

802.3 NEA – Additional WDM Applications

Initial Discussion

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What's this about?

Are there additional areas in Ethernet & WDM to address outside of current standards and active work (e.g., [B10K](#)).

This activity was prompted by the recent [SuperPON CFI](#) .

The presenter believes there is work to be done, a project to be started, and is targeting a CFI in March 2019 (Vancouver).

I want to socialize ideas, and get direct feedback.

As always, opinions expressed are those of the presenter. Any errors, misunderstandings, etc. are mine and mine alone 😊

Current State

802.3 does not specify how to use CDWM/DWDM with existing single lane optical Ethernet rates (e.g., 1G, 10G, 25G).

There is increasing interest in the industry to simplify deployment of WDM.

Our goal (as always) is to improve network ROI.

1G/10G CWDM/DWDM transceivers are available from a wide set of vendors (see later slides), showing a significant market for such devices

AFAIK there is no standard, alliance or MSA that specifies interoperability for this class of devices.

I believe that interoperability for this class of devices is within 802.3's charter, and should be addressed

Availability

A quick web search shows availability of this class of transceivers from (at least)

Cisco – [1Gbps](#) and [10Gbps](#) DWDM, [1Gbps](#) and [10Gbps](#) CWDM

Finisar – [1/10Gbps CWDM/DWDM](#)

FS.COM – [compatibles for many vendors](#)

Other vendors including:

[OpLink](#), [Eoptolink](#), [FlexOptic](#), [Omnitron](#), [Cozlink](#), [Fiberon](#), [Smart Optics](#)

Market Anecdotes - Cisco

Cisco has been selling 1/10Gbps CWDM/DWDM modules for a number of years.

Over the last three years, there have been steady sales of all combinations.

Use Case Anecdotes - Cisco

Initial feedback from Cisco field contacts (US Federal, Higher Ed, ...):

- Typically the customers control their fiber infrastructure and have OADM's. Using WDM transceivers saves money compared to using transponders in the fiber infrastructure.
- Customers have their own dark fiber, and are looking to increase bandwidth (e.g., N x 10G) or to offer segmented services to different groups. The beauty of WDM optics was not having to do a OEO transition saving costs

Market data – LightCounting

Stay Tuned

During the call Dale Murray offered to provide data.

My interests

Focused on 10/40Km reaches for 1/10 Gbps (existing technology on the market), and 25Gbps for emerging applications.

~~Would like to do this as a single clause addition, rather than a large number of new PMDs~~

~~Concept is a table listing PMDs that can be mapped, and the allowable wavelengths to map them to.~~

Looking to do this work as simply as possible.

Use existing CWDM and DWDM grids (no new grid).

Looking for:

Additional system vendors current product offerings.

More use cases.

What next?

I plan to work to build consensus on this topic.

All advice, opinions, data, etc are welcome

Please reach out to me at peterjone@cisco.com to express interest, and copy the NEA reflector.

Thank You!