Unconfirmed Meeting Minutes: IEEE 802.3 Greater than 10 Mb/s Long-Reach Single Pair Ethernet Study Group
December 8, 2021
Telephonic

Prepared by Bob Voss

IEEE 802.3 Greater than 10 Mb/s Long-Reach Single Pair Ethernet Study Group meeting convened at 9:02 AM (US CST), Wednesday December 08, 2021 by George Zimmerman, Study Group Chair.

<u>Attendance is listed in Appendices A</u>

<u>Administrative Matters</u>

The Study Group Chair noted that introductions would be skipped.

George Zimmerman reviewed the agenda in
https://www.ieee802.org/3/GT10MSPE/public/agenda_3GT10M_01a_12082021.pdf.

Mr. Zimmerman asked if there were any modifications to the agenda, none responded, and Mr. Zimmerman noted that the agenda was approved by unanimous consent.

Mr. Zimmerman asked if there were any modifications to the minutes from the last meeting, none responded, and Mr. Zimmerman noted that the minutes were approved by unanimous consent.

Mr. Zimmerman reviewed Study Group decorum and asked if anyone from the press was present, none responded.

Attendance, Mr. Zimmerman noted that the attendance for this meeting was being recorded by WebEx and asked that participants add their affiliation to their WebEx names. If that was not possible, Mr. Zimmerman asked that they put a message to the group chat with their affiliation.

Mr. Zimmerman reviewed the Study Group organization, the goals for the meeting, access to the reflector and website, and ground rules for the meeting.

Mr. Zimmerman asked if any participant had not seen the Pre-PAR patent policy slides (agenda slide 11), none responded. Mr. Zimmerman reviewed the "Guidelines for IEEE SA Meetings" slide for the group.

Mr. Zimmerman 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 12-14).

Mr. Zimmerman 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 15).

Mr. Zimmerman 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 16-17).

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

Liaisons: None

PRESENTATIONS:

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

At 9:18am CST

Title: **IEEE 802.3 SPEP2P SG: Target cabling for buildings: What's currently recommended**, Presenter: Peter Jones, Cisco.

The presenter discussed existing cabling in buildings and a possible additional objective recognizing these may have a different reach than the process automation cabling in the current objective. There was some discussion with questions asked and answered.

At 9:44am CST,

Title: **Closing the Gaps on 1000BASE-T1L**, Presenter: Peter Fischer, BKS Kabel-Service.

The presenter reviewed previous discussions of 1000 Mb/s PHY and proposed some objectives. There was discussion with several participants voicing concern over the support of a 1000 Mb/s PHY objective without obvious participation of SMEs in PHY design. Other participants voiced support.

Following discussion, the presenter asked for the following straw poll:

At 10:20am CST

Straw Poll 1
I would support a motion to propose the following objectives….
   1. Support a speed of 1000 Mb/s at the MAC/PLS service interface.
   2. Support 1000 Mb/s single-pair Ethernet operation in industrial environments (e.g., EMC, temperature).

3. Define performance characteristics of a link segment with a single balanced pair of conductors supporting up to 4 inline connectors for up to at least 100m reach, and a PHY supporting point-to-point full duplex operation over the link segment.
4. Maintain a bit error ratio (BER) at the MAC/PLS service interface of less than or equal to 10^{-10} or the frame loss ratio equivalent
5. The same latency objective shall be adopted as for 100Base-T1L

Room Count = 31
Y: 6   N: 17 A: 8

At 10:27am CST

Title: **Necessity of a Latency Objective**, Presenter: Dayin Xu, Rockwell Automation.

The presenter discussed and reviewed previous material on the need for a latency objective for control systems markets and provided an update on market sizing and access to the market segment which required low latency.
There was some discussion with concern over the combination of reach and latency creating an issue with technical feasibility. Some felt more comfortable without a specific number for latency in the objective, others preferred the specificity of a number.

Following discussion, the presenter asked for the following 2 straw polls.

Straw Polls:

Straw Poll 2:
I would support the project adopting a latency objective as "Support a low latency mode of operation with ≤ 1.5usec latency for constrained link segment specifications (e.g., insertion loss or noise)"
Room count: 28
Yes: 14
No: 3
Abstain: 9
No answer: 2

Straw Poll 3:
I would support the project adopting a latency objective as "Support a low latency mode of operation for constrained link segment specifications (e.g., insertion loss or noise)"
Room count: 27
Yes: 16
No: 4
Abstain: 4
No answer: 3

Mr. Zimmerman noted that the agenda had been exhausted and adjourned the meeting
The Meeting was adjourned at 11:02 AM US CST on December 8, 2021

Appendix A: IEEE 802.3 Greater than 10 Mb/s Long-Reach Single Pair Ethernet Study Group, December 8, 2021.

Name	Company	Affiliation
Bob Voss	Panduit	Panduit
Brian Murray	Analog Devices	Analog Devices
Chad Jones	Cisco	Cisco
Dave Hess	Cord Data	Cord Data
David D. Brandt	Rockwell Automation	Rockwell Automation
Dayin Xu	Rockwell Automation	Rockwell Automation
Dieter Schicketanz	Reutlingen University	Reutlingen University
Geoff Thompson	GraCaSI S.A.	Self
George Zimmerman	CME Consulting	ADI, APL Group, Cisco, Commscope, Marvell, SenTekSe
Hans Lackner	QoSCom GmbH	QoSCom GmbH
Harald Mueller	Endress+Hauser	Endress+Hauser
Heath Stewart	Analog Devices	Analog Devices
James Withey	Fluke	Fluke
Jason Potterf	Cisco	Cisco
Laura Schweitz	Turck	Turck
Marvell	Marvell	Marvell
Matthias Fritsche	Harting	Harting
Michal Brychta	Analog Devices	Analog Devices
Peter Fischer	BKS Kabel-Service AG	BKS Kabel-Service AG
Peter Jones	Cisco	Cisco
Peter Wu	Marvell	Marvell
Ralf Peteranderl	Rosenberger	Rosenberger
rich boyer	Aptiv	Aptiv
Rory Buchanan	OnSemi	OnSemi
Scott Griffiths	Rockwell Automation	Rockwell Automation
Steffen Graber	Pepperl+Fuchs	Pepperl+Fuchs
Stephan Schreiner	Rosenberger	Rosenberger
Steve Carlson	HSD	Bosch, Ethernovia
Tim Baggett	Microchip	Microchip
Valerie Maguire	Siemon	Siemon
Wayne Larsen	CommScope	CommScope
wensheng sun	Marvell	Marvell
Woojung Huh	Microchip	Microchip