Unconfirmed Meeting Minutes: IEEE P802.3cy Greater than 10 Gb/s Electrical Automotive Ethernet Task Force September 21, 2021 Telephonic

Prepared by Jon Lewis

IEEE P802.3cy Greater than 10 Gb/s Electrical Automotive Ethernet Task Force meeting convened at 10:03 AM (US EST), Tuesday September 21, 2021 by Steve Carlson, Task Force Chair.

Attendance is listed in Appendices A & B

Administrative Matters

Steve Carlson displayed the agenda in <u>https://www.ieee802.org/3/cy/public/sep21/agenda_3cy_01d_0921.pdf</u>.

The Task Force Chair noted that introductions would be skipped.

Steve Carlson reviewed the agenda in <u>https://www.ieee802.org/3/cy/public/sep21/agenda_3cy_01d_0921.pdf</u>. Mr. Carlson asked if there were any modifications to the agenda, none responded.

Motion #1: Move to approve the agenda as shown in https://www.ieee802.org/3/cy/public/sep21/agenda 3cy 01d 0921.pdf M: M. Hajduczenia S: R. Boyer Approved by unanimous consent (Procedural > 50%)

<u>Motion #2:</u> Move to approve the minutes from the 3 August, 10 August, 31 August, and 7 September ad hoc teleconferences, and the 13 & 20 July Plenary teleconference meetings as posted. M: N. Wienckowski S: R. Jonsson Approved by unanimous consent (Procedural > 50%)

Mr. Carlson reviewed Task Force decorum and asked if anyone from the press was present, none responded.

Attendance, Mr. Carlson noted that the attendance for this meeting was being recorded in IMAT and noted that there was no session code for this plenary meeting series.

Mr. Carlson reviewed the Task Force organization, the goals for the meeting, access to the reflector and website, and ground rules for the meeting.

IEEE Patent Policy, at **10:17 AM**, Mr. Carlson asked if any participant had not seen the patent policy slides (agenda slides 13-17), none responded. Mr. Carlson made the call for potentially essential patents at **10:18 AM**, and none responded.

Mr. Carlson asked if anyone had not heard and needed to hear the IEEE-SA copyright policy. None responded. He showed the IEEE-SA copyright slides (agenda slides 18-20).

Mr. Carlson asked if anyone had not heard and needed to hear the IEEE-SA participation behavior policy. None responded. He showed the IEEE-SA participation behavior slide, (agenda slide 21).

Mr. Carlson asked if anyone had not heard and needed to hear the IEEE-SA participation policy on "individual process". None responded. He showed the IEEE-SA participation slides on "individual process", (agenda slides 22-23).

The Chair reviewed the IEEE 802.3 Standards process and where the Task Force was in the process and the process by which we will develop the standard.

Liaisons: None

The Chair shared the location of the Action Items for the Task Force, AKA the To – Do List, which will be reviewed and updated during the meeting.

Mr. Carlson showed the Task Force documentation (agenda slides 31-33)

Mr. Carlson reviewed Task Force virtual meetings slides from the agenda (agenda slides 34-37).

PRESENTATIONS:

Mr. Carlson then moved to the presentations for the meeting.

Title: Proposed Text for PAM4 Modulation

URL: <u>https://www.ieee802.org/3/cy/public/sep21/jonsson_etal_3cy_01a_09_21_21.pdf</u> Presenters: Ragnar Jonsson, Marvell; Mike Tu, Broadcom; Hossein Sedarat, Ethernovia

Straw Poll #1: I support adopting the modulation text for 802.3cy as described in slides 4 and 5 of jonsson_etal_3cy_01a_09_21_21.pdf. Y: 36_N: 0 Motion #3: Move to adopt modulation text for 802.3cy as described in slides 4 and 5 of jonsson etal 3cy 01a 09 21 21.pdf with editorial license to implement M: R. Jonsson S: T. Souvignier Motion Passes by Unanimous Consent (Technical >= 75%)

Title: P802.3cy To Do List URL: <u>https://ieee802.org/3/cy/todo/index.html</u> Presenter: Natalie Wienckowski, GM

The to-do list was reviewed and updated. Please see the latest list on our website.

Mr. Carlson reviewed the information on Future Meetings.

The Chair noted that the agenda had been completed and asked if there was any further business. None responded.

The meeting was recessed at 11:04 AM US EDT and will resume September 28, 2021 at 10:00 AM US EDT.

The meeting resumed at 10:02 AM US EDT on September 28, 2021 by Steve Carlson, Task Force Chair.

Steve Carlson displayed the agenda in https://www.ieee802.org/3/cy/public/sep21/agenda_3cy_01d_0921.pdf.

Mr. Carlson reviewed Task Force decorum and asked if anyone from the press was present, none responded.

Mr. Carlson reviewed the Task Force organization, the goals for the meeting, access to the reflector and website, and ground rules for the meeting.

Attendance, Mr. Carlson noted that the attendance for this meeting was being recorded in IMAT and noted that there was no session code for this plenary meeting series.

IEEE Patent Policy, at **10:07 AM**, Mr. Carlson asked if any participant had not seen the patent policy slides (agenda slides 13-17), none responded. Mr. Carlson made the call for potentially essential patents at **10:08 AM**, and none responded.

Mr. Carlson asked if anyone had not heard and needed to hear the IEEE-SA copyright policy. None responded. He showed the IEEE-SA copyright slides (agenda slides 18-20).

Mr. Carlson asked if anyone had not heard and needed to hear the IEEE-SA participation behavior policy. None responded. He showed the IEEE-SA participation behavior slide, (agenda slide 21).

Mr. Carlson asked if anyone had not heard and needed to hear the IEEE-SA participation policy on "individual process". None responded. He showed the IEEE-SA participation slides on "individual process", (agenda slides 22-23).

The Chair reviewed the IEEE 802.3 Standards process and where the Task Force was in the process and the process by which we will develop the standard.

Liaisons: None

PRESENTATIONS:

Mr. Carlson then moved to the presentations for the meeting.

Title: 802.3cy coupling- and screening attenuation

URL: <u>https://www.ieee802.org/3/cy/public/sep21/mueller_3cy_01a_09_28_21.pdf</u> Presenters: Thomas Müller, Rosenberger

Motion #4: Move to adopt the coupling- and screening attenuation requirements on slide 3 of muller_3cy_01a_09_28_21.pdf for the 802.3cy link segment screening and coupling attenuation per the measurement setup defined in Annex 149A.

M: Thomas Müller S: Natalie Wienckowski Technical >= 75% Motion Passed by unanimous consent

Title: Code for Micro-Reflection Limit

URL: <u>https://www.ieee802.org/3/cy/public/sep21/jonsson_3cy_01a_09_28_21.pdf</u> Presenters: Ragnar Jonsson, Marvell

Title: 802.3cy Test Fixture Considerations

URL: <u>https://www.ieee802.org/3/cy/public/sep21/diminico_kadry_3cy_01a_9_28_21.pdf</u> Presenters: Chris Diminico, MC Communications

Mr. Carlson noted that the next ad-hoc meeting would be converted to an interim meeting and that the date/time would be on the IEEE 802.3 meeting calendar.

Mr. Carlson then reviewed the future meetings and noted that the November plenary requires registration.

Title: P802.3cy To Do List URL: <u>https://ieee802.org/3/cy/todo/index.html</u> Presenter: Natalie Wienckowski, GM

Mr. Carlson noted that the agenda had been exhausted and adjourned the meeting **The Meeting was adjourned at 11:55 AM US EDT on September 28, 2021**

Appendix A: Attendees at the IEEE P802.3cy Greater than 10 Gb/s Electrical Automotive Ethernet Task Force, September 21, 2021.

| Name | Employer | Affiliation |
|-----------------------|------------------------------------|--------------------------------------------|
| Akin, Sami | Volkswagen AG | Volkswagen Ag |
| Andrae, Stefan | SEI ANTech-Europe GmbH | SEI ANTech-Europe GmbH |
| Aronson, Joseph | Texas Instruments Inc. | Texas Instruments Inc. |
| Boyer, Rich | Aptiv - Signal and Power Solutions | Aptiv Signal and Power Solutions |
| Brooks, Paul | Viavi solutions GmbH | Viavi Solutions |
| Brown, Matthew | Huawei Technologies Canada | Huawei Technologies Canada |
| Brychta, Michal | Analog Devices Inc. | Analog Devices Inc. |
| Carlson, Steven | High-Speed Design Inc. | HSD, Robert Bosch GmbH, Ethernovia |
| Carty, Clark | Cisco Systems, Inc. | Cisco Systems, Inc. |
| Chang, Jae-yong | | Keysight Technologies |
| Choudhury, Golam | OFS | OFS |
| Cuesta, Emilio | TE Connectivity | TE Connectivity |
| Dawson, Fred | Chemours Canada Company | Chemours Canada Company |
| DiBiaso, Eric | TE Connectivity | TE Connectivity |
| Feyh, German | Broadcom Corporation | Broadcom Corporation |
| Fischer, Peter | BKS Kabel-Service AG | BKS Kabel-Service AG |
| Fritsche, Matthias | HARTING Technologie Gruppe | HARTING Electronics GmbH |
| Gauthier, Claude | NXP Semiconductors | NXP Semiconductors |
| Graba, James | Broadcom Corporation | Broadcom Corporation |
| Graber, Steffen | Pepperl+Fuchs SE | Pepperl+Fuchs SE |
| Grow, Robert | RMG Consulting | RMG Consulting, KDPOF |
| Gubow, Martin | Keysight Technologies | Keysight Technologies |
| Hajduczenia, Marek | Charter Communications | Charter Communications |
| Huber, Christoph | | Rosenberger |
| Huszak, Gergely | Self | KONE |
| Hyakudai, Toshihisa | | Sony Corporation |
| Jonsson, Ragnar | Marvell Semiconductor, Inc. | Marvell |
| Kadry, Haysam | Ford Motor Company | Ford Motor Company |
| Kagami, Manabu | Nagoya Institute of Technology | Nagoya Institute of Technology (NITech) |
| Kocsis, Sam | Amphenol Corporation | Amphenol Corporation |
| Koeppendoerfer, Erwin | LEONI Kabel GmbH | LEONI |
| Kondo, Taiji | MegaChips Corporation | MegaChips Corporation |
| Kunz, Stephan | | Rosenberger |
| Law, David | Hewlett Packard Enterprise | Hewlett Packard Enterprise |
| Lewis, Jon | Dell Technologies | Dell Technologies |
| Marris, Arthur | Cadence Design Systems, Inc. | Cadence Design Systems, Inc. |
| MASUDA, TAKEO | OITDA | OITDA |
| Mcclellan, Brett | Marvell Semiconductor, Inc. | Marvell Semiconductor, Inc. |

| Name | Employer | Affiliation |
|-----------------------|-------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| Nering, Raymond | Cisco Systems, Inc. | Cisco Systems, Inc. |
| Neulinger, Christian | MD Elektronik | MD Elektronik |
| NIIHARA, YOSHIHIRO | Fujikura Ltd. | Fujikura Ltd. |
| Pandey, Sujan | Huawei Technologies | Huawei Technologies (Netherlands) |
| | (Netherlands) B.V. | B.V. |
| Petrarca, Ryan | TDK Corporation | TDK Corporation |
| Piehler, David | Dell Technologies | Dell |
| Preis, Roland | MD Elektronik GmbH | MD Elektronik GmbH |
| Reinhard, Michael | SEI ANTech-Europe GmbH | SEI ANTech-Europe GmbH |
| Ren, Hao | Huawei Technologies Co., Ltd | Huawei Technologies Co., Ltd |
| SAWANO, Hiroshi | OITDA (Optoelectronics Industry and Technology Development Association) | OITDA |
| Sedarat, Hossein | Ethernovia | Ethernovia |
| Shiino, Masato | FURUKAWA ELECTRIC | FURUKAWA ELECTRIC |
| Simms, William | NVIDIA Corporation | NVIDIA Corporation |
| sisk, jason | University of New Hampshire InterOperability Laboratory (UNH- IOL) | University of New Hampshire InterOperability Laboratory (UNH-IOL) |
| Souvignier, Tom | Broadcom Corporation | Broadcom Corporation |
| Sun, Yi | | OFS |
| Takahashi, Satoshi | Self Employed | Self Employed |
| Theodoras, James | HG Genuine | HG Genuine |
| Tofanicchio, Giuseppe | | STMicroelectronics |
| Torres, Luis | Knowledge Development for Plastic Optical Fiber | Knowledge Development for Plastic Optical Fiber |
| Tremblay, David | Hewlett Packard Enterprise | Hewlett Packard Enterprise |
| Tu, Mike | Broadcom Corporation | Broadcom Corporation |
| Vanderlaan, Paul | UL LLC | UL LLC |
| Wienckowski, Natalie | General Motors Company | General Motors Company |
| Wu, Peter | Marvell Semiconductor, Inc. | Marvell Semiconductor, Inc. |
| Zimmerman, George | CME Consulting | CME Consulting/ADI, APL Group, CommScope, Cisco Systems, Marvell, and SenTekse |

Appendix B: Attendees at the IEEE P802.3cy Greater than 10 Gb/s Electrical Automotive Ethernet Task Force, September 28, 2021.

| Name | Employer | Affiliation |
|-----------------------|-------------------------------------------|--------------------------------------------|
| Akin, Sami | Volkswagen AG | Volkswagen Ag |
| Aronson, Joseph | Texas Instruments Inc. | Texas Instruments Inc. |
| Boyer, Rich | Aptiv - Signal and Power Solutions | Aptiv Signal and Power Solutions |
| Carlson, Steven | High-Speed Design Inc. | HSD, Robert Bosch GmbH, Ethernovia |
| Carty, Clark | Cisco Systems, Inc. | Cisco Systems, Inc. |
| Chang, Jae-yong | | Keysight Technologies |
| DiBiaso, Eric | TE Connectivity | TE Connectivity |
| Donahue, Curtis | Rohde & Schwarz | Rohde & Schwarz |
| Dube, Kathryn | UNH-IOL | UNH-IOL |
| Feyh, German | Broadcom Corporation | Broadcom Corporation |
| Fischer, Peter | BKS Kabel-Service AG | BKS Kabel-Service AG |
| Glanzner, Martin | | SEI Automotive Europe GmbH |
| Graba, James | Broadcom Corporation | Broadcom Corporation |
| Grow, Robert | RMG Consulting | RMG Consulting, KDPOF |
| Hajduczenia, Marek | Charter Communications | Charter Communications |
| Hess, David | CORD DATA | Cord Data / Cord Data |
| Ichimaru, Toshihiro | | Sumitomo Electric Industries, LTD |
| Jonsson, Ragnar | Marvell Semiconductor, Inc. | Marvell |
| Kadry, Haysam | Ford Motor Company | Ford Motor Company |
| Kagami, Manabu | Nagoya Institute of Technology | Nagoya Institute of Technology (NITech) |
| KAWAHARA, KEISUKE | FURUKAWA ELECTRIC | FURUKAWA ELECTRIC |
| Koeppendoerfer, Erwin | LEONI Kabel GmbH | LEONI |
| Kondo, Taiji | MegaChips Corporation | MegaChips Corporation |
| Laubach, Mark | IEEE member / Self Employed | IEEE member / Self Employed |
| Law, David | Hewlett Packard Enterprise | Hewlett Packard Enterprise |
| Lewis, Jon | Dell Technologies | Dell Technologies |
| Little, Terrance | <u> </u> | Foxconn Electronics Inc. |
| Mcclellan, Brett | Marvell Semiconductor, Inc. | Marvell Semiconductor, Inc. |
| Mueller, Thomas | Rosenberger | Rosenberger |
| Neulinger, Christian | MD Elektronik | MD Elektronik |
| NIIHARA, YOSHIHIRO | Fujikura Ltd. | Fujikura Ltd. |
| Pandey, Sujan | Huawei Technologies (Netherlands) B.V. | Huawei Technologies (Netherlands) B.V. |
| Patel, Harsh | Molex LLC | Molex LLC |
| Petrarca, Ryan | TDK Corporation | TDK Corporation |
| Sedarat, Hossein | Ethernovia | Ethernovia |
| Shiino, Masato | FURUKAWA ELECTRIC | FURUKAWA ELECTRIC |

| Name | Employer | Affiliation |
|-----------------------|------------------------------|------------------------------------|
| Souvignier, Tom | Broadcom Corporation | Broadcom Corporation |
| TAZEBAY, MEHMET | Broadcom Corporation | Broadcom Corporation |
| Tofanicchio, Giuseppe | | STMicroelectronics |
| Tremblay, David | Hewlett Packard Enterprise | Hewlett Packard Enterprise |
| Tu, Mike | Broadcom Corporation | Broadcom Corporation |
| Wienckowski, Natalie | General Motors Company | General Motors Company |
| Wu, Peter | Marvell Semiconductor, Inc. | Marvell Semiconductor, Inc. |
| Zhong, Qiwen | Huawei Technologies Co., Ltd | Huawei Technologies Co., Ltd |
| Zimmerman, George | CME Consulting | CME Consulting/ADI, APL Group, |
| | | CommScope, Cisco Systems, Marvell, |
| | | and SenTekse |