IEEE P802.3df 200 Gb/s, 400 Gb/s, 800 Gb/s, and 1.6 Tb/s Ethernet Task Force

Approved Meeting Minutes, prepared by John D'Ambrosia, Mark Nowell, and Kent Lusted

12 July 2022
Face-to-face Location - Le Centre Sheraton Montreal, Montreal, Quebec Canada
Remote Access on best effort basis provided
IEEE P802.3df Task Force July 2022 Meeting Task Force Page - https://www.ieee802.org/3/df/public/22_07/index.html

Session called to order at 10:30 am ET (all times ET), 12 July 2022

Meeting called to order by John D'Ambrosia, IEEE P802.3df Task Force Chair

Presentation #1	**Agenda and General Information**
Presenters	John D'Ambrosia
URL	https://www.ieee802.org/3/df/public/22_0609/agenda_3df_a_220609.pdf

Chair welcomed everyone to the meeting. There was a round of introductions for those individuals attending F2F. Chair noted the transition to F2F with remote participation and requested everyone to be patient.

Chair reminded everyone that registration was required to attend this meeting, either F2F or remotely, and reminded everyone what happens if an individual is in arrears. See Slide #3.

Chair reviewed the agenda (Slide #4) and noted presentation order on Slides #5 thru 7. Chair noted that individuals should check the webpage for the latest version of each presentation. Chair noted that the presentation times are subject to change.

Chair noted that he received three presentations with new technical information from Christopher Doerr, Kapil Shrikhande, Xinyuan Wang. There were no objections to hearing the new material. Chair would post them to the Task Force website soon.

Chair asked if there were any objections to the agenda, and there were none. The agenda was considered approved by unanimous consent.

Minutes –

- May 2022 session - https://www.ieee802.org/3/df/public/22_05/minutes_3df_2205_unapproved.pdf
- 09 June 2022 session - https://www.ieee802.org/3/df/public/22_0609/minutes_3df_220609_unapproved.pdf

Chair asked if there were any other corrections or modifications. There were none. Chair asked if there were any objections to approving the modified minutes. There were none, and the minutes were considered approved by unanimous consent.

Chair reviewed meeting decorum. (See Slides #8 thru 10.) Chair asked if there were any members of the press present. No one responded.

Chair reviewed attendance. (See Slide #11.)

Chair reviewed the Task Force Project Information / Organization. (See Slides #12).

Chair reviewed ground rules. (See Slide #13.)

Chair reviewed the current state of the Task Force. (See Slide #14.)

Chair reviewed voting in the task force. (See Slides #15 – 16.)

Slide #17 - Chair noted that the information regarding the IEEE SA Policies had been sent out via the Task Force reflector (see: https://www.ieee802.org/3/B400G/email/msg00357.html) , and requested that individuals review the following IEEE SA policies prior to the interim meeting –

- IEEE SA Patent policy
- IEEE SA Copyright Policy
- IEEE SA Participation Policy

Chair asked if anyone needed to review the policies at that time – there were no requests to do so from in-person nor remote attendees.

Chair presented the third slide (See Slide #38) of the IEEE SA Patent Policy slides. Chair did call for Potentially Essential Patents, and no one came forward.

Chair presented the second slide (See Slide #43) of 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 presented the second slide (See Slide #47) of the 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 noted there was one liaison from the OIF for the Task Force to consider (see: Slide #18, https://www.ieee802.org/3/minutes/may22/incoming/OIF_liaison_IEEE_800ZR_Update_19May22_Redacted.pdf) . Chair noted that the liaison would be considered towards the end of the meeting. Chair would prepare a draft liaison communication for the Task Force to consider and post it on the website.

Chair reviewed status of Architecture & Logic, Electrical, and Optics ad hocs. See Slides #20- 21.

At 11:00 a.m., John D'Ambrosia passed the meeting Chair responsibilities to Mark Nowell.

Presentation #2	**"Splitting IEEE P802.3df" - Proposed Project Documentation Packages**
Presenters	John D'Ambrosia
URL	https://www.ieee802.org/3/df/public/22_07/dambrosia_3df_01_2207.pdf

Chair noted that the IEEE P802.3ck Task Force was progressing to RevCom submittal at the July plenary closing. There was a round of applause.

Questions of clarification were addressed.

At 11:08 a.m., Mark Nowell passed the meeting Chair responsibilities to John D'Ambrosia.

Presentation #3	**FEC Requirements for Next Generation Ethernet from a Datacenter Operator**
Presenters	Shuang Yin
URL	https://www.ieee802.org/3/df/public/22_07/yin_3df_01b_2207.pdf

Questions of clarification were addressed.

Break for lunch at 11:40 a.m.

Meeting reconvened at 1:00 p.m.

Chair reminded participants to sign into the IEEE Meeting Attendance Tool.

Chair noted that the Task Force website was updated with the revised presentations.

Presentation #4	**8*100G&16*100G PCS/FEC/PMA baseline proposal**
Presenters	Leon Bruckman
URL	https://www.ieee802.org/3/df/public/22_07/bruckman_3df_02_2207.pdf

Questions of clarification were addressed.

Presentation #5	**PCS choice for FEC burst immunity**
Presenters	Adee Ran
URL	https://www.ieee802.org/3/df/public/22_07/ran_3df_01_2207.pdf

Questions of clarification were addressed.

Presentation #6	**800GbE PCS/FEC/PMA Baseline Proposal for PHYs using 8 x 100G PMD lanes - Update**
Presenters	Kapil Shrikhande
URL	https://www.ieee802.org/3/df/public/22_07/shrikhande_3df_01b_2207.pdf

Author noted additional supporters of Megha Shanbhag (TE) and Mike Dudek (Marvell).

Questions of clarification were addressed.

Chair reminded participants to adhere to the published presentation time.
Prior to the start of the presentation, Xinyuan Wang indicated that supporters had been added. He would provide the chair with the updated presentation (noted below) after the meeting.

Presentation #7	**800GbE PCS and PMA Baseline Proposals for 100 Gb/s per lane PHYs**
Presenters	Xinyuan Wang
URL	https://www.ieee802.org/3/df/public/22_07/wang_3df_01b_2207.pdf

Questions of clarification were addressed.

The proposed language for a straw poll #1 was shared with the group before going to break. Mark Gustlin provided an overview of Straw Poll #1. Matt Brown provided an overview of the straw poll from a chief-editor perspective and noted that the eight-lane 800GbE PCS/FEC selection was a key gap in the baseline specification.

Meeting break at 3:00 p.m.

Meeting reconvened at 3:20 p.m.

Chair reviewed the voting process for in-person and remote attendees.

Straw Poll #1 - All
I would support adopting the following for the 800GbE 100G/lane PCS/FEC/PMA baseline:
A) 800GbE (8x100G) PCS/FEC/PMA proposal per wang_3df_logic_220623a.pdf (Sped-up Clause 119)
B) 800GbE (8x100G) PCS/FEC/PMA proposal per shrikhande_3df_01b_2207.pdf (Parallel Clause 119)
C) Need more information
D) Abstain

Results:

Response	In Room	Remote	Total
A	10	17	27
B	39	30	69
C	4	9	13
D	11	9	20

Presentation #8	**FEC architecture considerations for 800GbE and 1.6TbE from performance, cost and evolution perspectives**
Presenters	Yuchun Lu
URL	https://www.ieee802.org/3/df/public/22_07/lu_3df_01_2207.pdf

Questions of clarification were addressed.

Prior to the start of the presentation, Lenin Patra indicated that supporters had been added. He would provide the chair with the updated presentation (noted below) after the meeting.

Presentation #9	**Updates on Concatenated FEC Proposal for 200G/Lane PMD**
Presenters	Lenin Patra
URL	https://www.ieee802.org/3/df/public/22_07/patra_3df_01a_2207.pdf

Questions of clarification were addressed.

Presentation #10	**Baseline proposals for 800 GbE RS/MII, Extender/XS, Time Sync and PMA, using 100G/lane signaling**
Presenters	Gary Nicholl
URL	https://www.ieee802.org/3/df/public/22_07/nicholl_3df_01_2207.pdf

Author noted that the eight-lane 800GbE PCS/FEC proposals from Kapil Shrikhande and Xinyuan Wang contain PMA details and that the author would not be covering the PMA part of the presentation (slides 11-12).

Questions of clarification were addressed.

Chair reminded all participants to sign into the IEEE Meeting Attendance Tool. Chair reminded participants present in person to sign into the in-person attendance book.

Chair noted prior to the start of Adam Healey's presentation that it was an updated version 01a with additional supporters. The updated presentation was already posted to the Task Force website.

Presentation #11	**Signaling rate range for 100 Gb/s lanes**
Presenters	Adam Healey
URL	https://www.ieee802.org/3/df/public/22_07/healey_3df_01a_2207.pdf

Questions of clarification were addressed.

Presentation #12	Copper Cable Terminology
Presenters	Kent Lusted
URL	https://www.ieee802.org/3/df/public/22_07/lusted_3df_02a_2207.pdf

Author noted that he would provide an updated version (02a) that includes a reference to the term “Direct Attach Copper / DAC” on slide 5. Questions of clarification were addressed.

Straw Poll #2

I would support the signaling rate ranges for 100 Gbps/lane PMDs and interfaces proposed in healey_3df_01a_2207.pdf slides #8, 9, 11, 13, 15. (Choose one)

Results

For in-person attendees, Chair asked if there were any participants that would vote no on straw poll #2. No one responded. Chair asked remote attendees if there were any participants that would vote no on straw poll #2. No one responded. Chair ruled that there were no objections to Straw Poll #2.

Straw Poll #3

I support adopting the RS/MII, MII Extender/XS, and Time Sync logic baselines per nicholl_3df_01_2207 for 800GbE using 100Gbps/lane signaling:

Results

For in-person attendees, Chair asked if there were any participants that would vote no on straw poll #2. No one responded. Chair asked remote attendees if there were any participants that would vote no on straw poll #2. No one responded. Chair ruled that Straw Poll #3 passed by unanimous consent.

Chair’s comments at end of day

1. Liu Xiang has requested to present additional data in a presentation to address interchannel FWM. Chair asked if there were any objections. THere were none and the chair will upload the updated presentation.
2. Reminder for individuals who have updates for presentations on Wednesday to send to chair by 7am Wed morning. Best efforts will be made to update website.
3. Chair had discussed the results of Straw Poll #1 with the proponents of the two respective proposals. It was requested that the straw poll be repeated for informative purposes based on 802.3 voters only. This will be done Thursday morning during the noted time for discussion / straw polls / motions. The chair noted he will send an announcement to the reflector.
4. Reminder that the TF meeting starts tomorrow at 10:30am.

Meeting recessed for the day at 5:47 p.m.

13 July 2022

Meeting reconvened at 10:37 am on 13 July.

Chair made opening comments and reviewed the plans for the day.

Chair reminded all participants to sign into the IEEE Meeting Attendance Tool.

Chair reminded the Task Force that he had received a request to redo Straw Poll #1 based on 802.3 WG Voters only for informative purposes. It will be on Thursday.

Chair noted that the presentation by Tom Mitcheltree would be given by co-author Mark Nowell.

Chair reminded in-person participants that the zoom meeting is reserved for remote attendees.

Chair reviewed the attendance and voting procedures for mixed-mode meetings.

Presentation #13	**Loss estimates for System Applications with Large Scale Switch – AUI Types**
Presenters	Upen Reddy Kareti
URL	https://www.ieee802.org/3/df/public/22_07/kareti_3df_01a_2207.pdf

Questions of clarification were addressed.

Prior to the start of the presentation, Ali Ghasi indicated he had an updated presentation with editorial changes. He would provide the chair with the updated presentation (noted below) after the meeting.

Presentation #14	**Link Training for AUI Based on OB Signaling**
Presenters	Ali Ghiasi
URL	https://www.ieee802.org/3/df/public/22_07/ghiasi_3df_01a_2207.pdf

Questions of clarification were addressed.

Chair asked if there was support to include a request for information related to CMIS-LT in the proposed OIF liaison letter. Participants expressed support to add the information.

Meeting broke for lunch at 11:55 a.m.
Meeting reconvened at 1:00 p.m.

Chair noted that the Task Force website was updated with all of the updated presentations received to date. He asked participants to verify that their contribution was uploaded correctly.

Presentation #15	**Evolution of 200G PMDs and AUI with Concatenated FEC**
Presenters	Ali Ghiasi
URL	https://www.ieee802.org/3/df/public/22_07/ghiasi_3df_02a_2207.pdf

Author noted an error on slide 5 where 300m should be 300mm and would provide an updated version 02a. Questions of clarification were addressed.

The IEEE 802.3 WG Chaired received a request for co-author Dan Cunio, who did the technical work in the following presentation, be permitted be to attend via remote access for this presentation only, to help answer any related technical questions related to the presentation. Under a provision in the IEEE 802 LMSC Operations Manual Clause 5 'IEEE 802 LMSC sessions' the 802.3 WG Chair with agreement by the P802.3df Chair agreed to the request.

Presentation #16	**224G Electrical Link Bandwidth Considerations**
Presenters	Leon Bruckman
URL	https://www.ieee802.org/3/df/public/22_07/bruckman_3df_01a_2207.pdf

Questions of clarification were addressed.

Chair reminded in-person and remote participants to sign into the IEEE Meeting Attendance Tool.

Presentation #17	**Starting Point: Chip to Chip (C2C) Mezzanine Test Board Channels for 200 Gb/s PAM 4**
Presenters	Rich Mellitz
URL	https://www.ieee802.org/3/df/public/22_07/mellitz_3df_01_2207.pdf

Chair noted that the channel data was posted to the Task Force website tools page. (See: https://www.ieee802.org/3/df/public/tools/index.html) Questions of clarification were addressed.

Prior to the start of the presentation, Liav Ben-Artsi indicated that he had an updated version with editorial changes. He provided the chair with the updated presentation (noted below) before the meeting. Chair noted that he would update the website.

Presentation #18	**Physical limitations of a multi-lane package integrating 200Gbps/lane**
Presenters	Liav Ben Artsi
URL	https://www.ieee802.org/3/df/public/22_07/artsi_3df_01b_2207.pdf

Questions of clarification were addressed.

Chair asked if there was objection to changing the presentation order to move the “IEEE MDI Considerations for 802.3df” presentation to before the. No one objected. Prior to the start of the presentation, Mark Nowell indicated that he had an updated version with technical changes based on peer review. He would provide the chair with the updated presentation (noted below) after the meeting.

Presentation #19	**IEEE MDI Considerations for 802.3df**
Presenters	Mark Nowell
URL	https://www.ieee802.org/3/df/public/22_07/nowell_3df_01b_2207.pdf

Author noted that the presentation would be updated (01b) to include references to 800GBASE-DR8-2. Questions of clarification were addressed.

Meeting break at 3:00 p.m.
Meeting reconvened at 3:15 p.m.

Presentation #20	**212.5 Gbps Chip-to-Module Link Simulation and Analysis**
Presenters	Mike Li
URL	https://www.ieee802.org/3/df/public/22_07/li_3df_01a_2207.pdf

Questions of clarification were addressed.

Presentation #21	Characteristics of a Passive Direct Attach Copper Cable (DAC) Assembly in CR Channels with Various Host Architectures
Presenters	Nathan Tracy
URL	https://www.ieee802.org/3/df/public/22_07/tracy_3df_01_2207.pdf

Questions of clarification were addressed.

Chair reminded in-person and remote participants to sign into the IEEE Meeting Attendance Tool.

Presentation #22	Optical modeling of 100 GBd PAM4 with relevance to DRn and DRn-2 PMDs
Presenters	Eric Bernier
URL	https://www.ieee802.org/3/df/public/22_07/bernier_3df_01_2207.pdf

Questions of clarification were addressed.

Presentation #23	Suppression of inter-channel FWM for 800G LR based on four 800GHz-spaced 200Gb/s PAM4 channels
Presenters	Xiang Liu
URL	https://www.ieee802.org/3/df/public/22_07/liu_3df_01b_2207.pdf

Questions of clarification were addressed.

Presentation #24	Link budget study of DP-PAM4 for 800G LR4 links
Presenters	Chris Doerr
URL	https://www.ieee802.org/3/df/public/22_07/doerr_3df_01b_2207.pdf

Questions of clarification were addressed.

Prior to the start of the presentation, Roberto Rodes indicated that supporters had been added. He would provide the chair with the updated presentation (noted below) after the meeting.

Chair reminded participants that presentations updates were due in the morning. He noted that any further presentation updates would be posted to the website after the meeting.

Presentation #25	Towards a 800G-LR4 IMDD specification consensus
Presenters	Robert Rodes
URL	https://www.ieee802.org/3/df/public/22_07/rodes_3df_01c_2207.pdf

Ali Ghiasi requested an update to the presentation to reflect a correction to his affiliation. Author to provide updated version (01c) with the change. Questions of clarification were addressed.

Chair reviewed the plans for Thursday. Chair provided an overview of the straw poll and motion topics for Thursday.

Chair reminded participants of the P802.3df draft 0.1 contribution in the Task Force private area. (See: https://www.ieee802.org/3/df/private/index.html) Chair provided the access information to the private area. Chair noted that the draft, and any other content, is posted for your review only, and neither the content nor access information should be copied or redistributed to others in violation of document copyrights.

Chair reminded participants of the IEEE 802 Plenary social event in the evening.

Meeting recessed for the day at 5:55 pm.

14 July 2022

Meeting reconvened at 8:05 am on 14 July.

Chair made opening comments and reviewed the plans for the day.

Chair reminded remote participants to declare their affiliation in the online tool.

Chair reminded participants to sign into the IEEE Meeting Attendance Tool. He noted that the morning session does not apply towards the IEEE 802.3 Working Group attendance.

Chair noted that he was changing the order of the motions and straw polls to put the perceived less contentious topics at the beginning in order for the project to continue making progress. DVL will be used for the IEEE 802.3 voters straw poll.

Presentation #26	**On PMD tolerance of 200Gbps PAM4**
Presenters	Huijan Zhang
URL	https://www.ieee802.org/3/df/public/22_07/zhang_3df_01b_2207.pdf

Questions of clarification were addressed.

Chair reminded participants to sign into the IEEE Meeting Attendance Tool. He provided the IMAT password. He noted that the morning session does not apply towards the IEEE 802.3 Working Group attendance.

Presentation #27	**Update on Coherent 800 LR/ER Proposals**
Presenters	Tom Williams
URL	https://www.ieee802.org/3/df/public/22_07/williams_3df_01_2207.pdf

Questions of clarification were addressed.

Chair reminded participants to provide their name and affiliation when speaking.

Prior to the start of the presentation, Eric Maniloff indicated that he had an updated version with technical changes based on peer review. He would provide the chair with the updated presentation (noted below) after the meeting.

Presentation #28	**Analysis of a coherent solution for the 800G single SMF 10 km objective**
Presenters	Eric Maniloff
URL	https://www.ieee802.org/3/df/public/22_07/maniloff_3df_01b_2207.pdf

Questions of clarification were addressed.

Chair reminded participants to sign into the IEEE Meeting Attendance Tool. He provided the IMAT password. He noted that the morning session does not apply towards the IEEE 802.3 Working Group attendance.

Chair noted that he had received comments asking about potential changes to Straw Poll #1 – either the straw poll wording or the potential responses. The chair noted that if any changes were made to the existing straw poll, then the straw poll would start at the beginning with an “all” vote before proceeding to an informative straw poll by WG voters.

Chair noted that he received a request for a roll-call style straw poll. He explained the details and noted that a roll-call straw poll would be only for 802.3 voters.

Motion #3 - signaling rate range

Move to:

Adopt the signaling rate ranges for 100 Gbps/lane PMDs and interfaces proposed in healey_3df_01a_2207.pdf slides #8, 9, 11, 13, 15.

M: Adam Healey
S: Matt Brown
Technical (>=75%)
Result: passed by unanimous consent

Before proceeding to the next motion, Mr. Nowell reviewed the requested changes that had been made to the presentation.

Presentation #29	**IEEE MDI Considerations for 802.3df**
Presenters	Mark Nowell
URL	https://www.ieee802.org/3/df/public/22_07/nowell_3df_01b_2207.pdf

Motion #4 - DR8 DR8-2 MDIs

Move to:

- Adopt the 8-lane MDI for both 800GBASE-DR8 and 800GBASE-DR8-2 optics proposed in nowell_3df_01b_2207 with editorial license

M: Mark Nowell
S: Earl Parsons
Technical (>=75%)
Result: Passed by unanimous consent 9:36 a.m.

Motion #5 - RS/MII

Move to adopt the RS/MII, MII Extender/XS, and Time Sync logic baselines per nicholl_3df_01_2207, slides 6-10, for 800GbE using 100Gbps/lane signaling.
M: Gary Nicholl
S: Kapil Shrikhande
Technical (>=75%)
Result: passed by unanimous consent 9:39 a.m.

Chair reviewed the results of the straw poll #1. Chair reviewed the proposed Straw Poll #4 (same as Straw Poll #1), which would be for 802.3 voters only and taken in the Direct Vote Live tool. Chair opened the floor for discussion on the straw poll #4. There was discussion.

Straw Poll #4 - PCS/FEC/PMA Baseline (802.3 Voters only)

I would support adopting the following for the 800GbE 100G/lane PCS/FEC/PMA baseline: (choose one)
A) 800GbE (8x100G) PCS/FEC/PMA proposal per wang_3df_logic_220623a.pdf (Sped-up Clause 119)
B) 800GbE (8x100G) PCS/FEC/PMA proposal per shrikhande_3df_01b_2207.pdf (Parallel Clause 119)
C) Need more information
D) Abstain
Result: A: 25, B: 49, C: 8, D: 8

Chair noted that Guangcan Mi had difficulty voting with the online tool and provided her vote via the meeting chat tool. Chair added to the results shown above.
Break at 9:57 a.m.

Meeting reconvened at 10:30 a.m.

Chair encouraged participants to build consensus offline on the eight-lane 800 GbE PCS/FEC choice.

Chair noted that no ad-hoc meetings had been scheduled.

Chair reminded participants to sign into the IEEE Meeting Attendance Tool.

The following straw poll (#5) was requested by Frank Chang.

Straw Poll #5: 800G 10km

For the 800GbE 10km objective, I would prefer the following approach:

- Option A: coherent based
- Option B: IMDD based
- Option C: need more information
- Option D: abstain

Response	In Room	Remote	Total
Option A	11	29	40
Option B	6	14	20
Option C	34	27	61
Option D	10	4	14

Chair noted that the Editorial Team developed a contribution for Draft 0.1 for IEEE P802.3df. As a contribution, it does not have any standing and is not a Task Force approved document at this time. Chair noted that the draft, and any other content, is posted for your review only, and neither the content nor access information should be copied or redistributed to others in violation of document copyrights.

Presentation #30	**P802.3df Chief Editor's Report**
Presenters	Matt Brown
URL	https://www.ieee802.org/3/df/private/8023df_d0p1.pdf

Questions of clarification were addressed. Author thanked the co-authors for their work to create Draft 0.1. As part of the chief editor's report, Matt Brown reviewed the document and identified missing areas to move the Task Force towards D1.0 and a technically complete draft.

Presentation #31	**Proposed Liaison Response to OIF 800ZR**
Presenters	John D'Ambrosia
URL	https://www.ieee802.org/3/df/public/22_07/dambrosia_3df_08_2207_Redacted.pdf

Questions of clarification were addressed. Proposed response was updated based on TF discussion to IEEE_802d3_to_OIF_3df_2207_draft.pdf

Motion #6	**Move that the IEEE P802.3df Task Force approve:** • **IEEE_802d3_to_OIF_3df_2207_draft.pdf** **with editorial license granted to the Chair (or his appointed agent) as a liaison communication from the IEEE 802.3 Working Group to OIF.**
Technical (>= 75%)	
Moved by	Mark Nowell
Second by	Kent Lusted
Results 802.3 (y/n/a)	Approved by unanimous consent

Chair reviewed future meetings. See Slide #19.

Nathan Tracy noted that he intends to contribute the channels associated with his presentation to the Task Force website.

Chair reminded participants to sign into the IEEE Meeting Attendance Tool.

Chair thanked participants for a productive mixed-mode plenary meeting.

Chair noted that the agenda of the meeting had been completed, and the meeting adjourned at 11:46 a.m.

Attendees (Tuesday, 12 July 2022, Based on IMAT, Zoom, Attendance Books)

Participant	Employer	Affiliation
Akbaba, Enis	Analog Devices Inc.	Analog Devices Inc.
Balan, Vishnu	nVidia	nVidia
Ben-Artsi, Liav	Marvell Semiconductor, Inc.	Marvell Semiconductor, Inc.
Bernier, Eric		Huawei Technologies Canada; Huawei Technologies Co., Ltd
Bliss, William	Broadcom Corporation	Broadcom Corporation
Bois, Karl	NVIDIA Corporation	NVIDIA Corporation
Boyle, Vincent		NSA/CSD
Brooks, Paul	Viavi solutions GmbH	Viavi Solutions
Brown, Blake		University of New Hampshire InterOperability Laboratory (UNH-IOL)
Brown, Matthew	Huawei Technologies Canada	Huawei Technologies Canada
Bruckman, Leon	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd
Calvin, John	Keysight Technologies	Keysight Technologies
Cassan, Dave	Alphawave	Alphawave
Castro, Jose	Panduit	Panduit Corp.
Chang, Frank	Source Photonics	Source Photonics
Chang, Xin	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd
Chang, Yongmao	Inphi Corporation	Source Photonics
Chen, Chan	Applied Optoelectronics, Inc.	Applied Optoelectronics, Inc.
Chen, Chin-Hui		Meta Platforms
cheng, weiqiang		China Mobile Communications Corporation (CMCC)
Choudhury, Mabud	OFS	OFS
Cole, Chris	Quintessent	Quintessent
D'Ambrosia, John	Futurewei Technologies	Futurewei Technologies, U.S. Subsidiary of Huawei
Davis , Mike	Sicoya	Sicoya
Dawe, Piers J G	NVIDIA	Nvidia
de Koos, Andras	Microchip Technology Inc	Microchip Technology, Inc.
Donahue, Curtis	Rohde & Schwarz	Rohde & Schwarz
Dube, Kathryn	UNH-IOL	UNH-IOL
Dudek, Michael	Marvell	Marvell
Dumais, Patrick		Huawei Technologies Co., Ltd
Effenberger, Frank	Futurewei Technologies	Futurewei Technologies
Estes, David	Spirent Communications	Spirent Communications
FAn, DAWEI	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd
Ferreti, Vince	Corning	Corning Incorporated
Feyh, German	Broadcom	Broadcom
Fortin, Eric		Nokia
Gao, Xiangrong	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd
Geng, Limin	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd
Ghiasi, Ali	Ghiasi Quantum LLC	Ghiasi Quantum LLC; Marvell Semiconductor, Inc.
Gore, Brandon	Samtec, Inc.	Samtec, Inc.
Gorshe, Steven Scott	Microchip Technology, Inc.	Microchip Technology, Inc.
Grow, Robert	RMG Consulting	RMG Consulting
Gru, Jao	Centec	Centec

Gustlin, Mark	Cisco Systems, Inc.	Cisco Systems, Inc.
Han, Rubio	CMCC	CMCC
He, Xiang	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd
Healey, Adam	Broadcom Inc.	Broadcom Inc.
Heck, Howard	Intel Corporation	Intel Corporation
Hidaka, Yasuo	Credo Semiconductor	Credo Semiconductor
Hidenari, Hirase		
Huang, Kechao	Huawei Technologies Co., Ltd.	Huawei Technologies Co., Ltd.
HUANG, QINHUI	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd
Huber, Thomas	Nokia	Nokia
Hyakutake, Yasuhiro	Adamant Namiki Precision Jewel Co.	Adamant Namiki Precision Jewel Co.
Ingham, Jonathan	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd
ISHIBE, KAZUHIKO	Anritsu Company	Anritsu Company
Isono, Hideki	IGS Consulting	Fujitsu Optical Components Limited
Issenhuth, Tom	Issenhuth Consulting, LLC	Huawei Technologies Co., Ltd
Jackson, Kenneth	Sumitomo Electric Device Innovations, USA	Sumitomo Electric Industries, LTD
Jafari, Amir	Semtech	Semtech
Jiang, Chendi	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd
Johnson, John	Broadcom Corporation	Broadcom Corporation
Kandalla, vamshi	GRL	GRL
Kareti, Upen	Cisco Systems, Inc.	Cisco Systems, Inc.
Kawatsu, Yasuaki	APRESIA Systems	APRESIA Systems
Kim, Kihong/Joshua	Hirose Electric (USA), Inc.	Hirose Electric (USA), Inc.
Kim, Yongbum	Tenstorrent	Tenstorrent
Klingensmith, William	U.S. Federal Government	DoD
Kochuparambil, Elizabeth	Cisco Systems, Inc.	Cisco Systems, Inc.
Kocsis, Sam	Amphenol Corporation	Amphenol Corporation
Koehler, Daniel	MorethanIP	Synopsys, Inc.
Kondo, Taiji	MegaChips Corporation	Dexerials Corporation
Lam, Cedric		Google
Lambert, Angela		Corning Incorporated
Lawson, Matthew	Cisco Systems, Inc.	Cisco Systems, Inc.
Law, David	HPE	HPE
Le Cheminant, Greg	Keysight Technologies	Keysight Technologies
Lewis, David	Lumentum	Lumentum
Li, Mike-Peng	Intel Corporation	Intel Corporation
Li, Pei-Rong	MediaTek Inc.	MediaTek Inc.
Li, Silas	Alphawave IP	Alphawave IP
Lieder, Eyal	Marvell Semiconductor, Inc.	Marvell Semiconductor, Inc.
Lim, Jane	Cisco Systems, Inc.	Cisco Systems, Inc.
Lin, Youxi	Huawei Technologies Duesseldorf GmbH	Huawei Technologies Co., Ltd
Little, Terrance	Foxconn Electronics Inc.	Foxconn Electronics Inc.
Liu, Cathy	Broadcom Corporation	Broadcom Corporation

Liu, Hai-Feng	HG Genuine	HG Genuine
LIU, XIANG	Huawei R&D USA	Huawei Technologies Co., Ltd
Liu, Yuqiao	Maxlinear	Maxlinear
Lu, Yuchun	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd
Lusted, Kent	Intel Corporation	Intel Corporation
Maki, Jeffery	Juniper Networks, Inc.	Juniper Networks, Inc.
Malicoat, David	Malicoat Networking Solutions	Malicoat Networking Solutions; SENKO Advanced Components
Maniloff, Eric	Ciena Corporation	Ciena Corporation
Marques, Flavio	FURUKAWA ELECTRIC	FURUKAWA ELECTRIC
Marris, Arthur	Cadence Design Systems, Inc.	Cadence Design Systems, Inc.
Martin, Kyersti	Inneos	Inneos
Mcclellan, Brett	Marvell Semiconductor, Inc.	Marvell Semiconductor, Inc.
Mellitz, Richard	Samtec, Inc.	Samtec, Inc.
mi, guangcan	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd
Moorwood, Charles	Keysight Technologies	Keysight Technologies
Muller, Shimon	Enfabrica Corp.	Enfabrica Corp.
Murty, Ramada	Broadcom	Broadcom
Muth, Karlheinz	Broadcom Corporation	Broadcom Corporation
Nakamoto, Edward	Spirent Communications	Spirent Communications
Nering, Raymond	Cisco Systems, Inc.	Cisco Systems, Inc.
Nicholl, Gary	Cisco Systems, Inc.	Cisco Systems, Inc.
Nicholl, Shawn	Xilinx	Advanced Micro Devices (AMD)
Ninomiya, Takuya		Senko Advanced Components
Nowell, Mark	Cisco Systems, Inc.	Cisco Systems, Inc.
Ofelt, David	Juniper Networks, Inc.	Juniper Networks, Inc.
Omori, Kumi	NEC Corporation	NEC Corporation
Opsasnick, Eugene	Broadcom Inc.	Broadcom Inc.
Palkert, Thomas	Macom, Samtec	Samtec-Macom
Pandey, Sujan	Huawei	Huawei
PARK, CHUL SOO	Juniper Networks Inc.	Juniper Networks, Inc.
Parkholm, Ulf	Telefon AB LM Ericsson	Telefon AB LM Ericsson
Parsons, Earl	CommScope, Inc.	CommScope, Inc.
Parthsarathy Vasu	Broadcom	Broadcom
Patra, lenin	Marvell Semiconductor, Inc.	Marvell Semiconductor, Inc.
peng, semmy		Huawei Technologies Co., Ltd
Pepper, Gerald	Keysight Technologies	Keysight Technologies
Pham, Phong	East Point	EastPoint
Piehler, David	Dell Technologies	Dell
Quan, Yu	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd
Rabe, Peter	East Point	East Point
Rabinovich, Rick	Keysight Technologies	Keysight Technologies
Rahn, Jeffrey	Facebook	Facebook
Ramesh, Sridhar	Maxlinear	Maxlinear
Ran, Adee	Cisco Systems, Inc.	Cisco Systems, Inc.
Regan, James		UNH-IOL
Ren, Hao	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd

Rodes, Roberto	II-VI	II-VI
Rush, Joshua	UNH-IOL	UNH-IOL
Sakai, Toshiaki	Socionext Inc.	socionext
Savi, Olindo	Hubbell Incorporated	Hubbell Incorporated
Sedarat, Hossein	Ethernovia	Ethernovia
Shanbhag, Megha	Tyco	TE Connectivity
She, Qingya	Fujitsu Network Communications	Fujitsu Network Communications
Sheffi, Nir		Banias Labs
Shoval, Ayal	Synopsys, Inc.	Synopsys, Inc.
Shrikhande, Kapil	Marvell Semiconductor, Inc.	Marvell Semiconductor, Inc.
Shubochkin, Roman	OFS	OFS
Shukla, Priyank	Synopsys, Inc.	Synopsys, Inc.
Sikkink, Mark		Hewlett Packard Enterprise
Simms, William	nVidia	nVidia
Sinn, Peter		Alphawave IP
Slavick, Jeff	Broadcom Inc	Broadcom Inc
Sluyski, MIke		Cisco Systems, Inc.
Sommers, Scott	Molex LLC	Molex Incorporated
Son, Yung Sung	Optomind Inc	Optomind Inc
Sorbara, Massimo	GLOBALFOUNDRIES	GLOBALFOUNDIRES
Souvignier, Tom	Broadcom Corporation	Broadcom Corporation
Sprague, Edward	Infinera Corporation	Infinera Corporation
Srivastava, Atul	NEL-America	NTT Electronics
Stassar, Peter	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd
Stone, Robert	Broadcom Corporation	Meta
SU, CHANGZHENG		Huawei Technologies Co., Ltd
Sun, Junqing	Credo Semiconductor	Credo Semiconductor
Sun, Yi		OFS
Sydow, Custar	Maxlinear	Maxlinear
TAKAHARA, TOMOO	FUJITSU LABORATORIES LIMITED	FUJITSU LIMITED
Tang, Yi	Cisco Systems, Inc.	Cisco Systems, Inc.
Tazebay, Mehmet	Broadcom	Broadcom
Theodoras, James	HG Genuine	HG Genuine
Thompson, lance	II-VI	II-VI
Tooyserkani, Pirooz	Cisco Systems, Inc.	Cisco Systems, Inc.
Torza, Anthony		Cisco Systems, Inc.
Tracy, Nathan	TE Connectivity	TE Connectivity
Tran, Viet	Keysight Technologies	Keysight Technologies
Ulrichs, Ed	Intel Corporation	Intel Corporation
Venkataraman, Srinivas		Facebook
Wang, Haojie	China Mobile Communications Corporation (CMCC)	China Mobile Communications Corporation (CMCC)
Wang, Ruoxu	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd
Wang, Sharon		
Wang, Xinyuan	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd

Weaver, James	Arista Networks	Arista Networks
Welch, Brian	Cisco Systems, Inc.	Luxtera
Williams, Tom	Cisco Systems, Inc.	Cisco Systems, Inc.
Wu, Mau-Lin	MediaTek Inc.	MediaTek Inc.
Xu, Yu	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd
Yin, Shuang		Google
Yu, Rangchen	SiFotonics	SiFotonics
Zengchao, Yao	Huawei	Huawei
Zhang, Huijian	HiSilicon OE	HISilicon OE
Zhong, Qiwen	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd
Zhou, Xiang		Google
Zhuang, Yan	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd
Zivny, Pavel	Tektronix	Tektronix

Attendees (Wednesday, 13 July 2022, Based on IMAT, Zoom, Attendance Books)

Participant	Employer	Affiliation
Acricupetian, Armand	Aloe Semiconductor	Aloe Semiconductor
Aekins, Rob	Legrand	Legrand
Akbaba, Enis	Analog Devices Inc.	Analog Devices Inc.
Balan, Vishnu	nVidia	nVidia
Ben-Artsi, Liav	Marvell Semiconductor, Inc.	Marvell Semiconductor, Inc.
Bernier, Eric		Huawei Technologies Canada; Huawei Technologies Co., Ltd
Bliss, William	Broadcom Corporation	Broadcom Corporation
Bois, Karl	NVIDIA Corporation	NVIDIA Corporation
Boyle, Vincent	NSA	NSA/CSD
Brooks, Paul	Viavi solutions GmbH	Viavi Solutions
Brown, Blake		University of New Hampshire InterOperability Laboratory (UNH-IOL)
Bruckman, Leon	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd
Calvin, John	Keysight Technologies	Keysight Technologies
Cassan, Dave	Alphawave	Alphawave
Castro, Jose	Panduit	Panduit Corp.
Chang, Frank	Source Photonics	Source Photonics
Chang, Xin	Huawei	Huawei
Chang, Yongmao	Inphi Corporation	Source Photonics
Chen, Chan	Applied Optoelectronics, Inc.	Applied Optoelectronics, Inc.
Chen, Chin-Hui		Meta Platforms
Cheng, Weiqiang	CMCC	CMCC
Choudhury, Golam	OFS	OFS
Cole, Chris	Quintessent	Quintessent
D'Ambrosia, John	Futurewei Technologies	Futurewei Technologies, U.S. Subsidiary of Huawei
Dawe, Piers J G	NVIDIA	Nvidia
de Koos, Andras	Microchip Technology Inc	Microchip Technology, Inc.
Deandrea, John	Finisar Corporation	Finisar Corporation
Diminico, Christopher	M C Communications, LLC	Panduit Corp.
Doerr, Chris	Aloe Semiconductor	Aloe Semiconductor, Inc.
Donahue, Curtis	Rohde & Schwarz	Rohde & Schwarz
Dube, Kathryn	UNH-IOL	UNH-IOL
Dudek, Michael	Marvell	Marvell
Dumais, Patrick		Huawei Technologies Co., Ltd
Effenberger, Frank	Futurewei Technologies	Futurewei Technologies
Estes, David	Spirent Communications	Spirent Communications
Fan, DAWEI	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd
Ferretti, Vince	Corning	Corning Incorporated
Fortin, Eric	Nokia	
Gao, Xiangrong	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd
Geng, Limin	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd
Ghiasi, Ali	Ghiasi Quantum LLC	Ghiasi Quantum LLC; Marvell Semiconductor, Inc.
Gore, Brandon	Samtec, Inc.	Samtec, Inc.

Gorshe, Steven Scott	Microchip Technology, Inc.	Microchip Technology, Inc.
Grow, Robert	RMG Consulting	RMG Consulting, KDPOF
Gu, Tao		Centec
Gustlin, Mark	Cisco Systems, Inc.	Cisco Systems, Inc.
Haasz, Jodi	IEEE SA	IEEE SA
Hairapetian, Armond		Aloe Semiconductor, Inc.
Han, Ruibo	CMCC	CMCC
Harley, James	Ciena Corporation	Ciena Corporation
He, Xiang	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd
Healey, Adam	Broadcom Inc.	Broadcom Inc.
Heck, Howard	Intel Corporation	Intel Corporation
Hess, David	Cord Data	Cord Data
Hidaka, Yasuo	Credo Semiconductor	Credo Semiconductor
Hidenari, Hirase,	AGC	AGC
Hossein Sedarat	Ethernovia	Ethernovia
Huang, Kechao	Huawei Technologies Co., Ltd.	Huawei Technologies Co., Ltd.
HUANG, QINHUI	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd
Huber, Thomas	Nokia	Nokia
Ingham, Jonathan	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd
ISHIBE, KAZUHIKO	Anritsu Company	Anritsu Company
Isono, Hideki	IGS Consulting	Fujitsu Optical Components Limited
Issenhuth, Tom	Issenhuth Consulting, LLC	Huawei Technologies Co., Ltd
Jackson, Kenneth	Sumitomo Electric Device Innovations, USA	Sumitomo Electric Industries, LTD
Jafar, Amir	Semtech	Semtech
Jiang, Chendi	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd
Jimenez, Andrew	Anixter Inc.	Anixter Inc.
Johnson, John	Broadcom Corporation	Broadcom Corporation
Kareti, Upen	Cisco Systems, Inc.	Cisco Systems, Inc.
Kim, Kihong/Joshua	Hirose Electric (USA), Inc.	Hirose Electric (USA), Inc.
Kim, Yongbum	Tenstorrent	Tenstorrent
Klingensmith, William	U.S. Federal Government	DoD
Kochuparambil, Elizabeth	Cisco Systems, Inc.	Cisco Systems, Inc.
Kocsis, Sam	Amphenol Corporation	Amphenol Corporation
Koehler, Daniel	MorethanIP	Synopsys, Inc.
Koeppendoerfer, Erwin	LEONI Kabel GmbH	LEONI
Kondo, Taiji	MegaChips Corporation	Dexerials Corporation
Lam, Cedric	Google	Google
Lambert, Angela		Corning Incorporated
Law, David	Hewlett Packard Enterprise	Hewlett Packard Enterprise
Lawson, Matthew	Cisco Systems, Inc.	Cisco Systems, Inc.
Le Cheminant, Greg	Keysight Technologies	Keysight Technologies

Lewis, David	Lumentum Inc.	Lumentum Inc.
Li, Mike-Peng	Intel Corporation	Intel Corporation
Li, Pei-Rong	MediaTek Inc.	MediaTek Inc.
Li, Silas	Alphawave	Alphawave
Lieder, Eyal	Marvell	Marvell Semiconductor, Inc.
Lim, Jane	Cisco Systems, Inc.	Cisco Systems, Inc.
Lin, Youxi	Huawei Technologies Duesseldorf GmbH	Huawei Technologies Co., Ltd
Little, Terrance	Foxconn Electronics Inc.	Foxconn Electronics Inc.
Liu, Cathy	Broadcom Corporation	Broadcom Corporation
Liu, Hai-Feng	HG Genuine	HG Genuine
LIU, XIANG	Huawei R&D USA	Huawei Technologies Co., Ltd
Liu, Xiaoxuan	ZTE	ZTE
Liu, Yuqiao	Maxlinear	MAXLINEAR INC
Lusted, Kent	Intel Corporation	Intel Corporation
Maki, Jeffery	Juniper Networks, Inc.	Juniper Networks, Inc.
Malicoat, David	Malicoat Networking Solutions	Malicoat Networking Solutions; SENKO Advanced Components
Maniloff, Eric	Ciena Corporation	Ciena Corporation
Marques, Flavio	FURUKAWA ELECTRIC	FURUKAWA ELECTRIC
Marris, Arthur	Cadence Design Systems, Inc.	Cadence Design Systems, Inc.
Mcclellan, Brett	Marvell Semiconductor, Inc.	Marvell Semiconductor, Inc.
McMillan, Larry	Western Digital	Western Digital
Mellitz, Richard	Samtec, Inc.	Samtec, Inc.
mi, guangcan	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd
Moorwood, Charles	Keysight Technologies	Keysight Technologies
Muller, Shimon	Enfabrica Corp.	Enfabrica Corp.
Murty, Ramana	Broadcom Inc.	Broadcom Corporation
Muth, Karlheinz	Broadcom Corporation	Broadcom Corporation
Nakamoto, Edward	Spirent Communications	Spirent Communications
Nering, Raymond	Cisco Systems, Inc.	Cisco Systems, Inc.
Nicholl, Gary	Cisco Systems, Inc.	Cisco Systems, Inc.
Nicholl, Shawn	Xilinx	Advanced Micro Devices (AMD)
Ninomiya, Takuya	Senko	Senko Advanced Components
Noujeim, Leesa	Google	Google
Nowell, Mark	Cisco Systems, Inc.	Cisco Systems, Inc.
Ofelt, David	Juniper Networks, Inc.	Juniper Networks, Inc.
Omori, Kumi	NEC Corporation	NEC Corporation
Opsasnick, Eugene	Broadcom Inc.	Broadcom Inc.
Palkert, Thomas	Macom & Samtec	Samtec-Macom
PARK, CHUL SOO	Juniper Networks Inc.	Juniper Networks, Inc.
Parkholm, Ulf	Telefon AB LM Ericsson	Telefon AB LM Ericsson
Parsons, Earl	CommScope, Inc.	CommScope, Inc.
Patra, lenin	Marvell Semiconductor, Inc.	Marvell Semiconductor, Inc.
peng, semmy		Huawei Technologies Co., Ltd
Pepper, Gerald	Keysight Technologies	Keysight Technologies
Pham, Phong	US Conec, Ltd.	EastPoint

Piehler, David	Dell Technologies	Dell
Qinhui, Huang	Huawei	Huawei
Quan, Yu	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd
Rabe, Peter	East Point	East Point
Rabinovich, Rick	Keysight Technologies	Keysight Technologies
Rahn, Jeffrey	Facebook	Facebook
Ramesh, Sridhar	MaxLinear	MAXLINEAR INC
Ran, Adee	Cisco Systems, Inc.	Cisco Systems, Inc.
Regan, James		UNH-IOL
Ren, Hao	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd
Rodes, Roberto	II-VI	II-VI
Rush, Joshua	UNH-IOL	UNH-IOL
Sakai, Toshiaki	Socionext Inc.	socionext
Savi, Olindo	Hubbell Incorporated	Hubbell Incorporated
Sedarat, Hossein	Ethernovia	Ethernovia
Shanbhag, Megha	Tyco	TE Connectivity
She, Qingya	Fujitsu Network Communications	Fujitsu Network Communications
Shefi, Nicole	Banias Labs	Banias Labs
Shoval, Ayal	Synopsys, Inc.	Synopsys, Inc.
Shrikhande, Kapil	Marvell Semiconductor, Inc.	Marvell Semiconductor, Inc.
Shukla, Priyank	Synopsys, Inc.	Synopsys, Inc.
Sikkink, Mark		Hewlett Packard Enterprise
Simms, William	NVIDIA Corporation	NVIDIA Corporation
Sinn, Peter		Alphawave IP
Slavick, Jeff	Broadcom Inc	Broadcom Inc
Sluyski, MIke	Cisco Systems, Inc.	Cisco Systems, Inc.
Sommers, Scott	Molex LLC	Molex Incorporated
Son, Yung Sung	Optomind Inc	Optomind Inc
Sorbara, Massimo	GLOBALFOUNDRIES	GLOBALFOUNDIRES
Souvignier, Tom	Broadcom Corporation	Broadcom Corporation
Sprague, Edward	Infinera Corporation	Infinera Corporation
Srivastava, Atul	NEL-America	NTT Electronics
Stassar, Peter	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd
Stone, Robert	Broadcom Corporation	Meta
Sun, Junqing	Credo Semiconductor	Credo Semiconductor
Sun, Yi		OFS
TAKAHARA, TOMOO	FUJITSU LABORATORIES LIMITED	FUJITSU LIMITED
Tang, Yi		
Tazebay, Mehmet	Broadcom	Broadcom
Theodoras, James	HG Genuine	HG Genuine
Tooyserkani, Pirooz	Cisco Systems, Inc.	Cisco Systems, Inc.
Torza, Anthony		Cisco Systems, Inc.
Tracy, Nathan	TE Connectivity	TE Connectivity
Tran, Viet	Keysight Technologies	Keysight Technologies
Ulrichs, Ed	Intel Corporation	Intel Corporation
Venkataraman, Srinivas		Facebook

Wang, Haojie	China Mobile Communications Corporation (CMCC)	China Mobile Communications Corporation (CMCC)
Wang, Ruoxu	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd
Wang, Sharon	Semtech	Semtech
Wang, Xinyuan	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd
Way Winston	NeoPhotonics	NeoPhotonics
Weaver, James	Arista Networks	Arista Networks
Welch, Brian	Cisco Systems, Inc.	Luxtera
Williams, Tom	Cisco Systems, Inc.	Cisco Systems, Inc.
Wu, Mau-Lin	MediaTek Inc.	MediaTek Inc.
Xu, Sunny		CommScope, Inc.
Xu, Yu	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd
Yin, Shuang		Google
Yu, Rangchen	SiFotonics	SiFotonics
Zengchao, Yan	Huawei	Huawei
Zhang, Huijan	Huawei	Huawei
Zhao, Ying	Aloe Semiconductor	Aloe Semiconductor, Inc.
Zhong, Qiwen	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd
Zhou, Xiang		Google
Zhuang, Yan	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd
Zimmerman, George	CME Consulting	APL Group, Cisco, CommScope, Marvell, Sen Tekse
Zivny, Pavel	Tektronix, Inc.	Tektronix, Inc.

Attendees (Thursday, 14 July 2022, Based on IMAT, Zoom, Attendance Books)

Participant	Employer	Affiliation
Akbaba, Enis	Analog Devices Inc.	Analog Devices Inc.
Ben-Artsi, Liav	Marvell Semiconductor, Inc.	Marvell Semiconductor, Inc.
Bernier, Eric		Huawei Technologies Canada; Huawei Technologies Co., Ltd
Bliss, William	Broadcom Corporation	Broadcom Corporation
Bois, Karl	NVIDIA Corporation	NVIDIA Corporation
Boyle, Vincent	NSA	NSA/CSD
Brooks, Paul	Viavi solutions GmbH	Viavi Solutions
Brown, Matt	Huawei	Huawei
Bruckman, Leon	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd
Calvin, John	Keysight Technologies	Keysight Technologies
Cassan, Dave	Alphawave	Alphawave
Castro, Jose	Panduit	Panduit Corp.
Chang, Frank	Source Photonics	
Chang, Xin	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd
Chang, Yongmao	Inphi Corporation	Source Photonics
Chen, Chan	Applied Optoelectronics, Inc.	Applied Optoelectronics, Inc.
Chen, Chin-Hui		Meta Platforms
cheng, weiqiang		China Mobile Communications Corporation (CMCC)
Choudhury, Golam	OFS	OFS
Cole, Chris	Quintessent	Quintessent
D'Ambrosia, John	Futurewei Technologies	Futurewei Technologies, U.S. Subsidiary of Huawei
Dawe, Piers J G	NVIDIA	Nvidia
de Koos, Andras	Microchip Technology, Inc.	Microchip Technology, Inc.
Deandrea, John	Finisar Corporation	Finisar Corporation
Dube, Kathryn	UNH-IOL	UNH-IOL
Dudek, Michael	Marvell	Marvell
Dumais, Patrick		Huawei Technologies Co., Ltd
Effenberger, Frank	Futurewei Technologies	Futurewei Technologies
Estes, David	Spirent Communications	Spirent Communications
FAn, DAWEI	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd
Ferretti, Vince	Corning	Corning
Feyh, German	Broadcom	Broadcom
Fortin, Eric	Nokia	Nokia
Frlan, Edward	Semtech	Semtech
Gao, Xiangrong	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd
Geng, Limin	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd
Ghiasi, Ali	Ghiasi Quantum	Ghiasi Quantum, Marvell
Gore, Brandon	Samtec, Inc.	Samtec, Inc.
Gorshe, Steven Scott	Microchip Technology, Inc.	Microchip Technology, Inc.
Grow, Robert	RMG Consulting	RMG Consulting, KDPOF
Gru, Jao	Centec	Centec
Gustlin, Mark	Cisco Systems, Inc.	Cisco Systems, Inc.
Haasz, Jodi	IEEE SA	IEEE SA
Hajduczenia, Marek	Charter Communications	Charter Communications

Han, Ruibo	CMCC	CMCC
harley James	Ciena Corporation	Ciena Corporation
He, Xiang	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd
Healey, Adam	Broadcom	Broadcom
Heck, Howard	Intel Corporation	Intel Corporation
Henari, Hirase	AGC	AGC
Hess, David	Cord Data	Cord Data
Hidaka, Yasuo	Credo Semiconductor	Credo Semiconductor
Hideki, Isono	IGS Consulting	Fujitsu Optical Components Limited
Huang, Kechao	Huawei Technologies Co., Ltd.	Huawei Technologies Co., Ltd.
HUANG, QINHUI	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd
Huber, Thomas	Nokia	Nokia
Ingham, Jonathan	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd
ISHIBE, KAZUHIKO	Anritsu Company	Anritsu Company
Isono, Hideki	Fujitsu Optical Components Limited	Fujitsu Optical Components Limited
Issenhuth, Tom	Issenhuth Consulting, LLC	Huawei Technologies Co., Ltd
Jackson, Kenneth	Sumitomo Electric Device Innovations, USA	Sumitomo Electric Industries, LTD
Jafari, Amir	Semtech	Semtech
Jiang, Chendi	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd
Johnson, John	Broadcom Corporation	Broadcom Corporation
Kareti, Upen	Cisco Systems, Inc.	Cisco Systems, Inc.
Kawatsu, Yasuaki	Apresia Systems	Apresia Systems
Kazuhio, Ishibe	Anritsu Company	Anritsu Company
Kechao, Huang	Huawei	Huawei
Kim, Kihong/Joshua	Hirose Electric (USA), Inc.	Hirose Electric (USA), Inc.
Kim, Yongbum	Tenstorrent	Tenstorrent
Klingensmith, William	U.S. Federal Government	DoD
Kochuparambil, Beth	Cisco Systems, Inc.	Cisco Systems, Inc.
Kocsis, Sam	Amphenol Corporation	Amphenol Corporation
Koehler, Daniel	MorethanIP	Synopsys, Inc.
Koeppendoerfer, Erwin	LEONI Kabel GmbH	LEONI
Kondo, Taiji	MegaChips Corporation	Dexerials Corporation
Lackner, Hans	QoSCom GmbH	QoSCom - Quality in Communications - GmbH
Lam, Cedric		Google
Lambert, Angie	Corning	Corning
Law, David	Hewlett Packard Enterprise	Hewlett Packard Enterprise
Lawson, Matt	Cisco Systems, Inc.	Cisco Systems, Inc.
Le Cheminant, Greg	Keysight Technologies	Keysight Technologies
Lewis, David	Lumentum Inc.	Lumentum Inc.
Li, Mike-Peng	Intel Corporation	Intel Corporation
Li, Pei-Rong	MediaTek Inc.	MediaTek Inc.
Li, Silas Siu-Kuen	alphawave IP	alphawave IP
Lieder, Eyal	Marvell Semiconductor, Inc.	Marvell Semiconductor, Inc.
Lim, Jane	Cisco Systems, Inc.	Cisco Systems, Inc.
Lin, Youxi	Huawei Technologies Duesseldorf GmbH	Huawei Technologies Co., Ltd
Liu, Cathy	Broadcom Corporation	Broadcom Corporation
Liu, Hai-Feng	HG Genuine	HG Genuine

LIU, XIANG	Huawei R&D USA	Huawei Technologies Co., Ltd
liu, xiaoxuan		ZTE Corporation
Lusted, Kent	Intel Corporation	Intel Corporation
Maki, Jeffery	Juniper Networks, Inc.	Juniper Networks, Inc.
Malicoat, David	Malicoat Networking Solutions	Malicoat Networking Solutions; SENKO Advanced Components
Maniloff, Eric	Ciena Corporation	Ciena Corporation
Marques, Flavio	FURUKAWA ELECTRIC	FURUKAWA ELECTRIC
Marris, Arthur	Cadence Design Systems, Inc.	Cadence Design Systems, Inc.
Mcclellan, Brett	Marvell Semiconductor, Inc.	Marvell Semiconductor, Inc.
McMillan, Larry	Western Digital Corporation	Western Digital Corporation
Mellitz, Richard	Samtec, Inc.	Samtec, Inc.
mi, guangcan	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd
Moorwood, Charles	Keysight Technologies	Keysight Technologies
Mueller, Thomas	Rosenberger	Rosenberger
Muller, Shimon	Enfabrica Corp.	Enfabrica Corp.
Murty, Ramana	Broadcom Inc.	Broadcom Corporation
Muth, Karlheinz	Broadcom Corporation	Broadcom Corporation
Nakamoto, Edward	Spirent Communications	Spirent Communications
Nering, Raymond	Cisco Systems, Inc.	Cisco Systems, Inc.
Nicholl, Gary	Cisco Systems, Inc.	Cisco Systems, Inc.
Nicholl, Shawn	Xilinx	Advanced Micro Devices (AMD)
Ninomiya, Takuya	Senko Advanced Components	Senko Advanced Components
Nowell, Mark	Cisco Systems, Inc.	Cisco Systems, Inc.
Ofelt, David	Juniper Networks, Inc.	Juniper Networks, Inc.
Omori, Kumi	NEC Corporation	NEC Corporation
Opsasnick, Eugene	Broadcom Inc.	Broadcom Inc.
Palkert, Thomas	Macom & Samtec	Samtec-Macom
PARK, CHUL SOO	Juniper Networks Inc.	Juniper Networks, Inc.
Parkholm, Ulf	Telefon AB LM Ericsson	Telefon AB LM Ericsson
Parsons, Earl	CommScope, Inc.	CommScope, Inc.
Patra, Lenin	Marvell	Marvell
peng, semmy		Huawei Technologies Co., Ltd
Pepper, Gerald	Keysight Technologies	Keysight Technologies
Pham, Phong	East Point	EastPoint
Piehler, David	Dell Technologies	Dell
Quan, Yu	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd
Rabe, Peter	East Point	East Point
Rabinovich, Rick	Keysight Technologies	Keysight Technologies
Rahn, Jeffrey	Facebook	Facebook
Ran, Adee	Cisco Systems, Inc.	Cisco Systems, Inc.
Regan, James	UNH-IOL	UNH-IOL
Ren, Hao	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd
Rodes, Roberto	II-VI	II-VI
Sakai, Toshiaki	Socionext Inc.	socionext
Savi, Olindo	Hubbell Incorporated	Hubbell Incorporated
Shanbhag, Megha	TE	TE
Shoval, Ayal	Synopsys, Inc.	Synopsys, Inc.

Shrikhande, Kapil	Marvell Semiconductor, Inc.	Marvell Semiconductor, Inc.
Shukla, Priyank	Synopsys, Inc.	Synopsys, Inc.
Sikkink, Mark		Hewlett Packard Enterprise
Simms, William	NVIDIA Corporation	NVIDIA Corporation
Sinn, Peter	Alphawave	Alphawave IP
Slavick, Jeff	Broadcom Inc	Broadcom Inc
Sluyski, MIke	Cisco Systems, Inc.	Cisco Systems, Inc.
Sommers, Scott	Molex LLC	Molex Incorporated
Son, Yung Sung	Optomind Inc	Optomind Inc
Sorbara, Massimo	GLOBALFOUNDRIES	GLOBALFOUNDIRES
Sprague, Edward	Infinera Corporation	Infinera Corporation
Srivastava, Atul	NEL-America	NTT Electronics
Stassar, Peter	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd
Stone, Robert	Broadcom Corporation	Meta
SU, CHANGZHENG		Huawei Technologies Co., Ltd
Sun, Wensheng	Marvell Semiconductor, Inc.	Marvell Semiconductor, Inc.
Sun Phil	Credo Semiconductor	Credo Semiconductor
Sun, Yi	OFS	OFS
Sydow, Cristian	Maxlinear	Maxlinear
TAKAHARA, TOMOO	FUJITSU LABORATORIES LIMITED	FUJITSU LIMITED
Theodoras, James	HG Genuine	HG Genuine
Tooyserkani, Pirooz	Cisco Systems, Inc.	Cisco Systems, Inc.
Tracy, Nathan	TE Connectivity	TE Connectivity
Tran, Viet	Keysight Technologies	Keysight Technologies
Tsuzaki, Nozomi	Independent	Independent
Ulrichs, Ed	Intel Corporation	Intel Corporation
venkataraman, Srinivas	Meta	Meta
Wang, Haojie	China Mobile Communications Corporation (CMCC)	China Mobile Communications Corporation (CMCC)
Wang, Ruoxu	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd
Wang, Sharon	Sentech	Sentech
Wang, Xinyuan	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd
Weaver, James	Arista Networks	Arista Networks
Welch, Brian	Cisco Systems, Inc.	Luxtera
Wensheng, Sun	Marvell	Marvell
Williams, Tom	Cisco Systems, Inc.	Cisco Systems, Inc.
Withey, James	Fluke Corporation	Fluke Corporation
Wu, Mau-Lin	MediaTek Inc.	MediaTek Inc.
Wu, Peter	Marvell Semiconductor, Inc.	Marvell Semiconductor, Inc.
Xu, Sunny		CommScope, Inc.
Xu, Yu	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd
yan, zengchao		Huawei Technologies Co., Ltd
Yin, Shuang	Google	Google
Yu, Quan	Huawei	Huawei
Zhang, Huijian	Hisilicon OE	Hisilicon OE
Zhang, Tingting		Huawei Technologies Co., Ltd
Zhong, Qiwen	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd
Zhou, Xiang		Google

Zhuang, Yan	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd
Zivny, Pavel	Tektronix, Inc.	Tektronix, Inc.