

IEEE 802.3 Ethernet Working Group  
**DRAFT** Liaison Communication

Source: IEEE 802.3 Working Group<sup>1</sup>

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From: David Law Chair, IEEE 802.3 Ethernet Working Group  
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Subject: Liaison to OIF, Response to "800LR IA Project update" dated 16 May 2023

Approval: Agreed to at IEEE 802.3 plenary meeting, Berlin, 13 July 2023

Dear Mr. Otto and members of the OIF,

Thank you for your liaison "800LR IA Project Update", dated 16 May 2023.

As the IEEE P802.3df and IEEE P802.3dj projects are both addressing 800 Gb/s Ethernet, status updates for both projects are provided.

The IEEE P802.3dj Task Force is in the midst of selecting baselines. As previously communicated, one of the objectives of this task force is to define a physical layer specification that supports 800 Gb/s operation over one wavelength over a single SMF in each direction with lengths up to at least 10 km. At the IEEE 802.3 May 2023 Interim DP-16QAM modulation was selected for this interface. Additionally, it adopted a DER0 value of  $2.67\text{e-}5$  for higher loss AUI's within a PHY using 200Gb/s PAM4 signalling. BER division between C2C C2M has been noted as being for future discussion and is currently receiving contributions. This progress would be of interest to system developers.

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<sup>1</sup> This document solely represents the views of the IEEE 802.3 Working Group, and does not necessarily represent a position of the IEEE, the IEEE Standards Association, or IEEE 802.

The IEEE P802.3dj Task Force met at the IEEE 802 July 2023 Plenary. For further information on task force activities, please see <https://www.ieee802.org/3/dj/index.html>. At the meeting the following decisions were made:

1. Discussion is continuing on FEC selection for this interface. Potential candidates are a concatenated FEC based on RS(544,514) and BCH(126,110) and oFEC. Wavelengths in the O Band and C Band are also under consideration.
1. A baseline was adopted that specifies the use of concatenated FEC based on RS(544,514) and BCH(126,110) and a wavelength in the O band.
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1. A baseline was adopted that specifies the use of concatenated FEC based on RS(544,514) and BCH(126,110).. Discussion continues on whether to use a wavelength in the O band or C band.
2. The task force further refined the AUI BER budgeting, identifying the BER that optical modules will need to support.
3. Other....??

The IEEE P802.3df Task Force also met at the IEEE 802 July 2023 Plenary and addressed comments submitted against IEEE P802.3df D2.1, and approved the generation of D3.0. Additionally, the draft was approved to progress to the next level of balloting. For further information please see <https://www.ieee802.org/3/df/index.html>.

We look forward to the continued collaboration between our two groups. Individuals interested in participating in the work of the P802.3dj Task Force may find further information at <https://www.ieee802.org/3/dj/index.html>.

Sincerely,

David Law

Chair, IEEE 802.3 Ethernet Working Group