

Unconfirmed Meeting Minutes: Meeting of the IEEE P802.3cg 10 Mbps Single Twisted Pair Ethernet Task Force

January 22-24, 2018
Geneva, CH

Prepared by Jon Lewis

The meeting of the IEEE P802.3cg 10 Mbps Single Twisted Pair Ethernet Task Force convened at 1:35 PM, Monday, January 22, 2018 by George Zimmerman, P802.3cg Task Force chair.

Attendance for the meeting is listed in Appendix A

All presentations referenced in these minutes are located on the [Jan 2018 802.3cg public website](#).

Administrative Matters

Mr. Zimmerman appointed Jon Lewis as recording secretary for this session.

Motion #1: Move to approve the agenda as shown in agenda_3cg_01_0118.pdf.

**M: Lennart Yseboodt S: Bernd Horrmeyer
Approved by voice without opposition (Procedural > 50%)**

The Task Force Chair called for introductions and affiliations.

George Zimmerman displayed the agenda in agenda_3cg_01_0118.pdf.

Motion #2: Move to approve minutes of IEEE P802.3cg 10 Mbps Single Twisted Pair Ethernet Task Force from Nov 2017 as posted.

**M: Ron Nordin S: James Withey
Approved by voice without opposition (Procedural > 50%)**

- Mr. Zimmerman noted that there should be no recording or photography without permission.
- Mr. Zimmerman asked if anyone was attending from the press including those who would run a public blog on this meeting. None responded.

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

Attendance, Mr. Zimmerman advised the group of the IEEE meeting attendance tool and procedures, including both the attendance log and the web attendance tracking tool (IMAT).

IEEE Patent Policy, at **1:59 PM**, Mr. Zimmerman noted that the patent policy had been updated and then read slides 1-4 of the patent policy aloud. Mr. Zimmerman then made the call for potentially essential patents at **2:04 PM**, Mr. Ingrassia from Canova Tech indicated that Canova Tech has sent in an LOA to the Chair. The Chair indicated he had received the LOA and will be forwarding to the IEEE. Mr. Zimmerman then read aloud slide #4.

Mr. Zimmerman reviewed the slide entitled "Participation in IEEE 802 Meetings" and asked if there was any discussion necessary, none responded.

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

No Liaisons were received for this meeting.

PRESENTATIONS

Mr. Zimmerman showed the PAR, CSD and Objectives URLs and reviewed the approved timeline for the Task Force.

Title: Editor's Report: P802.3cg Draft D0.3 (maguire_3cg_01_1118.pdf)

Presenter: Valerie Maguire, Siemon; P802.3cg chief editor

Motion #3: Move to include 9 comments (#364, #365, #366, #367, #368, #369, #370, #371, and #372) submitted after the P802.3cg draft 1.0 Task Force review deadline)

M: Lennart Yseboodt S: Masood Shariff

Approved by voice without opposition (Procedural > 50%)

The Editor outlined the comments by topic, and reminded participants that the comments had been posted by topic on the website. The Editor asked if anyone would like more time to review the EZ bucket or needed any comments pulled from the EZ bucket list.

Motion #4: Accept the resolutions to all P8023.cg d1p0 comments marked with the Topic "EZ" and posted as "EZ Bucket" comments sorted by clause/subclause" excluding comments #85, #140, #141, #170, #181, #284, and #287.

M: Curtis Donahue S: Lennart Yseboodt

Approved by voice without opposition (Procedural > 50%)

The Editor reviewed a summary of the remaining topics and the comment resolution agenda.

At this time, the editor's report was concluded.

The meeting recessed for a short break at 2:53 PM to resume in ITU C1 in the ITU Tower at 3:40.

The meeting resumed at 3:41 PM.

The Chair brought the meeting back to order then moved into Comment Resolution.

COMMENT RESOLUTION

Decisions during comment resolution were made by consensus, except where noted that motions were taken. For details on comment resolution see the posted comment database.

The Task Force meeting recessed for the day at 6:16 PM to resume at 8:00 AM.

The Task Force was brought to order at 8:01 AM.

The Chair called the meeting to order and asked for introductions from the Task Force.

George Zimmerman reviewed the agenda in agenda_3cg_01_0118.pdf.

- Mr. Zimmerman noted that there should be no recording or photography without permission.
- Mr. Zimmerman asked if anyone was attending from the press including those who would run a public blog on this meeting. None responded.

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

Attendance, Mr. Zimmerman advised the group of the IEEE meeting attendance tool and procedures, including both the attendance log and the web attendance tracking tool (IMAT).

Mr. Zimmerman reviewed the slide entitled "Participation in IEEE 802 Meetings" and asked if there was any discussion necessary, none responded.

IEEE Patent Policy, at **8:10 AM**, Mr. Zimmerman asked if there were any attendees that had not seen the patent policy this week, none responded. Mr. Zimmerman then

made the call for potentially essential patents at **8:11 AM**, and none responded. Mr. Zimmerman then read aloud slide #4.

Comment Resolution continued. Presentations shown are in support of comment resolution.

Title: 10BASE-T1L PSD Mask (Graber_3cg_02_0118.pdf)
Presenter: Steffen Graber, Pepperl+Fuchs

Title: Changes to Clause 147 and 148 (beruto_3cg_01_0118.pdf)
Presenter: Piergiorgio Beruto, Canova Tech

Title: 802.3CG T1S PMA TEST MODE 3 (Zerna_3cg_02_0118.pdf)
Presenter: Conrad Zerna, Fraunhofer

The meeting recessed for a short break at 10:31 AM.

The meeting resumed at 10:48 AM.

Title: Comments on IEEE Draft P802.3cg/D1.0 (xu_3cg_01_0118.pdf)
Presenter: Dayin XU, Rockwell Automation

Title: 802.3CG T1S MULTIDROP TERMINATIONS (Zerna_3cg_03_0118.pdf)
Presenter: Conrad Zerna, Fraunhofer

The meeting recessed for lunch at 12:09 PM.

The meeting resumed at 1:29 PM.

Comment resolution continued.

The meeting recessed for a short break at 3:23.

The meeting resumed at 3:51 PM.

Comment resolution continued.

Comment resolution was stopped to focus the group on multidrop power related presentations while the members of P802.3bt.

Title: Optional “Engineered” Power for 10BASE-T1S Multi-drop Ethernet (xu_3cg_02_0118.pdf)
Presenter: Dayin XU, Rockwell Automation

The meeting recessed for a short break at 5:15.

The meeting resumed at 5:30 PM.

Comment resolution resumed.

Title: Clause 45 MDIO Registers (Graber_3cg_01_0118.pdf)

Presenter: George Zimmerman, Commscope, Aquantia, CME Consulting, Cisco, ADI, BMW, APL Group

The Task Force meeting recessed for the day at 6:29 PM.

The Task Force was brought to order at 8:11 AM.

The Chair called the meeting to order and asked for introductions from the Task Force.

George Zimmerman reviewed the agenda in agenda_3cg_01_0118.pdf.

- Mr. Zimmerman noted that there should be no recording or photography without permission.
- Mr. Zimmerman asked if anyone was attending from the press including those who would run a public blog on this meeting. None responded.

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

Attendance, Mr. Zimmerman advised the group of the IEEE meeting attendance tool and procedures, including both the attendance log and the web attendance tracking tool (IMAT).

Mr. Zimmerman reviewed the slide entitled "Participation in IEEE 802 Meetings" and asked if there was any discussion necessary, none responded.

IEEE Patent Policy, at **8:20 AM**, Mr. Zimmerman asked if there were any attendees that had not seen the patent policy this week, none responded. Mr. Zimmerman then made the call for potentially essential patents at **8:21 AM**, and none responded. Mr. Zimmerman then read aloud slide #4.

Comment Resolution continued. Presentations shown are in support of comment resolution.

Title: Intrinsic Safety Annex (180123_Intrinsic%20Safety%20Annex.pdf)

Presenter: Jens Gottron, Siemens

The meeting recessed for a short break at 10:04 AM.

The meeting resumed at 10:42 AM.

The Chair called the meeting to order and comment resolution continued with presentations related to comments.

Title: 802.3CG CONSISTENT PMA ELECTRICAL PARAMETERS AND LINK SEGMENT DEF (Zerna_3cg_01c_0118.pdf)

Presenter: Conrad Zerna, Fraunhofer

Title: PSD mask and updated EMC simulations (beruto_3cg_02_0118_revB.PDF)

Presenter: Piergiorgio Beruto, Canova Tech

Title: Review on 10BASE-T1S Multidrop Emission and Immunity Requirements (Pandey_3cg_01a_0118.pdf)

Presenter: Sujan Pandey, NXP

Comment resolution concluded.

Title: Closing Chief Editor's Report P802.3cg draft 1.1 (maguire_3cg_02a_1118.pdf)

Presenter: Valerie Maguire, Siemon; P802.3cg chief editor

Title: Transmit Emissions Considerations for 10BASE-T1S (tazebay_3cg_01b_0118.pdf)

Presenter: Mehmet Tazebay, Broadcom Ltd.

The meeting recessed for lunch at 12:12 PM.

The meeting resumed at 1:39 PM.

Title: 10BASE-T1S Ethernet Device Architecture Considerations (xu_3cg_03_0118.pdf)

Presenter: Dayin XU, Rockwell Automation

1:57 PM, Wednesday, January 24, 2018 - The joint meeting of the IEEE P802.3cg 10 Mbps Single Twisted Pair Ethernet Task Force and IEEE P802.3cg 10 Mbps Backplane Ethernet convened by Jon Lewis, IEEE 802.3 10 Mb/s Backplane Ethernet Study Group chair and George Zimmerman, IEEE P802.3cg Task Force Chair.

Administrative Matters

Mr. Lewis appointed Mike Klempa as recording secretary for this session for the Study Group and Task Force.

PRESENTATIONS

The joint meeting then moved to the presentations for the meeting.

Title: Backplane Simulations (beruto_3cg_03_0118.pdf)

Abstract: Current 10BASE-T1S specifications seems to be suitable for the backplane use case.

Presenter: Piergiorgio Beruto, Canova Tech

Title: PAR/CSD Recommendations (draft 5) (jones_10spe_10bpe_03_0118_d5.pdf)

Abstract: Proposed Changes Summary for PAR/CSD changes, highlighted in red

Presenter: George Zimmerman, CME Consulting/ Commscope, Aquantia, CME Consulting, Cisco, ADI, BMW, APL Group

Discussion: Discussion occurred around wording on several items and changes were made to the document.

Title: Objectives Recommendations (draft 6) (jones_10spe_10bpe_04_0118_d6.pdf)

Abstract: Proposed Changes to 802.3cg Objectives, highlighted in red

Presenter: George Zimmerman, CME Consulting/ Commscope, Aquantia, CME Consulting, Cisco, ADI, BMW, APL Group

Discussion: Discussion occurred around wording on several items and changes were made to the document. Straw Polls were taken to determine the consensus of the group.

Straw Poll #1:

I prefer (choose one)

A: no change to existing 1km objective.

B: add full duplex to existing 1km objective.

C: make change as per page 6 of jones_10spe_10bpe_04_0118_d6.pdf.

A: 7 B: 3 C: ++

Consensus C

Straw Poll #2:

I prefer (choose one)

A: Leave 18 as is. Don't add 19.

B: Remove "link" from 18. Don't add 19.

C: Leave 18 as is and add 19 for multidrop power.

A: 9 B: 31 C: 2

Consensus B

Straw Poll #3:

I prefer (choose one)

A: 18 (without one or more)

B: 19 (with one or more)
A: 12 B: 15

Break at 4:00pm. Resumed at 4:30pm.

Straw Poll #3:

I prefer (choose one)
A: 10E-8
B: 10E-9
C: 10E-10
A: 0 B: 1 C: ++
Consensus C

LIAISONS

The TF Chair then moved to outgoing liaisons from the Task Force.

- 1: ISO-IEC optionally adding more MDI connectors
 - Minor edits
- 2: TIA optionally adding more MDI connectors
 - Minor edits

Mr. Lewis then explained that when voting for the following motions the group was voting:

**Study Group: Recommend change to the IEEE P802.3cg Task Force
Task Force: Accepts the change to the P802.3cg project documentation**

Motion #5: Move to instruct Chief Editor to create IEEE P802.3cg D1.1 from D1.0 and closed comments

M: Valerie Maguire

S: Ron Nordin

MOTION PASSES by voice without opposition

Motion #6: Move to instruct Chief Editor to review and refine editing instructions as needed throughout draft 1.1 prior to task force review

M: Valerie Maguire

S: Ron Nordin

MOTION PASSES by voice without opposition

Motion #7: Move to adopt PAR modifications on slide 4 of jones_10spe_10bpe_03_0118_d6.pdf

M: Peter Jones

S: Brett McClellan

Y: 48 N: 0 A: 3

MOTION PASSES (>= 75%)

**Motion #8: Move to adopt CSD modifications on slides 8-12 of
jones_10spe_10bpe_03_0118_d6.pdf**

M: Peter Jones

S: Gergely Huscak

Y: 53 N: 0 A: 0

MOTION PASSES (>= 75%)

**Motion #9: Move to adopt objectives modifications on slide 5-7 of
jones_10spe_10bpe_03_0118_d6.pdf**

M: Peter Jones

S: Mick McCarthy

Y: 52 N: 0 A: 1

MOTION PASSES (>= 75%)

**Motion #10: Move to approve draft liaison letter to TIA TR-42
(IEEE_802d3_to_TIA_TR42_TF_0118_draft3.pdf)**

M: Peter Jones

S: Amrik Bains

Y: 52 N: 0 A: 1

MOTION PASSES (>= 75%)

**Motion #11: Move to approve draft liaison letter to ISO/IEC SC25 WG3
(IEEE_802d3_to_ISOIEC_SC25_WG3_0118_10spe_d4.pdf)**

M: Peter Jones

S: James Withey

Y: 50 N: 0 A: 1

MOTION PASSES (>= 75%)

Straw Poll #5:

I am likely to attend 802.3cg at:

Attend March 2018 802 Rosemont, IL plenary:

Y: 36 N: 6 M: 5

Attend May 2018 interim, EA, Pittsburgh, PA, USA:

Y: 28 N: 3 M: 18

Motion #12: Move to adjourn.

M: David Brandt

S: Brian Franchuk

Passes by Voice without Opposition

THE MEETING ADJOURNED AT 5:42PM

Appendix A: Attendees at the IEEE P802.3cg 10 Mb/s Single Twisted Pair Ethernet Task Force Meeting, January 22-24, 2018.

IEEE P802.3cg Task Force Jan'18				1/22/18	1/23/18	1/24/18
Last Name	First Name	Employer	Affiliation	Monday	Tuesday	Wednesday
Abedy	Yossuf	Pulse Electronics	Pulse Electronics	X	X	X
Abramson	David	Texas Instruments	Texas Instruments		X	
Agnes	Andrea	ST Microelectronics	ST Microelectronics	X	X	
Akkihal	Shiva	Microchip	Microchip	X	X	X
Alessandro	Ingrassia	Canova Tech	Canova Tech	X	X	X
An	Hongming	Microchip	Microchip	X	X	X
Bains	Amrik	Cisco	Cisco	X	X	X
Bergner	Bert	TE Connectivity	TE Connectivity		X	X
Beruto	Piergiorgio	Canova Tech SRL	Canova Tech SRL		X	
Brandt	David	Rockwell Automation	Rockwell Automation	X	X	X
Canchi	Radhakrishna	Kyocera	Kyocera	X		
Chabot	Craig	UNH-IOL	UNH-IOL	X	X	
Chadha	Mandeep	Microsemi	Microsemi	X	X	X
Den Besten	Gerrit	NXP Semiconductor	NXP Semiconductor	X	X	X
DiMinico	Christopher	MC Communications	Panduit			X
Donahue	Curtis	UNH - IOL	UNH - IOL	X	X	
Fathi	Borhan	Nvidia	Nvidia	X	X	X
Flatman	Alan	LAN Technologies	LAN Technologies			X
Franchuk	Brian	Emerson Automation Solutions	Emerson Automation Solutions	X	X	X
Fritsche	Matthias	Harting	Harting	X	X	X
Gauthier	Claude	OmniPHY	OmniPHY	X	X	X
Gottron	Jens	Siemens AG	Siemens AG	X	X	X
Graber	Steffen	Pepperl+Fuchs	Pepperl+Fuchs	X	X	X
Grau	Olaf	Robert Bosch	Robert Bosch		X	X

IEEE P802.3cg Task Force Jan'18				1/22/18	1/23/18	1/24/18
Last Name	First Name	Employer	Affiliation	Monday	Tuesday	Wednesday
Hormmeyer	Bernd	Phoenix Contact	Phoenix Contact	X	X	X
Huszak	Gergely	Kone	Kone	X	X	X
Jimenez	Andrew	Anixter Inc.	Anixter Inc.		X	X
Jones	Chad	Cisco	Cisco		X	
Jones	Peter	Cisco	Cisco	X	X	X
Kattainen	Ari	Kone	Kone	X	X	X
Klempa	Michael	UNH-IOL	UNH-IOL			X
Krieger	Olaf	Volkswagen	Volkswagen	X	X	X
Kumeda	Taketo	YAZAKI	YAZAKI	X	X	X
Law	David	Hewlett Packard Enterprise	Hewlett Packard Enterprise	X	X	
Lewis	Jon	Dell EMC	Dell EMC	X	X	X
Maguire	Valerie	Siemon	Siemon	X	X	X
Matheus	Kirsten	BMW	BMW		X	X
McCarthy	Mick	Analog Devices	Analog Devices	X	X	X
McClellan	Brett	Marvell	Marvell	X	X	X
Medina	Marcel	Spirent	Spirent	X	X	X
Miller	Martin	Microchip	Microchip	X	X	X
Nikolich	Paul	Self	802 Chair		X	X
Nordin	Ron	Panduit	Panduit	X	X	X
Pandey	Sujan	NXP	NXP	X	X	X
Pardo	Carlos	KDPOF	KDPOF			X
Peker	Arkadiy	Microsemi	Microsemi		X	
Scantamburlo	Nicola	CanovaTech	CanovaTech		X	X
Schicketanz	Dieter	Self	Reutlingen University	X	X	X
Shariff	Masood	Commscope	Commscope	X	X	
Sparrowhawk	Bryan	Leviton	Leviton	X	X	X
Stewart	Heath	Analog Devices	Analog Devices	X	X	
Taiji	Kondo	Megachips	Megachips	X	X	X

IEEE P802.3cg Task Force Jan'18				1/22/18	1/23/18	1/24/18
Last Name	First Name	Employer	Affiliation	Monday	Tuesday	Wednesday
Tan	Alex	NXP	NXP	X		
Thompson	Geoff	GraCaSI SA.	Independent	X	X	
Tremblay	David	HPE	HPE		X	
Wang	Min	Waymo	Waymo	X	X	X
Wendt	Matthias	Philips Lighting	Philips Lighting	X	X	
Wienckowski	Natalie	GM	GM			X
Winkel	Ludwig	Siemens AG	Siemens AG	X	X	
Withey	James	Fluke Networks	Fluke Networks	X	X	X
Wucher	Markus	Endress+Hauser	Endress+Hauser	X	X	X
Xu	Dayin	Rockwell Automation	Rockwell Automation	X	X	X
Yseboodt	Lennart	Philips Lighting	Philips Lighting	X	X	
Zerna	Conrad	Frannhofer IIS	Frannhofer IIS	X	X	X
Zielinski	Martin	Emerson Automation Solutions	Emerson Automation Solutions	X	X	X
Zimmerman	George	CME Consulting	Commscope, Aquantia, CME Consulting, Cisco, ADI, BMW, APL Group	X	X	X
Zweck	Harald	Infineon Tech.	Infineon Tech.	X		