

IEEE 802.3 Ethernet Working Group
Liaison Communication

Source: IEEE 802.3 Working Group¹

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From: David Law Chair, IEEE 802.3 Ethernet Working Group
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Subject: Liaison reply to ITU-T SG15 regarding G.652

Approval: Agreed at IEEE 802.3 interim meeting, San Antonio, TX, USA, 18 May 2023

Dear Mr. Parsons and members of ITU-T SG 15,

Thank you for your liaison letter informing us about the correspondence activity regarding the properties of ITU-T G.652 fibers. This topic is of great importance to the work of the IEEE P802.3dj Task Force and the IEEE P802.3dk Task Force. We would like to encourage

¹ 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.

this process so that we can gain mutual benefits across our standards development organizations.

Per the scope of IEEE 802.3, we use external references such as the ITU for our fiber specifications. So far IEEE 802.3 has always used worst case fiber specifications in link analysis, which may result in excess penalty and increased complexity of optical interfaces. This limitation is particularly severe for 200 Gb/s WDM IMDD technologies at distances up to at least 10 km. However, we specify the optical channel (path) specifications for our interface specifications. This gives us some latitude to align the channel specs with characteristics of the fibers used in current and future infrastructures. The IEEE P802.3dj and IEEE P802.3dk Task Forces have recently started to investigate whether there are any statistical approaches that would allow us to continue to support the IMDD interfaces under consideration, without significantly impacting the performance of the networks.

We would appreciate any guidance or analysis that would lead to any alteration of the reference fiber specifications or improved approaches to address our channel specifications for these interfaces. We are also interested in your exploration of the historical distribution in order to understand performance of currently deployed fiber.

You can see an example of a recent contribution the IEEE P802.3dj Task Force reviewed: https://www.ieee802.org/3/dj/public/23_05/cole_3dj_01b_2305.pdf.

Regarding the plan going forward, the IEEE P802.3dj Task Force and the IEEE P802.3dk Task Force will both have meetings during July 10-13th, 2023 and Sept 11-14th, 2023 where this topic will continue to be studied. As both Task Forces are in the process of selecting baselines and are scheduled to generate their initial drafts later this year, any guidance on the schedule of the effort would be appreciated.

We look forward to continued communications on this topic, so that we can better align our work.

Sincerely,
David Law
Chair, IEEE 802.3 Ethernet Working Group