Meeting Minutes

Group: *IEEE Greater than 50G bidirectional optical access PHYs task force meeting*

Location: *IEEE Interim, San Antonio.*

Date: *May 15, 2023*

Opening

08:00 (GMT-5) The meeting was called to order by Yuanqiu Luo, chair. Frank Effenberger volunteered to be the Recording Secretary.

The task force chair gave her opening introduction on decorum, and an attendance list will be passed around.

Motion 1

- Move to approve the agenda, located at:
- https://grouper.ieee.org/groups/802/3/dk/public/2305/8023dk_2302_Task_Force_agenda.pdf
- M: Ken Jackson S: Limin Geng
- Motion result: Approved by voice without opposition

Motion 2

- Move to approve the minutes from April 2023, located at:
- https://grouper.ieee.org/groups/802/3/dk/public/2304/2304_8023dk_unapproved_minutes.pdf
- M: Frank Effenberger S: John Johnson
- Motion result: Approved by voice without opposition

The study group chair gave her opening introduction on goals, big ticket items, ground rules, process, attendance tool, and patent policy.

08:14 The task force acting chair made a call for patents; no response was made.

08:17 The task force chair reviewed the IEEE Participation guidelines and the IEEE SA Copyright policy.

All the usual IEEE policies and procedures were reviewed.

Goals for the May meeting were to discuss contributions and identify baseline candidates, concentrating on the wavelength plans, speed per wavelength, and loss budget.

Liaisons and Presentations

ITU-T LS/r on 100 Gb/s bidirectional point-to-point optical access	ITU-T Study Group 15	Attachment

The liaison was reviewed. It reports that an amendment of G.9806 was consented.
A draft response was reviewed. The group will review this at the end, to add any new results into the liaison.

ITU-T LS on G.652 fibre link property	ITU-T Study Group 15	Attachment

The liaison and its attachment was reviewed. Some new study of G.652 fibers is beginning in SG15. A draft response was reviewed, and there were no comments from this group. This response will be reviewed again in .3dj task force.

Considerations on BR40 wavelength plan	Han Hyub Lee Hwan Seok Chung	ETRI

This discussed the solution to the 100 Gb/s 40 km reach objective. The proposal is that 2x50 Gb/s transmission be used at this time, as it would have to lowest technical risk.

Wavelength plan for 100G and 200G Bidi optical PMDs targeting 10km and 20km reach	Peter Stassar Guangcan Mi Tao Gui	Huawei

This reviewed all the previous straw polls on this topic, and proposed that we use the 1304.5 and 1309 nm wavelength plan for BR10 and BR20 links.

Motion #3: Specify 100 Gb/s PAM4 modulation using wavelengths 1304.5 +/- 1 nm upstream and 1309.1 +/- 1 nm downstream for 10 km and 20 km PMDs.
M. Guangcan Mi S. John Johnson
Motion passes without objection.

Multipath interference in high-speed PAM4 transmission	Dawei Ge Dong Wang Ruibo Han Dechao Zhang Ning Cheng	China Mobile Innolight Technology

This presented some results that show that the multi-path interference issue is of practical importance in some applications. This is because many fiber connectors exhibit high reflections. It was observed that some of the cases highlighted demonstrated poor operational practices: using the wrong connectors in the wrong enclosure. If proper techniques are used and the in-force standard specifications are met, then the links defined in .3cp will work.

Impact of MPI on high-speed PAM4 transmission	Ning Cheng Dawei Ge Dong Wang Dechao Zhang	Innolight Technology China Mobile

This shows how the MPI issue impacts the link margin for PAM4 transmission. In general, MPI is a well known issue for PAM4 modulation.

MPI and its relationship to P802.3dk Frank Effenberger Futurewei

This gave a discussion on how the new MPI "request" might be reflected in our project. If the group agrees that defining a PMD that can handle higher reflections for 100 and 200 Gb/s, then we could add new objectives. If we want to also add these for 50 Gb/s, then we'd have to expand our scope.

At this point, it is not at all clear if the "request" is validated by sufficient market demand, and furthermore it seems that the fiber links are degrading over time, making this a moving target.

Discussions, straw-polls, other motions

The liaison was reviewed, and some mention for the adopted baseline on wavelengths.
Motion 4: Send the liaison response letter to ITU-T SG15-LS049 and give the chair editorial license.
M. Frank Effenberger, S. John Johnson
Motion passes without objection.

Future meeting plan
The plans for our next meetings were discussed.
June 7 will have a telephone meeting, 9:00 to 11:00 EDT.
The July 10-13 plenary meeting will be in Berlin.
The September 11-14 interim meeting will be in Brazil.
The November 13-16 plenary will be in Oahu, Hawaii.

Motion 5

- Move to adjourn the meeting.
- Procedural (>50%)
- M: John Johnson S: Peter Stassar
- Results Y: N: A:
- Motion passes by voice without opposition

11:15 (GMT-5) Meeting adjourned

Attendees (22)

Name	Affiliation	5/15/2023
Earl Parsons	Comscope	X
Frank Effenberger	Futurewei	X
Fabio Bottoni	Cisco	X
Guangcan Mi	Huawei	X
Hanhyub Lee	ETRI	X
Hao Ren	Huawei	X
Haojie Wang	CMCC	X
Kenneth Jackson	Sumitomo	X
Janik Stey-Ege	Bosch	X
John Johnson	Broadcom	X
Jun Shan Wey	Verizon	X
Kumi Omori	NEC	X
Limin Geng	Huawei	X
Marek Hajduczenia	Charter	X
Peter Stassar	Huawei	X

Ray Nering	Cisco	X
Tomoo Takahara	Fujitsu	X
Yuanqiu Luo	Futurewei	X
Yu Xu	Huawei	X
David Law	Hewlett Packard Enterprise	X
Ruibo Han	CMCC	X
Felix Fellhauer	Robert Bosch GmbH	X