

Meeting Minutes

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

Location: Denver, CO, USA

Date: Mar 11, 2024

Opening

13:00 (GMT-6) 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:
 - https://grouper.ieee.org/groups/802/3/dk/public/2403/8023dk_2403_Task_Force_agenda.pdf
M: Sisi Tan S: John Johnson
- Motion result: Approved by voice without opposition.

Motion 2

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

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

13:12 The task force chair made a call for patents; no response was made.

13:15 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 March 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.

The draft 0.3 was reviewed at the February meeting. There were no immediate comments on this draft. It can be found at: <https://www.ieee802.org/3/dk/private/index.html> (password protected)

Liaisons:

https://www.ieee802.org/3/minutes/jan24/incoming/SG15-LS86_Redacted.pdf

This liaison reviewed the progress in SG15 on the characterization of the parameters of G.652 and G.657 fibers. A response was prepared subsequent to one of the 802.3dj optical ad-hoc meetings.

https://www.ieee802.org/3/minutes/jan24/incoming/SG15-LS80_Redacted.pdf

Presentations	Contributor	Affiliation
Baseline proposal for 100GBASE-BR40	Tomoo Takahara	Fujitsu
	Takuya Kanai	NTT Innovative Devices
	Hiroataka Nakamura	NTT Innovative Devices

This contribution presented the fully completed proposal for the BR40 budget. This aims to incorporate all the comments and discussions that have been made over the past few months of review. The minimum average power is 3 dB lower than the minimum OMA, implying an extinction ratio of infinity. There were various comments that the TX-OMA max might be too low, meaning that there is not enough manufacturing margin. Also, the minimum loss of 10 dB was questioned. It follows what previous 40 km PMDs used, but it might be adjusted. The contributor expressed his view that these values are viewed as a starting point, and it is hoped that once they are put into the draft, they will attract comments to improve them.

A motion was prepared:

Motion: Move to adopt the proposed values, based on Slides 4-9 in "3dk_takahara_2403_1.pdf" (without "TBD") as the baseline for P802.3dk 100GBASE-BR40.

Technical >75%.

M: Tomoo Takahara S: Kenneth Jackson

There was more discussion on this motion, and perhaps a better way would be to forward this contribution to a specific ad-hoc meeting, so that they values can be discussed. This gained a lot of support.

In a later discussion, the motion was raised again, and it was suggested that the authors can create an updated version of the takahara contribution, and then we can revisit the motion again later in the meeting.

[BR20 power budget \(redux\)](#) Frank Effenberger Futurewei

This presented the situation on the BR20 budget, and suggested some ways forward to direct how the BR20 specs will be computed. This motivated two motions:

Motion #3: Move to adopt 0 to 10 dB to be the BR20 insertion loss range.

M: Frank Effenberger S: Eric Manlinoff

This technical motion was passed by voice without opposition.

Motion #4: Move to base the BR20 receiver parameters on an APD-based receiver.

M: Frank Effenberger S: Xiang Liu

This technical motion was passed by voice without opposition.

With these decisions, we can begin to do the detailed design of the BR20 links.

This reviewed the issues with defining the 200 Gb/s bidi links. This explored the possibility of reusing the LANWDM wavelengths (1295, 1300, 1304, 1309). For BR10 and BR20, the CD dispersion is tolerable. However, for BR40 there is too much negative dispersion. Several options were suggested for how to handle BR40: use 400 GHz grid, or use 4x50G design, or abandon the objective.

It was discussed that in the next few months the fiber dispersion might be improved just enough to make the BR40 feasible. In this case, the most likely wavelengths would be 1300, 1304, 1309, and 1313. Another possibility would be to revise the objective to be 30 km - that would certainly be feasible. The idea of chirping the transmitters to better suit the dispersion range of each channel was explored. This has been done in the past, and is a potential feasibility enhancer - in any case, it would be a vendor option, and not necessarily part of the specification.

The Takahara motion was taken up again.

Motion #5: Move to adopt the proposed values, based on Slides 4-9 in "3dk_takahara_2403_1b.pdf" as the baseline for P802.3dk 100GBASE-BR40.

M: Tomoo Takahara, S: Kenneth Jackson. Technical (≥ 75)

The motion passed without opposition.

This gave a first version of the PICS, based on the outline of our draft so far.

Motion #6: Move to adopt proposals from contributions 3dk_tan_2403_1 as baseline of clause 999.12.

M. Sisi Tan, S: Tao Gui. Technical ($\geq 75\%$)

The motion passed without objection.

Discussions, straw-polls, other motions

Motion #7: Move that the editor creates draft 0.4 based upon draft 0.3, reflecting the motions and comments in this meeting.

M: Yuanqiu Luo, S: Frank Effenberger. Technical ($\geq 75\%$)

The motion passed without objection.

Liaison #2: This liaison from ITU-T Q2/15 reported the progress of G.9806 Amd.3, which was consented in December 2023. Some text was drafted, but it was then decided to hold this until the May meeting, because at that point we will have more material results to report.

Future meeting plan

The plans for our next meetings were discussed.

We will have a conference call April 23, 09:00 to 10:00 EDT, the subject of which will be the review of the Takahara baseline. All members are requested to study and prepare for this meeting.

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 #8

Move to adjourn the meeting.

M: Vincent Ferretti S: John Johnson

Motion passes by voice without opposition.

17:10 (GMT-6) Meeting adjourned

Attendees (21)

<u>Name</u>	<u>Affiliation</u>	<u>3/11/2024</u>
Carlo Pardo	KDPOF	X
David Law	HPE	X
David Piehler	Dell	X
Eric Maniloff	Ciena	X
Frank Effenberger	Futurewei	X
Guangcan Mi	Huawei	X
John Johnson	Broadcom	X
Kenneth Jackson	Sumitomo	X
Limin Geng	Huawei	X
Mark Nowell	Cisco	X
Peter Stassar	Huawei	X
Ray Nering	Cisco	X
Roberto Rodes	Coherent	X
Rohit Sharma	Molex	X
Sisi Tan	Huawei	X
Tao Gui	Huawei	X
Tomoo Takahara	Fujitsu	X
Vince Ferretti	Corning	X
Xiang Liu	Huawei	X
Yuanqiu Luo	Futurewei	X
Yuefeng Cai	Huawei	X