

4 May 2023 Ad hoc Electronic Teleconference Meeting

Approved Meeting Minutes, Prepared by Kent Lusted

Meeting called to order at ~6:30 am (all times Pacific) by Kent Lusted, who was chairing the meeting.

Chair noted that individuals should fill out IMAT information for attendance.

Presentation #1	Agenda
Presenter	Kent Lusted
URL	https://www.ieee802.org/3/dj/public/adhoc/electrical/23_0504/agenda_3dj_01_adhoc_230504.pdf

Questions were asked and answered.

The chair asked if there were any modifications for the agenda (See slide #2) – there were none.

There were no objections to the approval of the agenda, and it was considered approved by unanimous consent.

Ad hoc chair noted that the minutes for the 20 April 2023 electrical ad hoc were posted to the website. (see: https://www.ieee802.org/3/dj/public/adhoc/electrical/23_0420/minutes_3dj_elec_230420_unapproved.pdf) He asked if there were corrections or modifications to the posted minutes. No one responded. He asked if there was objection to approving the posted minutes. No one responded. The minutes from 20 April 2023 were approved by unanimous consent.

The chair noted an email had been sent out to the reflector reminding individuals to review the following IEEE SA policies-

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

Chair asked if anyone needed any of these policies reviewed in-depth. There were no requests.

Chair presented the third slide (See Slide #26) 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 #31) 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 #35) 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 reminded participants of the IEEE Code of Ethics and Code of Conduct. (see slide #34)

The chair reviewed meeting decorum. See Slide #5.

The chair reviewed voting. See Slide #9.

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

Chair reminded participants to declare their affiliation in the online meeting. Failure to do so would result in expulsion from the meeting.

Task Force Chair noted that presentation requests for the May interim meeting are due 4 May 2023, AOE.

Presentation #2	Action Item: Project Scope Issues: Active Cables
Presenter	John D’Ambrosia
URL	https://www.ieee802.org/3/dj/public/adhoc/electrical/23_0504/dambrosia_3dj_elec_01_230504.pdf

Questions were asked and answered.

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

Chair reminded participants to declare their affiliation in the online meeting. Failure to do so would result in expulsion from the meeting.

Presentation #3	Analysis for Noise Coloring Effect on MLSE COM Using Error Events
Presenter	Hossein Shakiba
URL	https://www.ieee802.org/3/dj/public/adhoc/electrical/23_0504/shakiba_3dj_elec_01a_230504.pdf

Questions were asked and answered.

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

Chair reminded participants to declare their affiliation in the online meeting. Failure to do so would result in expulsion from the meeting.

Presentation #4	Error Propagation Analysis of MLSE
Presenter	Hossein Shakiba
URL	https://www.ieee802.org/3/dj/public/adhoc/electrical/23_0504/shakiba_3dj_elec_02_230504.pdf

Questions were asked and answered.

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

Presentation #5	212 Gb/s PAM4 per Lane C2M Channels Frequency Range and Rx Filter
Presenter	Rick Rabinovich
URL	https://www.ieee802.org/3/dj/public/adhoc/electrical/23_0504/rabinovich_3dj_elec_01b_230504.pdf

Author had an updated contribution with additional supporters and contributors in version '01b'.

Questions were asked and answered.

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

Presentation #6	200 Gb/s PAM4 Channel Sweep Designs for “Near Package Connector (NPC) KR Cabled Backplane” and “C2C with 1 Connector” Topologies with crosstalk update
Presenter	Rich Mellitz
URL	https://www.ieee802.org/3/dj/public/adhoc/electrical/23_0504/mellitz_3dj_elec_01_230504.pdf

Ad hoc chair noted that the channel contributions were posted to the Task Force Tools and Channels webpage. (see: <https://www.ieee802.org/3/df/public/tools/index.html>)

Questions were asked and answered.

Presentation #7	200 Gb/s per lane KR Backplane Objective Proposal – Status Report
Presenter	Rich Mellitz
URL	https://www.ieee802.org/3/dj/public/adhoc/electrical/23_0504/mellitz_3dj_elec_04a_230504.pdf

Author noted that he had an updated version with a change on slide 5. Chair asked if there was opposition to hearing the updated contribution. No one responded. Author would provide an updated version '04a'.

Ad hoc Chair summarized the feedback. He asked if there was any objection to proceeding with X=40 for consideration at the May interim meeting. No one objected.

Questions were asked and answered.

Kent Lusted passed the meeting chair responsibilities to Mark Nowell.

Presentation #8	200 Gbps/lane AUI C2M Channel Selection Criteria
Presenter	Kent Lusted
URL	https://www.ieee802.org/3/dj/public/adhoc/electrical/23_0504/lusted_3dj_elec_01_230504.pdf

Questions were asked and answered.

Kent Lusted resumed the meeting Chair responsibility.

Task Force Chair noted that presentation requests for the May interim meeting are due 4 May 2023, AOE.

Meeting adjourned at ~9:25 a.m. Pacific.

Attendees (per IMAT)

Name	Employer	Affiliation
Akinwale, Oluwafemi		Intel Corporation
BakroNagy, Istvan	Cisco Systems, Inc.	Cisco Systems, Inc.
Beauregard, Francois	Belden Canada ULC	Belden
Ben-Artzi, Liav	Marvell Semiconductor, Inc.	Marvell Semiconductor, Inc.
Bernier, Eric	Huawei Technologies Canada Co., Ltd.	Huawei Technologies Canada Co., Ltd.
Bruckman, Leon	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd
Calvin, John	Keysight Technologies	Keysight Technologies
Cassan, Dave	Alphawave	Alphawave
Chappell, Neveia	Keysight Technologies	Keysight Technologies
Choe, Denz		BeCe Pte Ltd
D'Ambrosia, John	Futurewei Technologies, U.S. Subsidiary of Huawei	Futurewei Technologies, U.S. Subsidiary of Huawei
Dawe, Piers J G	NVIDIA	Nvidia
Deandrea, John	Finisar Corporation	Finisar Corporation

Name	Employer	Affiliation
Del Vecchio, Peter		Broadcom Corporation
Didde, Stephen	Keysight Technologies	Keysight Technologies
Dudek, Michael	Marvell	Marvell
Dumais, Patrick		Huawei Technologies Co., Ltd
Erven, Chad	Semtech Ltd	Semtech Ltd
Ewen, John	None - Self-funded	None - Self-funded
Ghiasi, Ali	Ghiasi Quantum LLC	Ghiasi Quantum LLC; Marvell Semiconductor, Inc.
Gore, Brandon	Samtec, Inc.	Samtec, Inc.
Gustlin, Mark	Cisco Systems, Inc.	Cisco Systems, Inc.
Healey, Adam	Broadcom Inc.	Broadcom Inc.
Heck, Howard	Intel	Intel
Hegde, Rajmohan	Broadcom Corporation	Broadcom Ltd.
Hidaka, Yasuo	Credo Semiconductor	Credo Semiconductor
Huang, Howard		Synopsys, Inc.
Huang, Kechao	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd

Name	Employer	Affiliation
Hutchins, Jeff	Ranovus	Ranovus
Ingham, Jonathan	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd
Jiang, Chendi	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd
Jiang, Chenhui		Sicoya GmbH
Kim, Inho	MaxLinear	MaxLinear
Kim, Kihong/Joshua	Hirose Electric (USA), Inc.	Hirose Electric (USA), Inc.
Koch, Lavi		Lavi Koch Nvidia
Lapierre, Dominic		EXFO Inc.
Le Cheminant, Greg	Keysight Technologies	Keysight Technologies
Levin, Itamar		Intel Corporation
Li, Mike-Peng	Intel	Intel
Li, Pei-Rong	MediaTek Inc.	MediaTek Inc.
Liu, Cathy	Broadcom Corporation	Broadcom Corporation
Liu, Karen	Nubis Communications	Nubis Communications
Lu, Yuchun	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd
Lusted, Kent	Intel	Intel

Name	Employer	Affiliation
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
Mellitz, Richard	Samtec, Inc.	Samtec, Inc.
Moorwood, Charles	Keysight Technologies	Keysight Technologies
Muller, Shimon	Enfabrica Corp.	Enfabrica
Muth, Karlheinz	Broadcom Corporation	Broadcom Corporation
Nering, Raymond	Cisco Systems, Inc.	Cisco Systems, Inc.
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

Name	Employer	Affiliation
PARK, CHUL SOO	Juniper Networks Inc.	Juniper Networks, Inc.
Rabinovich, Rick	Keysight Technologies	Keysight Technologies
Ran, Adee	Cisco Systems, Inc.	Cisco Systems, Inc.
Rechtman, Zvi	NVIDIA	NVIDIA
Ren, Hao	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd
Rodes, Roberto	II-VI	II-VI
Sakai, Toshiaki	Socionext Inc.	socionext
Sella, Omer		Imperial College London
Shoval, Ayal	Synopsys, Inc.	Synopsys, Inc.
Shukla, Priyank	Synopsys, Inc.	Synopsys, Inc.
Sikkink, Mark	Hewlett Packard Enterprise	Hewlett Packard Enterprise
Simms, William	NVIDIA Corporation	NVIDIA Corporation
Sommers, Scott	Molex LLC	Molex Incorporated
Son, Yung Sung	Optomind Inc	Optomind Inc

Name	Employer	Affiliation
Sorbara, Massimo	GLOBALFOUNDRIES	GLOBALFOUNDRIES
Summers, Robert		Broadcom Corporation
Weaver, James	Arista Networks	Arista Networks
Wong, Henry		Alphawave Semi
Wu, Mau-Lin	MediaTek Inc.	MediaTek Inc.
Yin, Shuang		Google
Zhiwei, Yang	ZTE Corporation	ZTE Corporation
Zhuang, Yan	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd