Meeting Minutes

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

Location: *Las Campinas, Brazil.*

Date: *Sep 11, 2023*

Opening

09:00 (GMT-3) 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/2309/8023dk_2309_Task_Force_agenda.pdf
- M: Peter Stassar S: David Law
- Motion result: Approved by voice without opposition

Motion 2

- Move to approve the minutes from August 2023, located at:
- https://grouper.ieee.org/groups/802/3/dk/public/2308/2308_8023dk_unapproved_minutes.pdf
- M: John Johnson S: Frank Effenberger
- 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.

09:15 The task force acting chair made a call for patents; no response was made.

09:17 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 September meeting were to discuss contributions and identify baseline candidates, concentrating on the wavelength plans, speed per wavelength, and loss budgets.

Presentations

CD Tolerance Analysis of 100G x 1ch BiDi 40-km	Fabio Bottoni Ray Nering	Cisco

This presented some experimental results looking at 100G over 40km, using a set of fiber spools that were selected for their extremal dispersion characteristics. It was found that the minimum dispersion value was the worst case. Then the new work on statistical chromatic dispersion was mentioned. At the 40 km link length, the reduction of dispersion range is large, and CD becomes a much smaller impairment.

It was also found that the TDECQ was not directly correlated to the BER at the negative dispersion operating point. Perhaps there are differences between the reference and real receiver implementations.

Wavelength Plan Feasibility Consideration for 100G BiDi 40km	Limin Geng	Huawei

This considers the feasibility of the bidirectional diplexer filter. A 6 degree angle of incidence design appears able to separate the 1304.6 and 1309.1 nm wavelengths. Some simple modeling on CD impact showed acceptable penalty (however, this didn't include chirp, and more work is needed).

Baseline Proposal for 100GBASE-BR10	Guangcan Mi Yuefeng Cai	Huawei

This reviewed the optical specifications for the BR10 PMD. The one specification that was left as a TBD was the chromatic dispersion limits. We are expecting the results of the statistical CD specification from ITU-T Q5/15, and once that is received the CD limits can be calculated.

Proposal for the Baseline Parameters of 100GBASE-BR10, BR20, and BR40	Frank Effenberger Sisi Tan	Futurewei Huawei

This compiled several potential baseline specifications, so that they can be compared and discussed. It was suggested that we do some straw polls on the loss budgets to support.

Discussions, straw-polls, other motions

A series of straw polls were taken asking what loss budgets should be supported for the different classes of bidirectional optics.

Poll #1: For the BR10 loss budget, I support

A: 0 to 6.3 dB, based on 802.3cu 100GBASE-LR1	14
B: 0 to 10 dB, based on G.9806 Amd.3	0
C: Need more info / abstain	2

Poll #2: For the BR20 loss budget, I support:

A: 9 to 15 dB, based on MSA 100G-LR1-30	6
B: 5 to 15 dB, based on G.9806 Amd.3	8
C: Need more info / abstain	3

Poll #3: For the BR40 loss budget, I support

A: 10 to 18 dB, based on 802.3cp	16
B: 10.5 to 18 dB, based on MSA 100G-ER1-40	1
C: 10 to 20 dB, based on G.9806 Amd.3	0
D: Need more info / abstain	0

Several motions were then made to affirm the poll 1 and 3 results.

Motion 3
Move to adopt 0 to 6.3 dB as the channel insertion loss range for 100GBASE-BR10.
M: Frank Effenberger S: Peter Stassar
Passed by voice vote without opposition.

Motion 4
Move to adopt 10 to 18 dB as the channel insertion loss range for 100GBASE-BR40.
M: Frank Effenberger S: Ken Jackson
Passed by voice vote without opposition.

The selection of an editor was discussed. Sisi Tan had volunteered to serve in this role. This is her first editorial role, but Yuanqiu Luo (editor of 802.3cp) will provide support as needed.

Motion 5
Move to appoint Sisi Tan as editor.
M: Frank Effenberger S: Jon Lewis
Passed by voice vote without opposition.

Finally, the baseline specifications for the BR10 were adopted, as there is little controversy regarding this set of specifications. The contribution from Guangcan Mi contained the key parameters.

Motion 6
Move to adopt https://grouper.ieee.org/groups/802/3/dk/public/2309/3dk_Mi_2309_1.pdf (slides 6-7) as the baseline for 100GBASE-BR10, with the chromatic dispersion values set to "TBD".
M: Guangcan Mi S: Ken Jackson
Passed by voice vote without opposition.

Future meeting plan
The plans for our next meetings were discussed.
The October conference call will be Oct 10 (Tuesday)
The November 13-16 plenary will be in Oahu, Hawaii. Our objective times are Monday afternoon and Tuesday morning.

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

Motion 7
Move to adjourn the meeting.
M: Peter Stassar S: Jon Lewis
Motion passes by voice without opposition.

12:05 (GMT-3) Meeting adjourned

Attendees (29)

Name	Affiliation	9/11/2023
Andy Shen	Futurewei	X
Carlo Mariotti	Cisco	X
Carlos Pardo	KDPOF	X
Chan-Chih Chen	AOI	X
Craig Pasek	Cisco	X
Ed Ulrichs	Intel	X
Eric Maniloff	Ciena	X
Fabio Bottoni	Cisco	X
Frank Effenberger	Futurewei	X
Guangcan Mi	Huawei	X
Hideki Isono	Fujitsu Optical Components	X

David Law	HPE	X
Jon Lewis	Dell Technologies	X
John Johnson	Broadcom	X
Kenneth Jackson	Sumitomo	X
Kjersti Martino	Inneos	X
Limin Geng	Huawei	X
Luisma Torres	KDPOF	X
Mehmet Tazebay	Broadcom	X
Peter Stassar	Huawei	X
Rich Boyer	Aptiv	X
Shun-Sheng Wang	Realtek	X
Sisi Tan	Huawei	X
Sylvanus Lee	Leviton	X
Tomoo Takahara	Fujitsu	X
William Klingensmith	US Federal Government	X
Vince Ferretti	Corning	X
Yuanqiu Luo	Futurewei	X
Yuefeng Cai	Huawei	X