

Research on RZ and NRZ modulation for high-speed WDM optical communication systems

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Abstract: In the context of the strong development of optical transmission technology, research on RZ (Return-to-Zero) and NRZ (Non-Return-to-Zero) modulation methods is extremely urgent to optimize WDM (Wavelength Division Multiplexing) systems. This topic aims to build and deploy these two types of modulation technologies for high-speed optical communication systems, in order to increase transmission performance and minimize energy loss. Through a combination of theoretical research and experimentation, the topic is expected to provide innovative solutions with high practical applicability in optical transmission technology.

Keywords: RZ and NRZ modulation, WDM system, optical communications