Meeting Minutes

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

Location: *Zoom teleconference*

Date: *Apr 23, 2024*

Opening

09:00 (GMT-4) 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 the attendance will be captured from the Zoom system.

Motion 1

- Move to approve the agenda, located at:
- hhttps://grouper.ieee.org/groups/802/3/dk/public/2403/8023dk_2403_Task_Force_agenda.pdf
  M: Sisi Tan S: Ken Jackson
- Motion result: Approved by voice without opposition.

Motion 2

- Move to approve the minutes from March 2024, located at:
- https://grouper.ieee.org/groups/802/3/dk/public/2403/2402_8023dk_unapproved_minutes.pdf
- M: Frank Effenberger S: Ken Jackson
- Motion result: Approved by voice without opposition.

IEEE SA patent policy, individual participation behavior, copyright policy

The Task Force Chair reviewed the Individual Participation Behavior slides, the IEEE SA copyright policy and presented the IEEE SA Patent Policy slides. The call for patents was made at 09:16 and no one responded.

All the usual IEEE policies and procedures were reviewed.

Goals for the April meeting were to consider the continuing draft of the 100G clause and discuss contributions on various technical issues, and editor's suggestions for completing the sub-clauses.

Draft review

The draft 0.4 was reviewed. All the recent agreed materials have been added, including the PICS. There were no immediate comments on this draft.

It can be found at: https://www.ieee802.org/3/dk/private/index.html (password protected)

Presentation

Presentations	Contributor	Affiliation
Revised parameters of 100GBASE-BR40	Tomoo Takahara	Fujitsu
	Takuya Kanai	NTT Innovative Devices
	Hirotaka Nakamura	NTT Innovative Devices

This highlighted some key specifications that are currently under examination. In particular, the optical damage threshold was revised upward to -1.0 dBm, based on the deemed capabilities of III-V. The capabilities of SiGe based receivers should be checked. In G.9806, the damage threshold is +1.0 dBm. This might be explored to allow a wider range of Tx power. In general, these specification updates make the total set of parameters more self-consistent. A small editorial comment: Signal Detect normally goes in a table from the PMA function.

100GBASE-BR40 production data and specification discussion	Dirk Lutz	Eoptolink
	Aaron Ni	Eoptolink

This considered the current baseline for BR40. Data from 100 assembled modules were shown. This data shows that the Tx spec is quite difficult, but the receiver spec has a lot of margin. Hence, it proposes that the power budget should be shifted by 1 dB lower power levels. The origin of the difference might be the use of III-V vs. SiGe detectors.

BR40 transmit specification discussion based on supply chain feedback	Bin Shi	SiFotonics
	Yongpeng Zhao	SiFotonics

This considers the Tx outer OMA min specification of +5.7 dBm. This seems difficult to achieve using an EML. This suggests that the spec should be lowered 1.0 dB, which will make the transmitter feasible.

Overall, the power budget from presentation 1 seems to be internally self-consistent. However, there are two trade-off analyses called for: Tx Power Max vs. Rx damage threshold, and Tx OMA Min vs. Rx sensitivity. It was agreed to call for contributions into the May meeting to help resolve these trade-offs. Informally, it was suggested that the draft coming out of May should have all its values in place, using variables to express any remaining uncertain items.

Discussions, straw-polls, other motions

None.

Future meeting plan

The plans for our next meetings were discussed.
The May 13-17 interim will be in Annapolis MD, USA. Our group will meet Monday.
The July 15-18 plenary is in Montreal, QC, Canada.
The Sep 16-20 interim is in Hamburg Germany.
The Nov 11-15 plenary is in Vancouver BC, Canada.

That brought us to the end of the agenda. The chair thanked all our participants.

Motion #3
Move to adjourn the meeting.
M: Frank Effenberger S: Tomoo Takahara
Motion passes by voice without opposition.

10:22 (GMT-4) Meeting adjourned

Attendees (23)

Name	Affiliation	4/23/2024
Aaron Ni	EoptoLink	X
Angie Lambert	Corning	X
Craig Pasek	Cisco	X
David Law	HPE	X
Dirk Lutz	EoptoLink	X
Ernie Muhigana	Lumentum	X
Frank Effenberger	Futurewei	X
Guangcan Mi	Huawei	X
John Johnson	Broadcom	X
Kenneth Jackson	Sumitomo	X
Kumi Omori	NEC	X
Limin Geng	Huawei	X
Piers Dawe	Nvidia	X
Ryan Yu	Innolight	X
Shi Bin	Sifotonics	X
Sisi Tan	Huawei	X
Takuya Kanai	NTT	X
Tiger Ninomiya	Accelink	X
Tomoo Takahara	Fujitsu	X
Vince Ferretti	Corning	X
Yongpeng Zhao	Sifotonics	X
Yuanqiu Luo	Futurewei	X
Yuefeng Cai	Huawei	X