfy these requirements then you shall immediately cease any participation."

Chair presented the IEEE SA Copyright Policy slides. Chair noted – "By participating in this activity, you agree to comply with the IEEE Code of Ethics, all applicable laws, and all IEEE policies and procedures including, but not limited to, the IEEE SA Copyright Policy."

Presentation #14	**Future DC Network Considerations**
Presenter	Brad Booth
URL:	https://www.ieee802.org/3/B400G/public/21_05/booth_b400g_01b_210524.pdf

Booth noted that his presentation included an updated supporters list. The chair asked Mr. Booth to read out any additional names as supporters who were not yet added to the presentation. Mr. Booth read out the following names: Kazuhiko Ishibe, Anritsu; Tomoo Takahara; Fujitsu; Eric Maniloff, Ciena, Sridhar Ramesh, Maxlinear. James Weaver indicated on the call that he also wanted to be added as a supporter. (Updated version noted above)

There was general discussion about the presentation. The focus on PHY was noted, given this would leave out the RS and MII. Mr. Booth noted after discussion he meant physical layer.

D'Ambrosia asked Jon Lewis to chair while he stepped away briefly. Lewis took over chairing @ around 11am
D'Ambrosia resumed chairing at 11:11 am.

Presentation #15	**Server & end point connectivity needs**
Presenter	Kent Lusted
URL:	https://www.ieee802.org/3/B400G/public/21_05/lusted_b400g_01_210524.pdf

There was general discussion about the presentation. It was noted that some servers are starting to adopt QSFP-DD / OSFP (x8) form factors, potentially for different reasons, such as breakout support, faceplate density, or air flow.

Chair asked David Law to chair the meeting, so he could present. Mr. D'Ambrosia noted he was doing this presentation as a participant in the Study Group. Mr. D'Ambrosia noted for this topic he would step down as SG chair, and act as an advocate and participate in motions and voting.

Mr. Law assumed chairing meeting at 11:55am.

Mr. D'Ambrosia noted that the presentation had been updated with new supporters. Updated version noted below.

Presentation #16	**The Case for 1.6 Terabit Ethernet**
Presenter	John D'Ambrosia
URL:	https://www.ieee802.org/3/B400G/public/21_05/dambrosia_b400g_01b_210524.pdf

There was a break after D'Ambrosia gave the presentation that started at 12:24pm and ended at 12:30pm.

There was general discussion and Q&A on the presentation.

D'Ambrosia resumed chairing meeting at 12:53 pm.

D'Ambrosia noted he had asked for feedback from SG and at 802.3 WG meeting on alternate SG meeting times and had not received any. D'Ambrosia noted he would be identifying times and announce the July session shortly.

D'Ambrosia noted the next SG meeting would be on June 3, 2021 from 10am to 1pm ET, and the agenda would be on straw polls / motions based on the May 2021 session.

Session adjourned at 12:58pm.

Meeting Attendees

Name	Employer	Affiliation	4/26/21	5/3/21	5/17/21	5/24/21
Abbott, John	Corning Incorporated	Corning Incorporated	1	1		1
Anslow, Peter	INDEPENDENT	Independent	1	1	1	1
BakroNagy, Istvan	EFFECT Photonics	#NAME?				1
Baldwin, Thananya	Keysight Technologies	Keysight Technologies	1	1	1	1
Barbero, Fernando		Knowledge Development for POF SL				1
Bernstein, Gary	Leviton Manufacturing Co.	Leviton Manufacturing Co.	1	1	1	1
Bhatt, Vipul	II-VI Incorporated	II-VI Incorporated	1	1	1	1
Bliss, Will	Broadcom Corporation	Broadcom Corporation				1
Booth, Brad	Microsoft Corporation	Microsoft Corporation	1	1	1	
bordogna, mark	Intel Corporation	Intel Corporation			1	
Brooks, Paul	Viavi solutions GmbH	Viavi Solutions		1	1	1
Brown, Matthew	Huawei Technologies Canada	Huawei Technologies Canada			1	1
Bruckman, Leon	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd			1	1
Carty, Clark	Cisco Systems, Inc.	Cisco Systems, Inc.		1	1	1
Casher, Patrick		Foxconn Interconnect Technologies (FIT)			1	
Chacon Simon, Geoffrey	Hewlett Packard Enterprise	Synopsys, Inc.		1	1	
Chang, Jacky	Hewlett Packard Enterprise	Hewlett-Packard Development Company, L.P.	1	1	1	1
Chang, Xin	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd	1	1	1	1
Chang, Yongmao	Inphi Corporation	Source Photonics	1	1	1	1
Chen, Chan	Applied Optoelectronics, Inc.	Applied Optoelectronics, Inc.		1		1
Choudhury, Golam	OFS	OFS	1	1	1	1
D'Ambrosia, John	Futurewei Technologies	Futurewei Technologies, U.S. Subsidiary of Huawei	1	1	1	1
Deandrea, John	Finisar Corporation	Finisar Corporation		1	1	1
Diminico, Christopher	M C Communications, LLC	Panduit Corp.			1	
Dube, Kathryn	UNH-IOL	UNH-IOL		1	1	1
Dudek, Michael	Marvell	Marvell		1	1	1
Effenberger, Frank	Futurewei Technologies	Futurewei Technologies	1	1	1	1
Ewen, John	Marvell	Marvell	1		1	1
FAn, DAWEI	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd			1	1
Ferretti, Vincent	Corning Incorporated	Corning Incorporated	1			1
Feyh, German	Broadcom Corporation	Broadcom Corporation	1		1	1
Geng, Limin	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd			1	
Ghiasi, Ali	Ghiasi Quantum LLC	Ghiasi Quantum LLC, Marvel	1	1	1	1
Gomez, Chisato		Nitto, Inc. (New Business Development Div.)				1
Gore, Brandon	Samtec, Inc.	Samtec, Inc.	1	1	1	1
Gorshe, Steven Scott	Microchip Technology, Inc.	Microchip Technology, Inc.		1	1	
Graber, Steffen	Pepperl+Fuchs SE	Pepperl+Fuchs SE		1	1	
Grow, Robert	RMG Consulting	RMG Consulting, KDPOF	1	1	1	1
Gustlin, Mark	Cisco Systems, Inc.	Cisco Systems, Inc.	1	1	1	
Hajduczenia, Marek	Charter Communications	Charter Communications		1	1	1
Han, Ruibo	China Mobile Communications Corporation (CMCC)	China Mobile Communications Corporation (CMCC)	1	1		1
Harstead, Ed	Nokia	Nokia			1	

Haser, Alexandra	Molex Incorporated	Molex Incorporated			1	
He, Xiang	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd			1	1
Healey, Adam	Broadcom Inc.	Broadcom Inc.	1	1	1	1
Heck, Howard	Intel Corporation	Intel Corporation		1		1
Hegde, Rajmohan	Broadcom Corporation	Broadcom Ltd.	1	1	1	
Hidaka, Yasuo	Credo Semiconductor	Credo Semiconductor	1	1	1	1
Horner, Rita	Synopsys, Inc.	Synopsys, Inc.	1	1	1	1
Huang, Kechao		Huawei Technologies Co., Ltd				1
HUANG, QINHUI	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd				1
Huber, Thomas	Nokia	Nokia			1	1
Hutchins, Jeff	Ranovus	Ranovus			1	1
HYAKUTAKE, YASUHIRO	Adamant Namiki Precision Jewel Co., Ltd.	Adamant Namiki Precision Jewel Co., Ltd.			1	1
Isono, Hideki	Fujitsu Optical Components Limited	Fujitsu Optical Components Limited			1	1
Issenhuth, Tom	Issenhuth Consulting, LLC	Huawei Technologies Co., Ltd	1		1	1
Jackson, Kenneth	Sumitomo Electric Device Innovations, USA	Sumitomo Electric Industries, LTD			1	1
Johnson, John	Broadcom Corporation	Broadcom Corporation	1	1	1	1
Jonsson, Ragnar	Marvell Semiconductor, Inc.	Marvell	1	1	1	1
Kabra, Lokesh	Synopsys, Inc.	Synopsys, Inc.			1	
Kamino, John	OFS	OFS		1		
Kang, Taekyu	Electronics and Telecommunications Research Institute (ETRI)	Electronics and Telecommunications Research Institute (ETRI)	1	1	1	1
Kao, Chienping	Intel Corporation	Cornelis Networks	1		1	1
Kareti, Upen	Cisco Systems, Inc.	Cisco Systems, Inc.	1	1	1	
Kikuta, Tomohiro	Adamant Namiki Precision Jewel Co., Ltd.	Adamant Namiki Precision Jewel Co., Ltd.	1	1	1	
Kim, Kihong/Joshua	Hirose Electric (USA), Inc.	Hirose Electric (USA), Inc.			1	
Kim, Yongbum	Tenstorrent	Tenstorrent	1	1	1	1
Kimber, Eric	Semtech Ltd	Semtech Ltd		1		
Klempa, Michael	University of New Hampshire InterOperability Laboratory (UNH-IOL)	Amphenol Corporation	1	1		1
Klingensmith, William		DoD			1	1
Kochuparambil, Elizabeth	Cisco Systems, Inc.	Cisco Systems, Inc.		1	1	1
Kocsis, Sam	Amphenol Corporation	Amphenol Corporation			1	1
Kota, Kishore	Marvell Semiconductor, Inc.	Inphi Corporation			1	1
Kuschnerov, Maxim	Huawei Technologies Duesseldorf GmbH	Huawei Technologies Duesseldorf GmbH				1
Lam, Cedric		Google			1	
Laubach, Mark	IEEE member / Self Employed	IEEE member / Self Employed	1	1	1	1
Law, David	Hewlett Packard Enterprise	Hewlett Packard Enterprise	1	1	1	1
Lawson, Matthew	Cisco Systems, Inc.	Cisco Systems, Inc.	1	1	1	1
Le Cheminant, Greg	Keysight Technologies	Keysight Technologies	1	1	1	1
Lee, Sylvanus	Leviton Manufacturing Co.	Leviton Manufacturing Co.			1	1
Levin, Itamar		Intel Corporation				1
Lewis, David	Lumentum Inc.	Lumentum Inc.		1	1	1
Lewis, Jon	Dell Technologies	Dell Technologies	1		1	1
Li, Mike-Peng	Intel Corporation	Intel Corporation		1	1	

Li, Su	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd				1
Lim, Jane	Cisco Systems, Inc.	Cisco Systems, Inc.	1	1	1	1
Lin, Youxi		Huawei Technologies Co., Ltd				1
Lingle, Robert	OFS	OFS	1	1	1	1
Little, Terrance		Foxconn Electronics Inc.			1	1
Liu, Hai-Feng	HG Genuine	HG Genuine		1	1	1
Liu, Karen	Lightwave Logic	Lightwave Logic			1	
Lu, Yuchun	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd	1		1	1
Luo, Yuanqiu	Futurewei Technologies	Futurewei Technologies	1	1	1	1
Lusted, Kent	Intel Corporation	Intel Corporation	1	1	1	
Lyubomirsky, Ilya	Inphi Corporation	Inphi Corporation	1			
Mak, Gary	Inphi Corporation	inphi				1
Maki, Jeffery	Juniper Networks, Inc.	Juniper Networks, Inc.	1	1	1	1
Malicoat, David	Malicoat Networking Solutions	Malicoat Networking Solutions; SENKO Advanced Components		1	1	
Maniloff, Eric	Ciena Corporation	Ciena Corporation			1	1
Marks, Roger	EthAirNet Associates	Consensii LLC	1	1	1	1
Marques, Flavio	FURUKAWA ELECTRIC	FURUKAWA ELECTRIC	1			
Marris, Arthur	Cadence Design Systems, Inc.	Cadence Design Systems, Inc.	1	1	1	1
Martino, Kjersti		Inneos				1
Mcclellan, Brett	Marvell Semiconductor, Inc.	Marvell Semiconductor, Inc.	1	1	1	1
McMillan, Larry	Western Digital Corporation	Western Digital Corporation		1		
Meghelli, Mounir	IBM	IBM	1	1	1	1
Mellitz, Richard	Samtec, Inc.	Samtec, Inc.	1	1	1	1
mi, guangcan	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd			1	1
Milicevic, Mario	MaxLinear	MaxLinear				1
Moorwood, Charles	Keysight Technologies	Keysight Technologies	1	1	1	1
Mu, Jianwei		Hisense				1
Mueller, Thomas	Rosenberger	Rosenberger	1	1		
Muller, Shimon	Enfabrica Corp.	Axalume, Inc.	1	1	1	
Murty, Ramana	Broadcom Inc.	Broadcom Corporation	1			
Muth, Karlheinz	Broadcom Corporation	Broadcom Corporation	1		1	1
Nering, Raymond	Cisco Systems, Inc.	Cisco Systems, Inc.	1	1	1	1
Nicholl, Gary	Cisco Systems, Inc.	Cisco Systems, Inc.	1	1	1	
Nicholl, Shawn	Xilinx	Xilinx	1	1	1	1
Noujeim, Leesa	Google	Google				1
Nowell, Mark	Cisco Systems, Inc.	Cisco Systems, Inc.	1	1	1	1
Ofelt, David	Juniper Networks, Inc.	Juniper Networks, Inc.	1	1	1	1
Ogura, Ichiro	PETRA	PETRA	1	1	1	
Omori, Kumi	NEC Corporation	NEC Corporation			1	
Opsasnick, Eugene	Broadcom Inc.	Broadcom Corporation				1
Palkert, Thomas	Macom, Samtec	Samtec-Macom	1		1	1
Pandey, Sujan	Huawei Technologies (Netherlands) B.V.	Huawei Technologies (Netherlands) B.V.			1	
Pankert, Joseph		TRUMPF Photonics Components				1
PARK, CHUL SOO	Juniper Networks Inc.	Juniper Networks, Inc.	1	1	1	1
Parsons, Earl	CommScope, Inc.	CommScope, Inc.	1	1	1	1
Parthasarathy, Vasu	Broadcom Corporation	Broadcom Corporation	1	1		1
Pepper, Gerald	Keysight Technologies	Keysight Technologies	1	1	1	1

Piehler, David	Dell Technologies	Dell	1	1	1	1
Pimpinella, Rick	Panduit Corp.	Panduit Corp.	1	1	1	1
Powell, William	INDEPENDENT	INDEPENDENT	1	1	1	1
Pozzebon, Dino	Microchip Technology, Inc.	Microchip Technology, Inc.		1	1	1
Rabinovich, Rick	Keysight Technologies	Keysight Technologies	1	1	1	1
Ran, Adee	Cisco Systems, Inc.	Cisco systems	1	1	1	
Rannow, R K	silverdraft supercomputing	Silverdraft Supercomputing	1	1	1	1
Ren, Hao	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd			1	
Rodes, Roberto	II-VI	II-VI			1	1
Sakai, Toshiaki	Socionext Inc.	socionext		1	1	1
Sambasivan, Sam	AT&T	AT&T			1	1
Sarlet, Gert	II-VI Incorporated	II-VI Incorporated	1			
Savi, Olindo	Hubbell Incorporated	Hubbell Incorporated		1	1	1
SAWANO, Hiroshi	OITDA (Optoelectronics Industry and Technology Development Association)	OITDA			1	
Schube, Scott	Intel Corporation	Intel Corporation	1	1	1	
Shah, Darshan		Palo Alto Networks				1
She, Qingya	Fujitsu Network Communications	Fujitsu Network Communications			1	
Shrikhande, Kapil	Innovium Inc.	Innovium	1	1	1	1
Shukla, Priyank	Synopsys, Inc.	Synopsys, Inc.			1	
Sivakolundu, Ramesh	Cisco Systems, Inc.	Cisco Systems, Inc.			1	1
Slavick, Jeff	Broadcom Inc	Broadcom Inc	1	1	1	1
Sommers, Scott	Molex LLC	Molex Incorporated	1	1	1	1
Son, Yung Sung	Optomind Inc	Optomind Inc				1
Sone, Yoshiaki	NTT	Nippon Telegraph and Telephone Corporation (NTT)		1		1
Sorbara, Massimo	GLOBALFOUNDRIES	GLOBALFOUNDIRES			1	1
Sprague, Edward	Infinera Corporation	Infinera Corporation	1	1	1	1
Stassar, Peter	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd	1	1	1	1
Stone, Robert	Broadcom Corporation	Facebook		1	1	
Sun, Junqing	Credo Semiconductor	Credo Semiconductor		1	1	1
Sun, Yi		OFS				1
Tailor, Bharat	Semtech Canada Corporation	Semtech Canada Corporation	1	1	1	1
TAKAHARA, TOMOO	FUJITSU LABORATORIES LIMITED	FUJITSU LIMITED				1
Takahashi, Tadashi	Nitto Denko Corporation	Nitto Denko Corporation			1	
Takayama, Kazuya	Nitto Denko Corporation	Nitto Denko Corporation			1	
Terada, Masaru	FURUKAWA ELECTRIC	FURUKAWA ELECTRIC	1		1	1
Theodoras, James	HG Genuine	HG Genuine	1	1	1	1
Tooyserkani, Pirooz	Cisco Systems, Inc.	Cisco Systems, Inc.	1	1	1	
Tracy, Nathan	TE Connectivity	TE Connectivity			1	1
Tran, Viet	Keysight Technologies	Keysight Technologies			1	1
Trowbridge, Stephen	Nokia	Nokia	1	1		1
Tsujita, Yuichi		Nitto, Inc.; New Business Development Division				1
Ulrichs, Ed	Intel Corporation	Intel	1	1	1	1
Umnov, Alexander	Infinera Corporation	INDEPENDENT	1	1	1	1
Villares, Gustavo		Lumiphase				1
Voss, Robert	Panduit Corp.	Panduit Corp.	1	1	1	

Walker, Clinton	Alphawave IP	Alphawave IP	1	1		1
Wang, Haojie	China Mobile Communications Corporation (CMCC)	China Mobile Communications Corporation (CMCC)				1
Wang, Ruoxu	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd			1	1
Wang, Xinyuan	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd	1	1	1	
Weaver, James	Arista Networks	Arista Networks			1	1
Weber, Markus	socionext	Acacia Communications	1	1	1	
Welch, Brian	Cisco Systems, Inc.	Luxtera	1	1	1	1
Williams, Tom	Cisco Systems, Inc.	Acacia Communications	1	1	1	
Wu, Mau-Lin	MediaTek Inc.	MediaTek Inc.			1	
Xu, Yu	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd	1	1	1	
Young, James	CommScope, Inc.	CommScope		1		
Zebian, Sara		Google			1	
Zhang, Bo	Marvell Technology, Inc	Marvell Technology, Inc			1	1
Zhiwei, Yang	ZTE Corporation	ZTE Corporation	1	1	1	
Zhou, Xiang		Google				1
Zhuang, Yan	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd	1	1	1	1
Zivny, Pavel	Tektronix, Inc.	Tektronix, Inc.	1	1	1	1