

Minutes IEEE P802.3ch Multigig Automotive Ethernet PHY TF AdHoc meeting January 30, 2019

Prepared by George Zimmerman

Proposed Agenda:

1. Agenda/Admin: George Zimmerman, [agenda_3chah_01_013019.pdf](#)
2. TF Chair's comments: no presentation
3. Presentations:

Agenda	George Zimmerman (ad hoc Chair)	CME Consulting/ADI, Aquantia, BMW, Cisco, Commscope
Editor's to do list (updated as 1/28/19) Timeline with commitments for next meeting: to be updated during meeting	Natalie Wienckowski, Chief Editor	General Motors NA
Asymmetric Operations Power and Modulation Considerations	William Lo	Axonne
PMA for asymmetric MGBASE-T1	Hossein Sedarat	Ethernovia, Inc

4. Discussion & Next steps – All

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

Agenda/Admin George Zimmerman as ad hoc chair:

Meeting began at 7:05 am PT.

Introductions & Affiliations.

Presented file: [agenda_3chah_01_013019.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 7:12 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.

Chief Editor's Comments –Natalie Wienckowski

Natalie shared the 'to do list' and updated during the meeting, with new volunteers. Participants are invited to review the list (with D1.1) and send an email to nwienckowski@msn.com to volunteer for tasks.

See the updated list at http://www.ieee802.org/3/ch/todo/P802_3ch_Timeline_status_013019.xlsm

Presentations/Discussion:

Presentation: Asymmetric Operations Power and Modulation Considerations, William Lo, Axonne

The presenter discussed approaching asymmetric operations by slowing the baud rate in one direction and saving additional power by disabling the digital receiver's echo canceller.

There were some questions on the simulation done. The power savings on slide 2 are estimates and may not be correct. Some participants believe the power savings for 10GBASE-T is better than the presentation suggests. There were questions on what the impact of this is if you need to go to high speed in both directions. This proposal assumes that one direction is always slow and does not consider the time required to change to high speed mode.

Presentation: PMA for Asymmetric MGBASE-T1, Hossein Sedarat, Ethernovia

The presenter discussed an approach to asymmetric operation by defining a 'low power data' (LPD) mode where the EEE refresh was appended with a short burst of data. During discussion, there was some discussion of the MAC/RS controls and issues with buffering. However, that is out of scope of this presentation. Reconciliation Sublayer (RS) uses the carrier signal back to the MAC to hold off the MAC. Would need to synchronize the "data" periods to the MAC through the RS. However, the RS is asynchronous to the PHY. This method may work for slow, continuous data, but is not suitable for bursty data. Does interleaving impact this? If there is no packet a normal LPI signal is sent.

General Discussion of EEE and asymmetric mode operation followed.

The discussion acknowledged that every implementation is likely to require RS changes, but then focused on what does this mode need in actual operations – was it a) continuous low speed data, b) bursty data, or c) the ability to go between low speed and high speed?

A participant affiliated with a user answered that the need she was aware of was for very infrequent communication, e.g. every 100x ms sent as a burst. Some others suggested that this use case is what EEE was defined for. It was suggested that a question be sent to the reflector to see if there were differing use cases.

Another participant suggested that this focused the question on whether there was a way to make LPI more energy efficient?

Closing Business

Steve Carlson, Chair of IEEE P802.3cg Task Force, thanked the presenters for the contributions, and reminded them to keep the discussion going for the asymmetric mode, but the focus needs to be on completing the draft and reviewing/commenting on the draft. Steve urged everyone to comment on the next draft.

The meeting ended with the ad hoc Chair urging people to sign up for the items on the “to-do” list via email, as there were still items to be filled in.

Meeting adjourned at 8:57 AM PT.

Attendees (from Webex + emails)

First	Last	Affiliation
Saied	Benyamin	Aquantia
Phillip	Brownlee	Independent/TDK
Steven	Carlson	High Speed Design/Robert Bosch, Marvell
Eric	DiBiaso	TE
Jim	Graba	Broadcom
Bob	Grow	Independent
Craig	Gunther	Craig Gunther Consulting
Taiji	Kondo	Megachips
David	Law	HPE
bin	lin	TE
William	Lo	Axonne
Larry	Matola	Aptiv
Brett	McClellan	Marvell
Wes	Mir	Aptiv
Thomas	Müller	Rosenberger
Roy	Myers	Ethernovia
Josef	Ohni	MD-Elektronik
Sujan	Pandey	NXP
Vimalli	Raman	Yazaki
Hossein	Sedarat	Ethernovia
Masood	Shariff	CommScope
Ramin	Shirani	Ethernovia
Tom	Souvignier	Broadcom
Mike	Tu	Broadcom
Natalie	Wienckowski	General Motors
Conrad	Zerna	Fraunhofer IIS
Allan	Zhu	Huawei
George	Zimmerman	CME Consulting/ADI, APL, Aquantia, BMW, Cisco, Commscope
TOTAL	28	Attendees

