July 14, 2020
Electronic Task Force meeting

Prepared by George Zimmerman, CME Consulting/ADI, Cisco, CommScope, Marvell, SenTekse (Day 1)
Prepared by Robert Voss, Panduit/Panduit (Day 2)

IEEE P802.3da 10 Mb/s Single Pair Multidrop Segments Enhancement Task Force meeting convened at 7:00AM PDT, Tuesday, July 14, 2020 by Chad Jones, as acting Chair of the Task Force.

Due to cancellation of the 802 plenary venue, related to COVID-19 pandemic concerns, the meeting was held electronically via WebEx.

Attendance is listed in Appendix A

Administrative Matters

Mr. Jones appointed George Zimmerman as recording secretary for this session.
Mr. Jones then handed control of the meeting to David Law, 802.3 Working Group chair.

Mr. Law explained that the Working Group chair appoints the Task Force Chair, and the Task Force would confirm the appointment. Mr. Law then reminded the group that he had announced his intention to appoint Chad Jones Task Force Chair and he then appointed Mr. Jones as the Task Force Chair.

Mr. Jones then left the teleconference and the following motion was made:

Motion #1: Confirm Chad Jones as the IEEE 802.3da 10 Mbps Single Pair Multidrop Segments Enhancement Task Force Chair.

M: **Bob Voss** **S:** **Peter Jones**

MOTION PASSES BY VOICE WITH UNANIMOUS CONSENT

Mr. Jones rejoined the teleconference, and Mr. Law then turned the meeting over to Task Force Chair, Chad Jones.

All presentations referenced in these minutes are located on the July 2020 IEEE P802.3da Task Force website.

This being a teleconference meeting, the Chair asked that participants introduce themselves when speaking, in lieu of a formal roll call. There was no objection.

Mr. Jones displayed the agenda in http://www.ieee802.org/3/da/public/jul20/8023da_agenda_0720.pdf

Motion #2: Move to approve the agenda for the July 2020 meeting (shown in 8023da_agenda_0720.pdf).

M: Fred Dawson   S: Gergely Huszak
Approved by voice without opposition (Procedural > 50%)
Motion Passes by voice without objection

The Chair then noted that the minutes from the final Single Pair Multidrop Enhancements Study Group, held on May 18, had been posted for some time, and heard the following motion:

<u>Motion #3</u>: Move to approve the minutes from the May 18 Single Pair Multidrop Enhancements Study Group meeting
M: Bob Voss   S: Bernd Horrmeyer
Motion passes by voice without objection (Procedural > 50%)

The chair resumed with the agenda deck.

Chair reviewed the goals for the meeting, big ticket items, access to the reflector and website, and ground rules for the meeting.

Attendance, Mr. Jones advised the group that the attendance would be taken from Webex, but that participants needed to sign into IMAT for 802.3 attendance credit. As announced by Mr. Law, attendance at a meeting on 6 unique days of the 802.3 plenary period was required for 802.3 voting rights credit.

Members of the Press, Mr. Jones asked if there were any members of the press present, none responded.

IEEE Patent Policy, Mr.Jones read aloud slides #1 and #2. Mr. Jones then made the call for potentially essential patents at **7:19 AM**, none responded. Mr. Jones then read aloud slides #3 and #4.

At this point, there was a request for clarification on the patent policy regarding patents issued vs. otherwise, and this request was deferred to D. Law. Mr. Law took the question offline.

Mr. Jones resumed review of the agenda deck, including the following items – a review of the participation policy, a review of the IEEE copyright policy, a review of the IEEE policy on dominance, and a review of the IEEE Standards process. There were no questions.

At 7:28 AM, he then completed the review of the agenda document, including that a liaison letter to 802.3 had been received from TIA TR42 and delegated to the 802.3da Task Force to consider a response.

At this time, Mr. Law came back with a response to the question on the patent policy:

The question was whether the call for patents applied to pending patents or only issued patents. Mr. Law referred to FAQ <https://standards.ieee.org/content/dam/ieee-standards/standards/web/documents/other/patents.pdf#page=3>. Specifically, item "1 – What is an Essential Patent Claim?"
With that clarification, the Chair re-issued the call for patents (7:33AM), and there were no responses.

<u>Presentations and Discussion:</u>
At 7:36AM the Chair moved on to the presentations.

Presentations: -   Steps toward baseline text – Kent Lusted, presented by Chad Jones (Cisco systems)

- http://www.ieee802.org/3/da/public/jul20/lusted_3ck_01a_0518.pdf

Liaison Received:
The Chair then moved to the liaison letter forwarded by the 802.3 chair:
TIA TR-42 liaison to IEEE on Base-T1 isolation
- http://www.ieee802.org/3/minutes/mar20/incoming/TR-42%20liaison%20to%20IEEE%20802.3%20on%20BASET1%20isolation.pdf

The liaison was received in January 2020. There was some discussion of the liaison, which referred to isolation classes and working voltages for a number of single pair applications, most of which are point-to-point.

There was discussion as to what the liaison was asking for, and a decision was made to convene an ad hoc to consider and propose a draft for response to TIA.
The Chair announced an Ad hoc would be held on Friday 7/17 at 8AM PDT.

The Chair then asked the group's consent to jump the agenda to accommodate some presentations.

Presentation: Mixing Segment Recovery/Redundancy Termination, Gergely Huszak (Kone)
The presenter discussed what happens to a mixing segment if there is a break in the cable between nodes and possible approaches to deal with this.
Questions were asked and answered.

Work Items:
The Chair (C. Jones) then moved back to the agenda item for identifying the work items, which had been circulated on the reflector: http://www.ieee802.org/3/SPMD/email/msg00143.html
He reviewed a list of potential items and edited online, posting the result as:
http://www.ieee802.org/3/da/workitems/index.html - this is intended to be a living list.

The Chair suggested others could add to the list via the reflector.

Presentation: Multidrop Classification, Heath Stewart, Analog Devices

The presenter discussed application of power and querying the link segment for what voltage PD was present. There was discussion of the assumptions of the presenter, and parameters to be discussed - questions came up, among them (not complete):
- Number of voltages to be supported
- Number of nodes to support (relationship to capacitance and inductance at the MDI)
- How are hybrid nodes (nodes that support multiple voltages) supported? (proposed as a separate data point)
- Handling hot inserts (when there isn't an opportunity to do classification)
- Classification as envisioned by the presenter is only during startup of the PSE
- Standby power (turnoff decision) isn't addressed at this time
- Relationship to "active T" presentation

Discussion concluded at 8:57AM

The Chair, noting the time and the meeting was scheduled to recess at 9am, recessed the meeting at 8:59AM.
Presentations would resume on Monday the 20th at 7am PDT.

20 July 2020 Meeting called to order by Mr. Jones (chair) at 903AM CDT

Day 2 attendance is listed in Appendix B

Chair reviewed essential slides with group, reminding TF of detailed review from 14Jul session of meeting, pointing to the slides covering the patent policy, the copyright policy, the IEE Code of Ethics and Conduct, and the IEEE Participation policy.

The Chair called on the members to register their attendance in imat.

At 908am CDT, the chair moved on to presentations

Presentation – George Zimmerman "Enhanced Multidrop with Interoperability" – what do we need?
The presenter made the case for, and highlighted some of the issue with, multidrop interoperability.
        Questions were asked and answered.

At 942am CDT, Peter Jones began **presenting** "LLDP Overview and Use Cases"
Use of LLDP as part of our negotiating mechanisms, relating to 802.3da TF Objective 3
        Questions were asked and answered.

At 1015am CDT, Chris Diminico began **presenting** "SPE Multidrop Enhancements Mixing Segment Consideration Update"
Parametric link segment model discussion
        No questions posed to presenter

AT 1036am CDT, the chair shared a work in process response to the **liaison letter** received from TIA TR42. Chair called for discussion of letter. It was pointed out that the letter was addressed to the chair of 802.3cg, which has concluded its work. It was suggested that the letter make note that 802.3cg is complete. The TF Chair will discuss with the WG chair and add this to the letter before presenting in the Thursday closing meeting if needed.

At 1040am CDT, the chair presented "Project Timeline" presentation
        Chair asked for input to and discussion of proposed timeline. It was suggested that the timeline wasn't aggressive enough and the group decided to remove on cycle from TF review.

1045am CDT:
Motion #4: Move to adopt proposed timeline as the IEEE P802.3da timeline
        M = Peter Jones   S = George Zimmerman
Motion passes by voice with unanimous consent

Future Meetings
        September interim likely to be teleconference, week of 21Sept2020
        November plenary will be a teleconference, week of 09Nov2020
        January 2021 Interim, week of 18Jan2021
        Ad Hoc Meeting series
        The chair announced the continuation of the standing Ad Hoc meeting series. Meetings between now and the assumed September teleconference meetings: August 12, August 26, September 29

The chair then appointed two Ad Hoc chairs:
George Zimmerman will chair an ad hoc on channel/noise model, etc. as proposed in his presentation
Peter Jones will be 802.3da ad hoc chair

Chair called for any other business – none heard

Next meeting is August 12th (ad hoc)

Having exhausted the agenda, the Chair adjourned meeting at 1058am CDT

Appendix A: Attendees at the IEEE P802.3da 10 Mb/s Single Pair Multidrop Segments Enhancement Task Force : July 14, 2020

List of attendees from Webex (**Bold** indicates logged into Webex without IMAT entry):

Anthony New	Masood Shariff
Ari Kattainen	Matthias Fritsche (HARTING)
Arkadiy Peker	Matthias Wendt, Signify
bernd horrmeyer	Michal Brychta
Chad Jones	Mick McCarthy
chris diminico (Guest)	Navaneeth Kumar Narayanasamy
christopher pohl [Beckhoff]	**Olindo Savi**
Clark Carty	**Paul Vanderlaan (UL)**
Cornelia Eitel (Hirschmann Automation)	Peter Jones
Dachen Chiou	rich boyer
Dave Hess	Richard Pitwon
David Brandt	Rick Frosch
David Law	**Rob Aekins**
Denis Beaudoin	ROBERT GROW
Doug Oliver [Ford]	Robert Voss (PANDUIT)
Emilio Cuesta (TE Connectivity)	Ryouma Toyoda
Eric DiBiaso (Guest)	Scott Griffiths (Rockwell Automation)
Fred Dawson	Scott Wade
Geoff Thompson	Shimon Muller
George Zimmerman	Simon Mark
Gergely Huszak (Kone)	Sridhar Ramesh
Gideon Intrater (Dialog, Adesto)	Steffen Graber
Hans Lakner	steve.sedio@us.tdk.com
Haysam Kadry	**Thomas Rettig**
Heath Stewart	Thuyen Dinh
Hideki Goto (Toyota)	Tim Baggett (Microchip)
Jairo Bustos	Tobias Islinger
James Withey	Valerie Maguire
Jason Potterf	**Weiqiang**
Kae Dube	Wojciech Koczwara (Rockwell Automation)
Kirsten Matheus (BMW)	**Yan Zhuang**
Mark Dearing	Yong Kim [Axonne]
Marty Gubow (Keysight)	

List of those that logged attendance in imat (**Bold** indicates logged into IMAT without Webex entry):

Name	Affiliation
Baggett, Tim	Microchip Technology, Inc.
Beaudoin, Denis	Texas Instruments Incorporated

Boyer, Rich	Aptiv Signal and Power Solutions
Brandt, David	Rockwell Automation
Brychta, Michal	Analog Devices Inc.
Bustos Heredia, Jairo	Wurth Elektronik Group
Carty, Clark	Cisco Systems, Inc.
Chiou, Dahcen	Dan-Chief Technology
Cuesta, Emilio	TE Connectivity
Dawson, Fred	Chemours Canada Company
Dearing, Mark	Leviton Manufacturing Co.
DiBiaso, Eric	TE Connectivity
Diminico, Christopher	Panduit Corp.
Dinh, Thuyen	Pulse Electronics
Dube, Kathryn	UNH-IOL
Eitel, Cornelia	Hirschmann Automation and Control, Inc.
Ferretti, Vincent	Corning Incorporated
Fritsche, Matthias	HARTING Electronics GmbH
Frosch, Richard	Phihong USA Inc,
Goto, Hideki	Toyota Motor Corporation
Graber, Steffen	Pepperl+Fuchs AG
Griffiths, Scott	Rockwell Automation
Grow, Robert	RMG Consulting
Gubow, Martin	Keysight Technologies
Hess, David	CORD DATA
Horrmeyer, Bernd	Phoenix Contact
Huszak, Gergely	KONE
Islinger, Tobias	Infineon Technologies AG
Jones, Chad	Cisco Systems, Inc.
Jones, Peter	Cisco Systems, Inc.
Kadry, Haysam	Ford Motor Company
Kim, Yongbum	NIO
Koczwara, Wojciech	Rockwell Automation
Kumada, Taketo	Yazaki Corporation
Lackner, Hans	QoSCom - Quality in Communications - GmbH
Law, David	Hewlett Packard Enterprise
Luo, Yuanqiu	Futurewei Technologies
Maguire, Valerie	The Siemon Company
Mark, Simon	Wurth Electronik Group
Matheus, Kirsten	BMW Group
McCarthy, Mick	Analog Devices Inc.
Muller, Shimon	Axalume, Inc.
New, Anthony	Prysmian Cables & Systems
Peker, Arkadiy	Microchip Technology, Inc.
Pohl, Christopher	Beckhoff Automation
Potterf, Jason	Cisco Systems, Inc.
Ramesh, Sridhar	Maxlinear Inc
Rettig, Thomas	Beckhoff Automation
Sedio, Stephen	TDK Corporation
Shariff, Masood	CommScope, Inc.

Stewart, Heath	Analog Devices Inc.
Thompson, Geoffrey	INDEPENDENT
Toyoda, Ryouma	Yazaki Corporation
Vanderlaan, Paul	UL LLC
Voss, Robert	Panduit Corp.
Wade, Scott	DiiA
Wendt, Matthias	Signify
Withey, James	Fluke Corporation
Xu, Yu	Huawei Technologies Co. Ltd
Zimmerman, George	CME Consulting/ADI, CommScope, Cisco Systems, Marvell, and SenTekse

Appendix B: Attendees at the IEEE P802.3da 10 Mb/s Single Pair Multidrop Segments Enhancement Task Force : July 20, 2020

List of attendees from Webex (**Bold** indicates logged into Webex without IMAT entry):

Alex Ingrassia [Canova Tech]	Ichiro Ogura (PETRA)
Alex Lin	Islinger Tobias (IFAG ATV PS PSS TM SPE)
Amrit Gopal (Ford)	James Withey
Anthony New (Prysmian Group)	Jason Potterf
Arkadiy Peker	Jim Theodoras (HG Genuine)
Ayla Chang	John DeAndrea, II-Vi/Finisar
bernd horrmeyer	JOHN S ABBOTT
Bob Voss (PANDUIT)	kenghua
Chad Jones	Kirsten Matheus (BMW)
chris diminico (Guest)	Leon Bruckman (Guest)
Christopher Pohl [Beckhoff Automation]	Mark Bordogna (Intel)
Clark Carty	Mark Dearing LEVITON
Cornelia Eitel (Hirschmann)	Marty Gubow (Keysight)
Dave Hess	Masood Shariff
David D. Brandt	Matthias Wendt, Signify
David Law (HPE)	Michal Brychta (Analog Devices)
Dayin Xu (Guest)	Mick McCarthy - Analog Devices
dokim(hkmc)	Olindo Savi
Douglas Oliver [Ford]	Paul Brooks (Viavi Solutions)
Emilio Cuesta (TE Connectivity)	Paul Vanderlaan (UL)
Eric DiBiaso (Guest)	Peter Jones
Flavio Marques / Furukawa Electric	Qingya She
Fred Dawson	rich boyer
George Zimmerman	Rick Frosch
Gergely Huszak (Kone)	Rob Aekins
Gideon Intrater (Adesto)	Rory Buchanan
Hans Lackner QoSCom GmbH	Scott Griffiths (Rockwell Automation) (Guest)
Hao Ren (Huawei)	Scott Wade (DiiA)
Harry Aller (Innovative Lighting)	Simon Mark (Würth Elektronik)
Haysam Kadry	Steffen Graber (Pepperl+Fuchs SE)
Hideki Goto, Toyota	steve.sedio@us.tdk.com
Hideki Isono (FOC)	Tadashi Takahashi(Nitto Denko Corporation)
Hossein Sedarat	Taiji Kondo, MegaChips

Takayama, Kazuya (Nitto Denko Corp.)	Valerie Maguire
Takeo Masuda	Wojciech Koczwara (Rockwell Automation) (Guest)
Theo Brillhart (Fluke)	
Thomas Rettig	Xiang He (Huawei)
Thuyen Dinh	Xinyuan Wang(Huawei)
Tim Baggett (Microchip)	YANG YUMENG
Tobias Islinger, Infineon	Yasuhiro Hyakutake (AD-Na)
Tomohiro Kikuta (Adamant Namiki Precision Jewel Co., Ltd.)	Zhigang Gong (O-Net)

List of those that logged attendance in imat (**Bold** indicates logged into IMAT without Webex entry):

Name	Affiliation
Abbott, John	Corning Incorporated
Aekins, Rob	Legrand
Baggett, Tim	Microchip Technology, Inc.
bordogna, mark	Intel
Boyer, Rich	Aptiv Signal and Power Solutions
Brandt, David	Rockwell Automation
Brillhart, Theodore	Fluke Corporation
Brooks, Paul	Viavi Solutions
Bruckman, Leon	HUAWEI
Brychta, Michal	Analog Devices Inc.
Buchanan, Rory	ON Semiconductor
Carty, Clark	Cisco Systems, Inc.
Chang, Xin	Huawei Technologies Co. Ltd
Chuang, Keng Hua	Hewlett-Packard Development Company, L.P.
Cuesta, Emilio	TE Connectivity
Dawson, Fred	Chemours Canada Company
Deandrea, John	Finisar Corporation
Dearing, Mark	Leviton Manufacturing Co.
DiBiaso, Eric	TE Connectivity
Diminico, Christopher	Panduit Corp.
Dinh, Thuyen	Pulse Electronics
Eitel, Cornelia	Hirschmann Automation and Control, Inc.
Frosch, Richard	Phihong USA Inc,
Fukuoka, Takashi	AutoNetworks Technologies Ltd.; Sumitomo Electric Industries, Ltd.
Gong, Zhigang	O-Net Communications Ltd.
Goto, Hideki	Toyota Motor Corporation
Graber, Steffen	Pepperl+Fuchs SE
Griffiths, Scott	Rockwell Automation
Gubow, Martin	Keysight Technologies
Gustlin, Mark	Cisco Systems, Inc.
He, Xiang	HUAWEI
Hess, David	CORD DATA
Horner, Rita	Synopsys, Inc.
Horrmeyer, Bernd	Phoenix Contact
Huszak, Gergely	KONE
HYAKUTAKE, YASUHIRO	Adamant Namiki Precision Jewel Co., Ltd.

Intrater, Gideon	Dialog Semiconductor
ISHIBE, KAZUHIKO	Anritsu Company
Islinger, Tobias	Infineon Technologies AG
Isono, Hideki	Fujitsu Optical Components Limited
Jones, Chad	Cisco Systems, Inc.
Jones, Peter	Cisco Systems, Inc.
Kadry, Haysam	Ford Motor Company
Kikuta, Tomohiro	Adamant Namiki Precision Jewel Co., Ltd.
Koczwara, Wojciech	Rockwell Automation
Kondo, Taiji	MegaChips Corporation
Lackner, Hans	QoSCom - Quality in Communications - GmbH
Lim, Jane	Cisco Systems, Inc.
Lin, Alex	MediaTek Inc.
Maguire, Valerie	The Siemon Company
Mark, Simon	Wurth Electronik Group
Marques, Flavio	FURUKAWA ELECTRIC
Matheus, Kirsten	BMW Group
McCarthy, Mick	Analog Devices Inc.
Muller, Shimon	Axalume, Inc.
New, Anthony	Prysmian Cables & Systems
Nicholl, Gary	Cisco Systems, Inc.
Ogura, Ichiro	PETRA
Pohl, Christopher	Beckhoff Automation
Potterf, Jason	Cisco Systems, Inc.
Ramesh, Sridhar	Maxlinear Inc
Ren, Hao	HUAWEI
Rettig, Thomas	Beckhoff Automation
Savi, Olindo	Hubbell Incorporated
Sedarat, Hossein	Ethernovia
Sedio, Stephen	TDK Corporation
Shariff, Masood	CommScope, Inc.
She, Qingya	Fujitsu Network Communications
Takahashi, Tadashi	Nitto Denko Corporation
Takayama, Kazuya	Nitto Denko Corporation
Theodoras, James	HG Genuine
Vanderlaan, Paul	UL LLC
Voss, Robert	Panduit Corp.
Wade, Scott	DiiA
Wang, Xinyuan	Huawei Technologies Co. Ltd
Wendt, Matthias	Signify
Withey, James	Fluke Corporation
Xu, Dayin	Rockwell Automation
YANG, Yumeng	Huawei Technologies Co., Ltd
Zhuang, Yan	Huawei Technologies Co. Ltd
Zimmerman, George	CME Consulting/ADI, CommScope, Cisco Systems, Marvell, and SenTekse