

Minutes IEEE P802.3cy Greater than 10 Gb/s Electrical Automotive Ethernet PHY TF AdHoc meeting March 1, 2021

Prepared by Natalie Wienckowski

Proposed Agenda:

Title	Presenters(s)	Affiliation(s)
Agenda	Natalie Wienckowski (ad hoc Chair)	General Motors
TF Chair's Comments	Steve Carlson	High Speed Design, Robert Bosch GmbH, Ethernovia
EMC Ingress Into Shielded Connection	Rich Boyer	Aptiv
PCB INSERTION LOSS MATERIAL COMPARISON	Haysam Kadry	Ford Motor Company
P802.3cy To-do list	Natalie Wienckowski	General Motors
Closing Remarks	Steve Carlson	High Speed Design, Robert Bosch GmbH, Ethernovia

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

Agenda/Admin Natalie Wienckowski as ad hoc chair:

Meeting began at 10:03 am ET.

Introductions & Affiliations.

Presented file: [cy Task Force adhoc agenda a 02 23 21.pdf](#)

1. Reviewed the Attendance information related to the ad hoc.
2. Displayed patent slide deck and asked if any participant had not read the IEEE-SA Patent Slides slide set, none responded.
Call for Patents was made at 10:08 am Eastern Time, none responded
3. Displayed the IEEE-SA Copyright policy slide and asked if any participant had not read the IEEE copyright slide set, none responded.
4. Displayed the IEEE-SA Participation slide and reviewed it.
5. 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/cy/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: None at this time.

Presentations/Discussion:

Presentation: [EMC Ingress Into Shielded Connection](#) (Rich Boyer, Aptiv)

Rich presented information cable shield performance. He presented data on Shielding Attenuation and Coupling Attenuation at 900 MHz and 2.6 GHz for both Differential and Common mode.

Rich then calculated how much better the in-line would have to be to meet the IEEE 802.3-2020 specifications.

Rich presented potential next steps if this information is useful.

There was a question as to whether the connection cables between the DSO and DUT have any impact on the measurements. Rich doesn't think the "purple cables" have a large impact. They are phase matched cables that should have very little impact.

There was a question as to why Rich plans to limit the test frequency to 6 GHz. There are currently no Automotive requirements above 6GHz as there are no intentional transmitters above that frequency. Rich could test to higher frequencies, but there is no requirement for what should be tested. Also, this test is to look at near field, e.g. a cell phone but on top of an ECU, so he isn't looking at frequencies when there is nothing that transmits that could be placed near an ECU.

Please let Rich know if you found this information useful and would like him to do more.

Presentation: [PCB INSERTION LOSS MATERIAL COMPARISON](#) (Haysam Kadry, Ford Motor Company)

Haysam presented simulation data on IL loss on different PCB types. The IL presented is per inch of PCB trace. This was done for a 4 layer board and a 16 layer board for each PCB type.

If we define a maximum IL for the PCB, this can then be used for each implementation to determine the type of PCB to use based on the expected trace length.

This differs from a previous presentation Haysam did as he looked at additional PCB types and used a standard simulation tool and did not try to use Matlab to create an equation to calculate this.

There was a question as to the impact of temperature on IL. Haysam will check the tool he used to see if he can include temperature.

Presentation: [P802.3cy To-do list usage](#) (Natalie Wienckowski, General Motors)

The To-Do list was updated. Participants are urged to review the list for topics they can support and for missing topics. Please send a message to the reflector with requested changes to the list.

The current list can be found on this page: [To Do spreadsheets](#)

Closing Discussion

Haysam will likely make a motion for the maximum PCB IL of about 3 d @ 7GHz B during the March 16th Plenary.

WG Plenary meetings will be on March 8th, March 11th, and March 18th. You will need to attend meetings on at least 6 of the 8 days during the 2 weeks (8th – 11th & 15th – 18th) to get attendance credit.

P802.3cy will meet on March 15th & 16th.

There is an 802.3 CFI Consensus building meeting on March 9th. Steve will check if you can get attendance credit for this or not.

The 802.3 Maintenance meeting is on March 17th.

There is an 802.1 tutorial on time synchronization on March 2nd. Everyone is welcome to participate.

There will be a PAR review for PARs from other 802 groups (2 from 802.1) on March 2nd.

Meeting adjourned at 11:25 PM ET.

Attendees (snapshot of participants in meeting, email)

First	Last	Affiliation
Brett	McClellan	Marvell
Christian	Neulinger	MD Elektronik
Dan	Kennefick	Daikin America
Eric	DiBiaso	TE Connectivity
Erwin	Köependörfer	Leoni Kabel GmbH
Haysam	Kadry	Ford
Hossein	Sedarat	Ethernovia
Jae-yong	Chang	Keysight

First	Last	Affiliation
Jamila	Borda	BMW
Luisma	Torres	KDPOF
Makoto	Nariya	Sony
Martin	Glanzner	SEI ANTech Europe GmbH
Michael	Reinhard	SEI ANTech
Mike	Tu	Broadcom
Natalie	Wienckowski	General Motors
Nobuyasu	Araki	Yazaki
Rich	Boyer	Aptiv
Roland	Preis	MD Elektronik
SJ	Yu	Foxconn Interconnect Technology
Stefan	Andrä	SEI ANTech – Europe GmbH
Stephan	Hartmann	Siliconally GmbH
Steve	Carlson	High Speed Design, Robert Bosch GmbH, Ethernovia
Taiji	Kondo	MegaChips
Takeo	Masuda	OITDA/PETRA
Terry	Little	Foxconn Interconnect Technology
Thomas	Grasser	MD Elektronik
Yoshihiro	Niihara	Fujikura Ltd.
TOTAL	27	Attendees