Sprint 3

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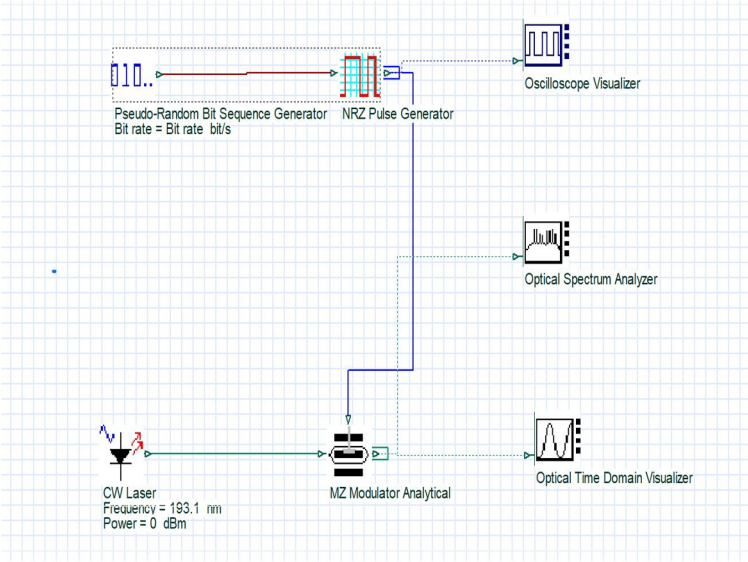
Transmitter

We create a transmitter using an external modulated laser. For this transmitter, we use it to be a component in WDM system.

MZM(Mach-Zehnder Modulator):

The optical input split into the modulator arms, the phase modulated with two phase shifters driven by electrical signals. Then output the combined modulated optical signals.



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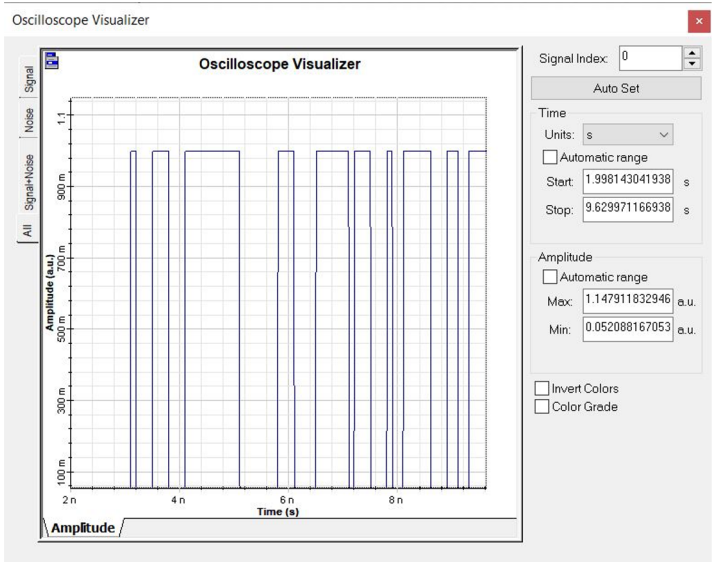
Oscilloscope Visualizer

By adjust parameter, we can optimize the electrical signal of the component with the Optisystem software and the change of the signal can be visualized in real time.



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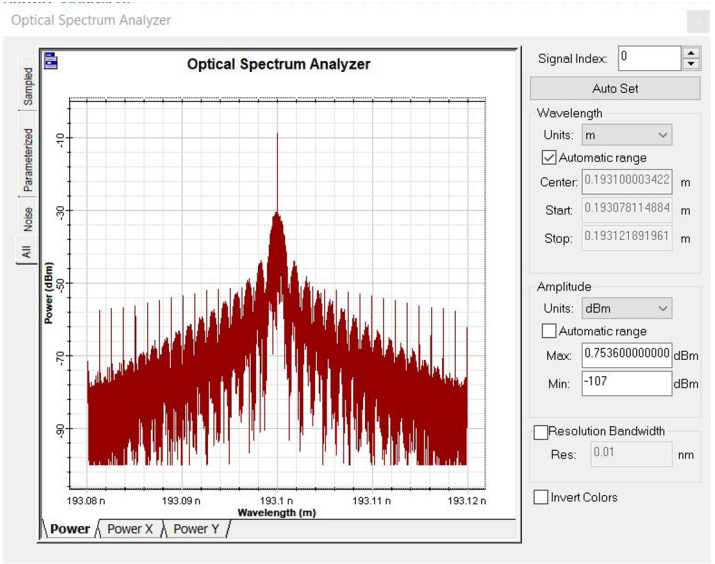
Optical Spectrum Analyzer

With Optisystem software, we can analyze optical spectrum of the component convenience and the the signal can be visualized in real time.



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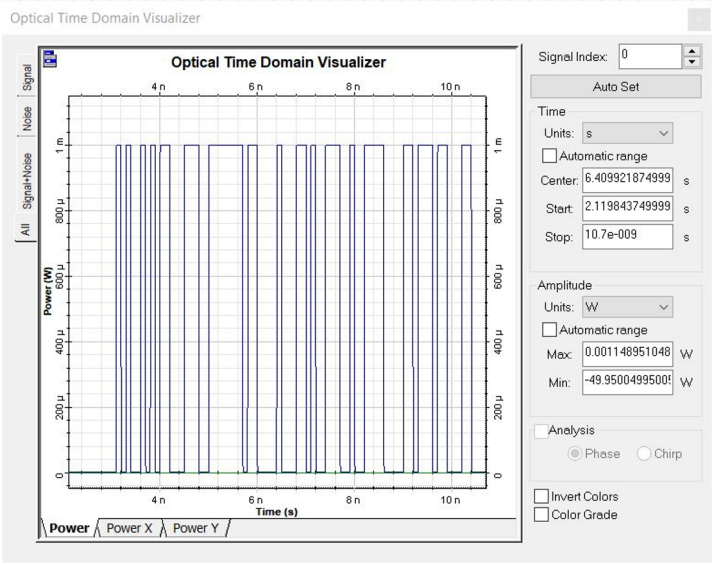
Optical Time Domain visualizer

The optical time domain can be can be visualized in real time. With Optisystem software, we can adjust the optical signal in time domain for analyzing and optimization .



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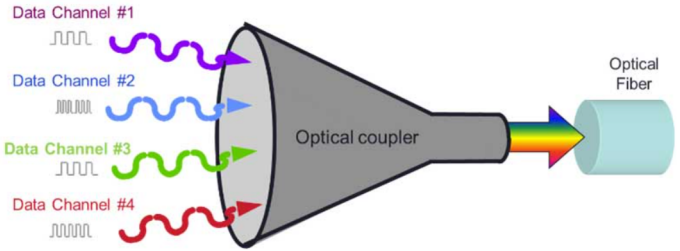
WDM system

Wavelength Division Multiplexing (WDM) is a fiber-optic transmission technique that combine light with different wavelengths (or colors) into one fiber, and apply with the multiplexer to transmit data. Different colors of light can travel on one fiber at the same time, then signals can be transmitted in an optical waveguide at different wavelengths or frequencies on the optical spectrum. As a result, light can transmit more information than electronics.



Wavelength Division Multiplexing (VDM)
retrieved from:https://www.ciena.com/insights/what-is/What-Is-WDM.html