

Minutes IEEE P802.3ch Multigig Automotive Ethernet PHY TF AdHoc meeting May 30, 2018

Prepared by George Zimmerman

Proposed Agenda:

1. Agenda/Admin: George Zimmerman, agenda_3chah_01a_053018.pdf
2. SG Chair's comments: no presentation
3. Presentations:

Insertion Loss Limit Analysis	Eric DiBiaso	TE Connectivity
Coupling Attenuation Graph Fix	Thomas Mueller	Rosenberger

4. Discussion & Next steps – All

[See adhoc webpage for agenda deck and presentations](#)

Agenda/Admin George Zimmerman acting as ad hoc chair:

Meeting began at 7:04am PT.

Introductions & Affiliations.

Presented file: [agenda 3chah 01a 053018.pdf](#)

1. Reviewed the Attendance information related to the ad hoc.
2. Displayed the Participation slide and reviewed it.
3. Displayed patent slide deck, and reviewed it.
Call for Patents was made at 7:14 Pacific Time, none responded
4. Reminded participants to indicate full names and employer/affiliation for the meeting minutes.

Instructions for subscribing to the reflector may be found at <http://www.ieee802.org/3/ch/reflector.html>. If you cannot subscribe to the reflector for some reason, and need additional assistance please contact the Task Force chair.

Chair's Comments – Steve Carlson

Steve Carlson, Chair of the IEEE P802.3ch Task Force thanked everyone for their attendance of this ad hoc following shortly on the heels of our interim meeting in Pittsburgh, and thanked them for a productive meeting.

Presentations/Discussion:

Presentation: Coupling Attenuation Graph Fix, Thomas Mueller, Rosenberger

The presenter reviewed that the plot given on slide 9 of http://www.ieee802.org/3/ch/public/may18/mueller_3ch_02a_0518.pdf

at the interim meeting was incorrect, but that the equation was correct. Mr. Carlson clarified that since the motion accepted the equation, and the editor would re-plot the equation anyways, there was no error. The presentation from this ad hoc meeting would serve to document the correction.

Presentation: Insertion Loss Limit Analysis, Eric DiBiaso, TE Connectivity

The presenter reviewed analysis of the insertion loss limit line over temperature showing that the limit line currently in the draft had too little loss below 1 GHz. As opposed to the proposal made at the interim which would have added a frequency-independent offset, this presentation proposed an additional $1/\sqrt{f}$ term, which brought the low frequency performance inline with measurements and simulations.

Participants with PHY expertise on the call remarked that the change should not make any material difference to PHY analysis, and participants from cabling backgrounds were supportive of the new curve.

There was additional discussion about the fact that the existing and new curves predicted ~1-2dB more loss at high frequencies than was being shown, and the deviation grew as frequency increased. The presenter reminded the group that this was a single cable. Another cabling participant remarked that this additional margin was for insertion loss deviation, which shows up as ripple in the high frequencies. A third participant suggested that the methodology used in the multigigabit BASE-CR PHYs, where insertion loss deviation (ripple) was fitted separately from a limit line, might be more appropriate for PHY analysis.

There was a discussion of next steps. There appeared to be general support for the proposed change, cable vendors would have to see whether the limit line was tight at high frequencies for other cables, and PHY vendors would need to see if a change to tighten the 3 GHz limit would make a material difference.

There was also discussion of reducing the upper frequency below 3 GHz. A participant voiced that the 5.5 GHz was clearly too much, but that just how much excess bandwidth was needed was to be determined.

Closing Business

The next meeting will be June 13 at 7 am pacific

Meeting closed – 8:00 PDT

Attendees (from Webex + emails)

First	Last	Affiliation
Franz	Aletsee	HS-Augsburg
Devaraju	Basappa	NXP
Jim	Bauer	Marvell
Phillip	Brownlee	TDK

Stefan	Buntz	Daimler
Steven	Carlson	High Speed Design/Robert Bosch, Marvell, NXP
Gerrit	den Besten	NXP
Eric	DiBiaso	TE
Michael	Doerndl	Md-Elektronik
German	Feyh	Broadcom
Mike	Gardner	Molex
Claude	Gauthier	NXP
Amrit	Gopal	Ford
Matthias	Jaenecke	Yazaki
Dongok	Kim	Hyundai
Kirsten	Matheus	BMW
Brett	McClellan	Marvell
Wes	Mir	Aptiv
Thomas	Muller	Rosenberger
Henry	Muyschondt	Microchip
Philipp	Numberger	Md-Elektronik
Josef	Ohni	MD-Electronik
Sujan	Pandey	NXP
Harsh	Patel	Molex
Litsa	Rubino	Aptiv
Masood	Shariff	Commscope
Mike	Tu	Broadcom
Natalie	Wienckowski	GM
George	Zimmerman	CME Consulting/Aquantia & Commscope
Helge	Zinner	Continental
TOTAL	29	Attendees