

Unconfirmed Meeting Minutes:

IEEE P802.3dh Multi-Gigabit Automotive Ethernet over Plastic Optical Fiber Task Force

Plenary Meeting (Hybrid)

November 15th, 2023

Honolulu, HI, USA

Prepared by Kazuya Takayama

Wednesday, November 15th, 2023, 1:03 p.m.

IEEE P802.3dh Multi-Gigabit Automotive Ethernet over Plastic Optical Fiber Task Force meeting convened by Yuji Watanabe, Task Force Chair.

Administrative Matters:

Mr. Watanabe called the meeting to order.

Mr. Watanabe reviewed General Decorum and asked if anyone from the press was present.

None responded at 1:04 p.m.

Mr. Watanabe reviewed In-Person Decorum.

Mr. Watanabe reviewed Teleconference Decorum.

Mr. Watanabe announced for Meeting Registration Fee and Non-Payment of Registration Fee.

Attendance is recorded by IMAT.

Attendance is listed in Appendix A

Mr. Watanabe displayed the agenda in [Agenda dh 01a 2023 11 15.pdf](#)

Mr. Watanabe reviewed meeting agenda and asked any correction or modification needed.

No further modification/correction was asked.

No objection was made.

Agenda is approved by unanimous consent at 1:08 p.m.

Goals for the meeting:

- Verify frequency response methodology.
- Discuss & Approve timeline.

Big ticket items:

- Measurement methodology
- Producibility of frequency response measurement

Mr. Watanabe reviewed the access to the reflector and website, Task Force Private Area, and ground rules for the meeting.

IEEE Governance:

Mr. Watanabe briefly reviewed the IEEE structure for standards development and the bylaws and rules by which the Task Force is governed.

Mr. Takayama reviewed meeting minutes for October 18th ad hoc meeting.

([P802d3dh_minutes_20231018_w_attendee.pdf](#)).

Mr. Watanabe asked any correction or modification needed.

No further correction or modification was asked.

Meeting minutes for October 18th ad hoc meeting was approved at 1:12 p.m.

Mr. Takayama reviewed meeting minutes for November 1st ad hoc meeting.

([P802d3dh_minutes_202311101_w_attendee_draft.pdf](#)).

Mr. Watanabe asked any correction or modification needed.

No further correction or modification was asked.

Meeting minutes for November 1st ad hoc meeting was approved at 1:14 p.m.

IEEE Patent Policy, IEEE-SA copyright Policy:

Mr. Watanabe briefly reviewed the patent policy slides (agenda: p.17 - p.18).

At 01:15 p.m., Mr. Watanabe made the call for potentially essential patents.

None responded.

Mr. Watanabe briefly reviewed other guidelines and patent related information (agenda: p.19 - p.20).

Mr. Watanabe briefly reviewed the IEEE-SA copyright policy slides (agenda: p.22 – p.23).

Mr. Watanabe briefly reviewed the IEEE-SA participation slides (agenda: p.24 – p.26).

Project Status:

Mr. Watanabe briefly 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 and Communications:

No letters for this meeting.

Mr. Watanabe showed the location of the approved project documents for the Task Force and reviewed the objectives for the Task Force.

Presentations

Presentation #1

Title: *Optical Connector Design Concept for GI-POF*

([Taguchi_3dh_01_Connector_Design_2023_11_15.pdf](#))

Presenter: **Noritaka Taguchi, Yazaki Corporation**

This contribution provided the information about attenuation change of GI-POF with butt coupling under vibration condition. The measurement data of vibration along to fiber direction (z-axis) data were updated.

Mr. Pérez-Aranda asked several questions and made several comments:

- How much is the maximum vibration frequency and measurement (sampling) frequency? Z-axis measurement data showed periodic change. I assume measurement frequency is below Nyquist.
 - Mr. Taguchi answered it was 450Hz. Sampling frequency will be checked and reported later.
- Do we have to assign 0.7 dB/connection from power budget?
 - Mr. Taguchi answered that threshold number came from ISO standard.
- How much of loss should be assigned?
- If the scratch is concern, then the picture or image of endface should be presented.

Mr. Torres asked question and made comment:

- How long was the measurement time?
 - Mr. Taguchi answered it was 6 hours.
- How can we assess the scratch? 6 hours was too short. Test method for the aging of fiber is referring to ISO or IEC.

Mr. Harshbarger asked question:

- Different core diameter were presented in the past. Have you tested those?
 - Mr. Taguchi answered that only A4j (core/clad = 55/490) was measured.

Presentation #2

Title: ***Update on the temperature dependence of the frequency response for automotive grade GI-POF***

([Hirose 3dh 01 2023 11 15.pdf](#))

Presenter: **Takeshi Hirose, AGC**

This contribution provided the updated information about frequency response measurement result of GI-POF with 15 m in length under the condition of humidity, macro bend, 3 in-line connection.

Mr. Pérez-Aranda asked several questions and made several comments:

- According to p.7, insertion loss showed temperature variation. How much is the Tg?
 - Mr. Watanabe answered it is trade secret.
- Why not use APC?
 - Mr. Hirose answered that the endface preparation is difficult due to refractive index. 8 degree is not the best angle.
- OM3 showed clean plot. We are dealing with different animal.
- There is random variation of frequency response. For mass production, for example, 140 dB/km is rejected. And, 70 dB/km will be used. For IEC, what number will be used?
 - Mr. Watanabe answered it is 100 dB/km.

- Is this sampling oscilloscope?
 - Mr. Kagami answered it is sampling oscilloscope.
- There are three noise preservation methods. How did you configure FFE?
- There is a concern. I guess FFE was configured with no noise preservation. Then blue line (page 11) is not relevant for this (frequency response).
- The VCSEL used for eye diagram measurement is different from the light source for frequency measurement. OTDR is also. I suggest use similar transmitter to get good insight.
- Humidity test for 24 hours was not enough.
- For PMD specification, the data set is not complete. Without clear measurement method, very difficult to advance this project.

Mr. Law commented that this seems to be a study group stage.

Mr. Torres asked question and made comment:

- Assuming no problem in measurement method, the channel was completely different. We are dealing with new channel which is completely unknown.

Mr. Ferretti asked questions:

- For frequency response, have you done long-term test? (3000 hours) How many fibers tested? Did void grow? Where was the location of void?

Mr. Pérez-Aranda commented that it is better to have access to sample by several laboratory.

Short break 14:50-15:15

Presentation #3

Title: *IEEE P802.3dh Timeline Issues*

([Torres 3dh 01a timeline issues 2023 11 15.pdf](#))

Presenter: **Luisma Torres, KDPOF**

This contribution provided the information about the situation of this project.

Mr. Law asked about the GI-POF core diameter. Has it decided?

Mr. Carlson made comments:

- This is the fact. There is no project here. No adopted baseline. No progress. I make motion to withdraw PAR later today. If it fails, in WG tomorrow.

Mr. Murty made comments:

- Technical feasibility of 15 m link GI-POF were shown as well as in other task forces. To get the confirmation of GI-POF feasibility, the worst case of the fiber property needs to be defined. There are a lot of work needed.

Presentation #4 & #5 (consecutive)

Presentation #4

Title: *Update on IEC status and timeline proposal*

([Watanabe 3dh 01a 2023 11 15.pdf](#))

Presenter: **Yuji Watanabe, AGC**

This contribution provided the information about the activity of adding new category for A4 fiber in IEC standard.

Presentation #5

Title: **Changes from 802.3cz**

([Watanabe 3dh 02 2023 11 15.pdf](#))

Presenter: **Yuji Watanabe, AGC**

This contribution provided the idea of necessary change to 802.3cz baseline text to create draft 1.0.

Mr. Pérez-Aranda commented that this IEC proposal was not realistic.

Mr. Choudhury made a few comments:

- This was not IEC proposal but your proposal.
- Not enough information to predict timeline.
- CDV is not sufficient. Need to get FDIS (pre-release). Std needs to be available for purchase

Mr. Ferretti made a few comments:

- There is a concern to develop CD by Spring.
- For next two to three IEC meeting, we have to wait.

Mr. Hyakutake asked about the fiber core diameter. Will it be a range or fixed value?

- Mr. Watanabe answered it will be fixed number.

Mr. Carlson made a few comments:

- IEC timeline, you don't have control.
- This TF has not been productive long term.

Action Items:

Mr. Watanabe showed To Do List ([P802 3dh to-do 20231115.xlsx](#)).

Timeline:

Mr. Watanabe showed the proposed timeline for Task Force.

Mr. Carlson commented that it is not realistic.

Mr. Pérez-Aranda commented that it is not realistic.

Mr. Carlson requested motion for PAR withdrawal.

Motion #1

Request the IEEE 802.3 Working Group withdraw the IEEE P802.3dh PAR

Moved by Steve Carlson

Seconded by Luisma Torres

(≥75% required, Technical)

Y: 13, N: 9, A: 2 (59.1%)

Motion failed at 4:22 p.m.

Motion:

ec-23-0777-00-00EC

IEEE P802.3dh Multi-Gigabit Automotive Ethernet over Plastic Optical Fiber PAR withdrawal request to NesCom

Motion:

Request the IEEE 802.3 Working Group withdraw the IEEE P802.3dh PAR

M: Steve Carlson S: Luisma Torres

Technical (≥ 75%)

Y: ??, N: ??, A: ??

Version 1.0

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Result:



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IEEE P802.3dh TF Plenary meeting - Registration fee required Welcome, Kazuya Takayama

Motion #1

Vote for one

Yes	13	54.2%
No	9	37.5%
Abstain	2	8.3%
Valid	24	
Unexercised	0	
Total	24	

Voters	24
View-only Attendees	0
Non-Voters	4
Total	28

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IEEE P802.3dh TF Plenary meeting - Registration fee required

Welcome, Kazuo Takayama

Motion #1

Vote for one

Attendee	Last Logged In	Vote	Vote Date/Time
Jon Lewis	Nov 15 2023 4:12PM UTC -10	Yes	Nov 15 2023 4:21PM UTC -10
Chad Jones	Nov 15 2023 4:19PM UTC -10	Yes	Nov 15 2023 4:21PM UTC -10
Ruben Perez De Aranda Alonso	Nov 15 2023 4:19PM UTC -10	Yes	Nov 15 2023 4:21PM UTC -10
Satoshi Takahashi	Nov 15 2023 4:20PM UTC -10	Yes	Nov 15 2023 4:21PM UTC -10
Vincent Ferretti	Nov 15 2023 4:16PM UTC -10	Yes	Nov 15 2023 4:21PM UTC -10
Steven Carlson	Nov 15 2023 1:26PM UTC -10	Yes	Nov 15 2023 4:21PM UTC -10
Angela Lambert	Nov 15 2023 4:20PM UTC -10	Yes	Nov 15 2023 4:21PM UTC -10
Tomohiro Kikuta	Nov 15 2023 4:20PM UTC -10	No	Nov 15 2023 4:21PM UTC -10
Douglas Hershberger	Nov 15 2023 4:20PM UTC -10	Yes	Nov 15 2023 4:21PM UTC -10
Kjersti Martino	Nov 15 2023 4:16PM UTC -10	Yes	Nov 15 2023 4:21PM UTC -10
Golam Choudhury	Nov 15 2023 4:19PM UTC -10	Yes	Nov 15 2023 4:21PM UTC -10
Janik Steyer-Ege	Nov 15 2023 4:19PM UTC -10	Yes	Nov 15 2023 4:21PM UTC -10
Charles Hozeska	Nov 15 2023 4:19PM UTC -10	No	Nov 15 2023 4:21PM UTC -10
Takeshi Hirose	Nov 15 2023 4:20PM UTC -10	No	Nov 15 2023 4:21PM UTC -10
Ramana Murty	Nov 15 2023 4:19PM UTC -10	Abstain	Nov 15 2023 4:21PM UTC -10
Masato Shiino	Nov 15 2023 4:20PM UTC -10	Yes	Nov 15 2023 4:21PM UTC -10
Hideki Goto	Nov 15 2023 4:19PM UTC -10	Abstain	Nov 15 2023 4:21PM UTC -10
Kazuyoshi Kurashima	Nov 15 2023 4:20PM UTC -10	No	Nov 15 2023 4:21PM UTC -10
Kevin Peters	Nov 15 2023 4:21PM UTC -10	Yes	Nov 15 2023 4:21PM UTC -10
Manabu Kagami	Nov 15 2023 4:19PM UTC -10	No	Nov 15 2023 4:21PM UTC -10

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The screenshot shows the IEEE SA Standards Association interface for a meeting. At the top, it says "IEEE P802.3dh TF Plenary meeting - Registration fee required" and "Welcome, Kazuo Takayama". The main heading is "Motion #1" with a sub-heading "Vote for one". Below this is a table of attendees and their votes.

Attendee	Last Logged In	Vote	Vote Date/Time
Yesuhiro Hyekutake	Nov 15 2023 4:19PM UTC -10	No	Nov 15 2023 4:21PM UTC -10
Hidenari Hirase	Nov 15 2023 4:19PM UTC -10	No	Nov 15 2023 4:21PM UTC -10
Yoshihiro Niihara	Nov 15 2023 4:17PM UTC -10	No	Nov 15 2023 4:22PM UTC -10
Kazuye Takayama	Nov 16 2023 1:41PM UTC -10	No	Nov 15 2023 4:22PM UTC -10

Below the table, there are navigation elements: a "Return to Menu" button, and links for "Privacy Policy", "Support", and "Leave Meeting". A "POWERED BY SBS" logo is in the bottom right corner.

Future Meetings:

Ad hoc meeting will be held biweekly basis.

Next ad hoc meeting was scheduled on November 29th.

January 2024 [Interim]

- January 22 -25, 2024, St. Petersburg, FL

March 2024 [Plenary]

- March 11 -14, 2024, Denver, Colorado

May 2024 [Interim]

- May 13 -16, 2024, Venue TBD

July 2024 [Plenary]

- July 15 -18, 2024, Montreal, Quebec, Canada

Mr. Watanabe asked any other business to conduct or discussed.

None responded.

The Task Force Plenary meeting was adjourned at 4:26 p.m.

Appendix A: Attendees at the IEEE P802.3dh Task Force Plenary meeting, November 15th, 2023.

Name	Affiliation
Carlson, Steve	HSD, Robert Bosch GmbH, Ethernovia
Chang, Jae-yong	Keysight
Choudhury, Mabud	OFS
Ferretti, Vincent	Corning Incorporated
Feyh, German	Broadcom Corporation
Glanzner, Martin	SEI Automotive Europe GmbH
Goto, Hideki	Toyota Motor Corporation
Haasz, Jodi	IEEE SA
Harshbarger, Douglas	Corning Incorporated
Hirase, Hidenari	AGC
Hirose, Takeshi	AGC Inc.
Hozeska, Charles	Cernitin Solutions
Hyakutake, Yasuhiro	Orbray Co., Ltd.
Kagami, Manabu	Nagoya Institute of Technology (NITech)
Kaseda, Yugo	Nitto Denko Corporation
Kikuta, Tomohiro	Orbray Co., Ltd.
Kurashima, Kazuyoshi	AGC
Lambert, Angela	Corning Incorporated
Law, David	Hewlett Packard Enterprise
Lewis, Jon	Dell Technologies
Martino, Kjersti	Inneos
Murty, Ramana	Broadcom Corporation
Nakayama, Daiki	Sumitomo Electric Industries, LTD
Niihara, Yoshihiro	Fujikura Ltd.
Pardo, Carlos	KDPOF
Perez De Aranda Alonso, Ruben	KDPOF
Peters, Kevin	Inneos
Shiino, Masato	FURUKAWA ELECTRIC
Steyer-Ege, Janik	Bosch
Taguchi, Noritaka	YAZAKI
Takahashi, Satoshi	Self Employed
Takayama, Kazuya	Nitto Denko Corporation
Tanaka, Yuhei	Nitto Denko Corporation
Torres, Luis	Knowledge Development for Plastic Optical Fiber

Tsuzaki, Nozomi	Independent
Wang, Frank	Realtek
Watanabe, Yuji	AGC
Yamada, Osamu	YAZAKI

Total: 38 attendees