

23 February 2023 Ad hoc Electronic Teleconference Meeting

Approved Meeting Minutes, Prepared by Kent Lusted and John D’Ambrosia

Meeting called to order at ~6:35 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 and General Information

Presenter: Kent Lusted

URL https://www.ieee802.org/3/dj/public/adhoc/electrical/23_0223/agenda_3dj_01a_adhoc_230223.pdf

Chair noted a date error in the agenda slide 2. He would provide an updated agenda version ‘a’ with the correction.

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.

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 #24) 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 #29) 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 #33) 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.”

The chair reviewed meeting decorum. See Slide #3.

The chair reviewed voting. See Slide #7.

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

Presentation #2	A Path toward Incorporating Advanced Signal Processing in Electrical Channel Performance Assessment-Recap
Presenter	Hossein Shakiba

URL	https://www.ieee802.org/3/dj/public/adhoc/electrical/23_0223/shakiba_3dj_elec_01_230223.pdf
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Questions were asked and answered.

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

Break at 8:05 a.m. pacific. Resumed at 8:10 a.m.

Presentation #3	COM 4.0 Update: COM Post Processing for Receivers which Utilize a Maximum Likelihood Sequence Estimate (MLSE)
Presenter	Rich Mellitz
URL	https://www.ieee802.org/3/dj/public/adhoc/electrical/23_0223/mellitz_3dj_elec_01a_230223.pdf

Author would provide COM version 4.0 for posting to the Task Force website. Author to provide updated contribution version "a" that includes a reference channel diagram.

Questions were asked and answered.

Straw Poll #1

I support continuing exploration of inclusion of MLSE effect in the COM methodology in Annex 93A.

Y: 41, N: 5

Straw Poll #2

I would support inclusion of the MLSE effect in the COM reference receiver for CR and KR PMDs.

Y: 26, N: 2, NMI: 22

Straw Poll #3

I would support inclusion of the MLSE effect in the reference receiver for high-loss (e.g. ~ 36 dB bump to bump) C2M AUI.

Y: 15, N: 3, NMI: 32

Straw Poll #4

I would support inclusion of the MLSE effect in the reference receiver for medium-loss (e.g. ~22 dB bump to bump) C2M AUI.

Y: 10, N: 17, NMI: 23

Kent Lusted summarized the feedback provided on the MLSE topic: more information on worst case improvements, difference in existing COM vs. the proposed method, results with colored noise.

Kent Lusted noted that he would not give his presentation "AUI C2M Interfaces: Link Training or not?" due to a lack of meeting time. The contribution would remain posted to the ad hoc website. He encouraged participants to review the contribution and send responses over the electrical ad hoc email reflector.

Task Force Chair Mr. D'Ambrosia noted he would continue to prioritize contributions with multiple co-authors and multiple affiliations. He reminded participants to continue offline consensus building in advance of the March Plenary meeting. He also noted that Registration Fees are required for all individuals who participate in the March Plenary session(s).

Ad hoc chair reviewed future meetings and reminded participants of the IEEE 802.3 March plenary session. Additional electrical ad hoc meetings would be scheduled after the March plenary meeting and would be announced over the email reflector. Task Force Chair Mr. D'Ambrosia noted that requests for presentations for the March Plenary session were due Thursday, 2 March 2023.

Meeting adjourned at ~9:28 am Pacific.

Attendees (per IMAT)

Name	Employer	Affiliation
Akbaba, Enis	Analog Devices Inc.	Self Employed
Ben-Artzi, Liav	Marvell Semiconductor, Inc.	Marvell Semiconductor, Inc.
Bernier, Eric	Huawei Technologies Canada Co., Ltd.	Huawei Technologies Canada Co., Ltd.
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
Chappell, Neveia		Keysight Technologies
Chen, Chan	Self Employed	Applied Optoelectronics, Inc.
cheng, weiqiang	China Mobile Limited	China Mobile Limited
Choe, Denz		BeCe Pte Ltd
Choudhury, Golam	OFS	OFS
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
Del Vecchio, Peter		Broadcom Corporation

Name	Employer	Affiliation
Diminico, Christopher	M C Communications, LLC	Panduit Corp.
Dudek, Michael	Marvell	Marvell
Dumais, Patrick		Huawei Technologies Co., Ltd
Ewen, John	Marvell	Marvell
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.
He, Xiang	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd
Healey, Adam	Broadcom Inc.	Broadcom Inc.
Heck, Howard	Intel	Intel
Hidaka, Yasuo	Credo Semiconductor	Credo Semiconductor
Huang, Kechao	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd
Hutchins, Jeff	Ranovus	Ranovus
Kareti, Upen	Cisco Systems, Inc.	Cisco Systems, Inc.
Kim, Inho	MaxLinear	MaxLinear
Kim, Kihong/Joshua	Hirose Electric (USA), Inc.	Hirose Electric (USA), Inc.
Klempa, Michael	Amphenol Corporation	Alphawave IP
Koch, Lavi		Lavi Koch Nvidia

Name	Employer	Affiliation
Kocsis, Sam	Amphenol Corporation	Amphenol Corporation
Kondo, Taiji	MegaChips Corporation	Dexerials Corporation
Krishnasamy, Kumaran	Broadcom Corporation	Broadcom Corporation
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
Lu, Yuchun	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd
Lusted, Kent	Intel	Intel
Malicoat, David	Malicoat Networking Solutions	Malicoat Networking Solutions; SENKO Advanced Components
Mellitz, Richard	Samtec, Inc.	Samtec, Inc.
Moorwood, Charles	Keysight Technologies	Keysight Technologies
Mu, Jianwei		Hisense
Muller, Shimon	Enfabrica Corp.	Enfabrica
MURAKAMI, YUKI		Fujitsu Limited

Name	Employer	Affiliation
Murty, Ramana	Broadcom Inc.	Broadcom Corporation
Naderi Shahi, Sina		Marvell
Nering, Raymond	Cisco Systems, Inc.	Cisco Systems, Inc.
Noujeim, Leesa	Google	Google
Ofelt, David	Juniper Networks, Inc.	Juniper Networks, Inc.
Opsasnick, Eugene	Broadcom Inc.	Broadcom Inc.
Palkert, Thomas	Macom, Samtec	Samtec-Macom
PARK, CHUL SOO	Juniper Networks Inc.	Juniper Networks, Inc.
peng, semmy		Huawei Technologies Co., Ltd
Piehler, David	Dell Technologies	Dell
Pimpinella, Rick	Panduit Corp.	Panduit Corp.
Quan, Yu	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd
Rabinovich, Rick	Keysight Technologies	Keysight Technologies
Ramesh, Sridhar	MaxLinear	MAXLINEAR INC
Ran, Adee	Cisco Systems, Inc.	Cisco Systems, Inc.
Ren, Hao	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd
Sadeghi, Saeid		Synopsys, Inc.
Sakai, Toshiaki	Socionext Inc.	socionext

Name	Employer	Affiliation
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
Sorbara, Massimo	GLOBALFOUNDRIES	GLOBALFOUNDRIES
Sun, Junqing	Credo Semiconductor	Credo Semiconductor
Tracy, Nathan	TE Connectivity	TE Connectivity
Tran, Viet	Keysight Technologies	Keysight Technologies
Wang, Haojie	China Mobile Communications Corporation (CMCC)	China Mobile Communications Corporation (CMCC)
Wang, Ruoxu	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd
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