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

Prepared by Natalie Wienckowski

Proposed Agenda:

1. Agenda/Admin: George Zimmerman, agenda_3chah_01_100218.pdf
2. SG Chair's comments: no presentation
3. Presentations:

802.3ch Link Partner Register Access	Paul Langner/Saeid Benyamin	Aquantia
Multi Gig Automotive EEE Proposal	Jim Graba	Broadcom
On Tx emission requirements	Mike Tu	Broadcom
Training sequence baseline	Mike Tu	Broadcom
Data mode scrambler options	Mike Tu	Broadcom
Editor's to do list from September Interim (updated)	Natalie Wienckowski, Chief Editor	General Motors

4. Discussion & Next steps – All

See adhoc webpage for agenda deck and presentations

Agenda/Admin George Zimmerman as ad hoc chair:

Meeting began at 7:04 am PT.

Introductions & Affiliations.

Presented file: agenda_3chah_01_100218.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 7:10 am 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/Chief Editor's Comments – Steve Carlson

None

Presentations/Discussion:

Presentation: 802.3ch Link Partner Register Access, Saied Benyamin, Aquantia

[802.3ch Link Partner Register Access](#)

Saied went through his presentation. William Lo proposed that this be put on top of the 1000BASE-T1 OAM protocol. Saied offered to work with William on defining this. Saied is proposing to replace the OAM as all the information desired is available through register reads. There is some concern with allowing all registers to be read. There needs to be additional discussion to determine if all registers should be able to be read or only a specific range of registers could be read. Should specific registers be defined and should these be the only ones that can be read? Register writes must not be allowed. Need to determine what should happen when a register is "latched until read". If it is cleared, the host won't be able to get this status.

Presentation: Multi Gig Automotive EEE Proposal, Jim Graba, Broadcom

[Multi Gig Automotive EEE Proposal](#)

Jim went through his presentation. Saied was concerned about the clock drift over the QR period. Jim doesn't think this is an issue. George also has concerns with the clock drift. Jim will do some more investigation on this. George had a question on when the training scrambler starts and stops during EEE. Jim prefers to keep the scrambler running. Need to investigate what this means for power consumption. Brett stated that some of the PCS needs to be running during EEE to ensure the checks happen with the correct timing. There was a question as to how many symbols should be needed for refresh. Do we need to require 'WAKE' after 'Alert' to ensure the loops don't 'starve'?

Presentation: On Tx Emission Requirements, Mike Tu, Broadcom

[On Tx emission requirements](#)

Mike went through his presentation. George wonders if there are multiple margins that are being added on top of each other: signal doesn't always reach the mask limit; the cable coupling attenuation is not always the worst case. In addition, 15 dB of margin are being added to this. Mike is requesting that people review this to determine if they think this is accurate as this will impact the design of the scrambler. Sujan reiterated that this will impact the scrambler. Natalie will have GM's EMC expert provide feedback on this presentation.

Presentation: Training Sequence Baseline, Mike Tu, Broadcom

[Training sequence baseline](#)

Mike went through his presentation. He requested others to collaborate with him for the final proposal for the spec.

Presentation: Data Mode Scrambler Options, Mike Tu, Broadcom

Data mode scrambler options

Mike went through his presentation.   Sujan asked if Mike had investigated the scrambler impact on PSD for the 3rd option. This is the same scrambler as Test Mode 1 in On Tx emission requirements. Gerrit asked why the polynomial needs to be larger than degree 33. George said this was to have sufficient randomness to train the cancellers for 10GBASE-T. It needs to be investigated if this is needed for 10GBASE-T1. George's opinion is that there is little effort for the longer training polynomials and they can solve lots of issues. The only changes that have been made to scrambler polynomials is to lengthen them. Consensus is that this needs more investigation.

Presentation: 802.3ch ToDo list, Natalie Wienckowski, General Motors

P802_3ch_Timeline_status_0918

Natalie shared the todo list. She asked people to volunteer for topics. Please see the list for those who have volunteered and when they plan to present on this topic. Additional volunteers are requested for areas that already have volunteers and those that don't. You are urged to contact Natalie with any topics that may be missing from this list. We want to ensure we are ready to create D1p0 out of November.

Closing Business

Everyone was urged to 'keep up the good work'.

Meeting adjourned at 8:40 AM PT.

Attendees (from Webex + emails)

First	Last	Affiliation
Devaraju	Basappa	Omniphy Semiconductor
Jim	Bauer	Marvell
Saied	Benyamin	Aquantia
Phillip	Brownlee	Cable One/TDK
Sean	Chiang	Mediatek
Gerrit	Den Besten	NXP
Eric	DiBiaso	TE
Massad	Eyal	Valens
German	Feyh	Broadcom
Mike	Gardner	Molex
Amrit	Gopal	Ford
Jim	Graba	Broadcom
Marty	Gubow	Keysight Technologies
Venkat	Iyer	Microchip
Haysam	Kadry	Ford
Taiji	Kondo	Megachips
Bin	Lin	TE
William	Lo	Axonne
Larry	Matola	Aptiv
Brett	McClellan	Marvell

Henry	Muyshondt	Microchip
Doug	Oliver	Ford
Sujan	Pandey	NXP
Tom	Souvignier	Broadcom
Geoff	Thompson	Independent
Mike	Tu	Broadcom
Natalie	Wienckowski	GM
Peter	Wu	Marvell
John	Yurtin	Aptiv
Allan	Zhu	Huawei
George	Zimmerman	CME Consulting/Aquantia, ADI, Cisco, Commscope
TOTAL	**31**	**Attendees**