Proposed Alternative Text to Clause 154.6

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154.6 The DWDM channel

The DWDM channel, which is the transmission path over a single wavelength/frequency between a DWDM PHY transmitting to another DWDM PHY, is the medium associated with the 100GBASE-ZR PMD.

DWDM technology is used to transport multiple DWDM channels over a single fiber. Each DWDM Channel operates at a single wavelength/frequency (referred to either by channel index number or channel center frequency) on a defined DWDM frequency grid.

The 100GBASE-ZR PMD specification covers a maximum of 48 DWDM channels over a DWDM system, supporting between 1 and 48 channels, with a channel spacing of 100 GHz. (Refer to Annex 154A for further information regarding implementations of DWDM systems.)

For proper operation the DWDM channel should be configured to the same channel center frequency as the associated 100GBASE-ZR Tx and 100GBASE-ZR Rx .

Table 154–6 shows the mapping of the 100GBASE-ZR channel index numbers to the optical channel center frequencies. This grid corresponds to the DWDM frequency grid defined by Recommendation ITU-T G.694.1. The transmitter nominal center frequency is the optical frequency in Table 154–6 corresponding to the variable Tx_optical_channel_index. If the PMD is able to operate with an Rx_optical_channel_index that is different from the Tx_optical_channel_index (Tx_Rx_diff_opt_chan_ability is one), the receiver nominal center frequency is the optical frequency in Table 154–6 corresponding to the variable Rx_optical_channel_index, otherwise it is the same as the transmitter nominal center frequency.

Add Table 154–6—Mapping of the 100GBASE-ZR channel index numbers to optical channel center frequencies

NOTE—Coexistence of DWDM optical signals with characteristics other than the 100GBASE-ZR PMD within the same DWDM system is not covered by this standard.

Specifications are provided for the DWDM channel (from TP2 to TP3, in Figure 154-2), such as chromatic dispersion, ripple, polarization mode dispersion, etc. These specifications are applicable to each of the specified 48 DWDM channels and are defined in a way that the effects of other DWDM channels, simultaneously present on the DWDM system, have been taken into account.

The optical interface parameters of the transmitter of the DWDM PHY are specified at the input of the DWDM channel (TP2 in Figure 154–2). The optical interface parameters of the receiver are specified at the output of the DWDM channel (TP3 in Figure 154–2).
[Author's note: Does this text belong in a section on the DWDM channel ?]