

# Meeting Minutes

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

*Location: Le Meridien hotel Hamburg*

*Date: Sep 16, 2024*

## Opening

08:00 (GMT+2) 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. There were no members of the press in the meeting. The attendance will be registered manually from the Zoom system.

### Motion 1

- Move to approve the agenda, located at:
- [https://grouper.ieee.org/groups/802/3/dk/public/2409/8023dk\\_2409\\_Task\\_Force\\_agenda.pdf](https://grouper.ieee.org/groups/802/3/dk/public/2409/8023dk_2409_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 July 2024, located at:
- [https://grouper.ieee.org/groups/802/3/dk/public/2409/2407\\_8023dk\\_unapproved\\_minutes.pdf](https://grouper.ieee.org/groups/802/3/dk/public/2409/2407_8023dk_unapproved_minutes.pdf)
- M: Frank Effenberger S: John Johnson
- Motion result: Approved by voice without opposition.

The September meeting goals are to progress the draft and complete the baselines for all PMDs.

Attendance credit changes on interims and plenaries were reviewed.

## 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 08:25 and no one responded.**

All the usual IEEE policies and procedures were reviewed. The copyright policy was reviewed at 08:28, and the individual participation policy was reviewed at 08:31.

## Draft 0.5 Review

<https://www.ieee802.org/3/dk/private/index.html>

The 100G PMD clause is substantially complete, and has tracked the few small updates that were from contributions in July. The exact values of the dispersions should be recalculated and made uniform in

precision. The introduction sentences to many sub-clauses (this clause is a copy of clause X and Y) needs to be reworded to say that the new subclause is “modeled after” or “substantially follows” the prior clauses. The issue is that the new clause is not an exact copy; rather, it is based on the previous clauses with the necessary changes. There were some other comments regarding editorial uniformity issues.

## Presentations

Presentations	Contributor	Affiliation
<a href="#">TBDs in Clause 999</a>	Sisi Tan	Huawei
This considered the TBDs in the draft, and suggested additions to resolve some of them.		
<a href="#">200 GBASE-BR baseline proposal</a>	Frank Effenberger	Futurewei
<p>This discussed how to move forward with 200G BiDi. One suggestion is to try to reuse the statistical dispersion analysis being done in .3dj. This will give us a better (easier) dispersion requirement, and also should be easier to approve since it is the best answer possible. Another suggestion is to use the LAN-WDM wavelengths for BR10 and BR20, which should be very feasible from a channel impairment perspective. Even the BR40 would be at the same difficulty as 800G-LR4, which is kind of at the edge of feasibility.</p> <p>There were many comments and discussions based on this contribution.</p> <ul style="list-style-type: none"> <li>• Once we use the statistical model, there is a risk that the link might not work. In the 800G LR4 space, there is a coherent “backup plan”, but we don’t have that here. However, for BR10 and BR20, we are 75% and 50% less dispersion impacted as 800G-LR4. The BR40 is at “equal” dispersion impact, but since that is at 40 km, there will be about 16 segments, and so the statistical effect will be even better.</li> <li>• If we use the statistical dispersion analysis, then are we sure that the LAN-WDM wavelength choice for BR10 correct? It seems possible that for BR10, at least, CWDM wavelengths could be used. This comment applies not only to 200G, but also the 100G! This should be studied.</li> <li>• The access application space has practical limitations, where network imperfections (dirty connectors or tight bends) can cause excess loss. We need to plan for that.</li> <li>• Wavelength reuse only makes sense if the same transmitter can be used (similar power levels, for example).</li> </ul>		
<a href="#">Considerations on 200G BiDi</a>	Sisi Tan	Huawei
<p>This discussed the prospects for 200G Bidi, and raised questions on whether 200G BR40 is needed. Some operators might want to skip 200G and go for 400G. This suggests that perhaps 200G BR40 could be dropped from our objectives.</p> <p>It was observed that we have been working for two years in the .3dk project, and we haven’t gotten to draft 1.0. We are behind our project schedule.</p>		
Break		
<a href="#">An in-depth look at PMD and DGD scenarios for 50 Gbaud, 100 Gbaud and 200 Gbaud IMDD links</a>	Vince Ferretti	Corning
<p>This gives a good tutorial on the PMD effect and its characterization. It seems that for 50 GBd links, the PMD reaches a 1 dB penalty at around 100 km, meaning that for .3dk this should not be an issue. Final take away is that PMD of real deployed cables should be measured – because the whole analysis</p>		

here is based on measurements made decades ago. The situation may have changed. Maybe we need to create a liaison to FSN and OIF to request these measurements to be made. (Maybe also OCP.)

## Discussions, straw-polls, other motions

### Motion 3

- Move to adopt proposals from slides 2 and 4 in contribution 3dk\_tan\_2409\_1 as baselines for clauses 999.7.12 and 999.11:
- M: Sisi Tan S: Ken Jackson
- Motion result: Approved by voice without opposition.

### Motion 4

- Move to adopt 3.1, 3.9, and 5.0 ps (taken from 3dk\_ferretti\_2409\_1a) as DGD\_max of 100GBASE-BR10, BR20, and BR40 to Table 999-12:
- M: Vince Ferretti S: John Johnson
- Motion result: Approved by voice without opposition.

There was a discussion on the 200G objectives. There seem to be doubts on the usefulness of these PMDs, and the project schedule

### Motion 5

- Move to delete the 200GBASE-BR10, 200GBASE-BR20, and 200GBASE-BR40 PHYs from the 802.3dk task force objectives.
- M: Frank Effenberger S: Guangcan Mi
- Motion result: Approved by voice without opposition.

### Motion 6

- Move to generate Draft 1.0 by implementing motions 3 through 5 in draft 0.5.
- M: Yuanqiu Luo S: John Johnson
- Motion result: Approved by voice without opposition.

## Future meeting plan

The plans for our next meetings were discussed.

- October interim zoom call: Oct-15, 09:00-10:00 EDT (New York)
- 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 7

Move to adjourn the meeting.

M: Ken Jackson S: Peter Stassar

Motion passes by voice without opposition.

12:15 (GMT+2) Meeting adjourned

## Attendees (19)

Angela Lambert      Corning  
Antonio Tartaglia    Ericsson

Carlos Pardo	KDPOF
David Piehler	Dell
Eric Maniloff	Ciena
Frank Effenberger	Futurewei
Frank Wang	Realtek
Guangcan Mi	Huawei
John Johnson	Broadcom
Ken Jackson	Sumitomo
Kumi Omori	NEC
Limin Geng	Huawei
Michael He	Innolight
Peter Stassar	Huawei
Sisi Tan	Huawei
Tiger Ninomiya	Accelink USA
Tomoo Takahara	Fujitsu
Vince Ferretti	Corning
Yuanqiu Luo	Futurewei