Abstract

In this report, the demonstration of a cost effective bidirectional WDM-PON architecture supporting symmetric data rate for both point-to-point and broadcasting services are presented. To decrease the network cost and increase the end user data rate, utilizing RZ-DPSK for point-to-point (P2P) data and intensity modulation (IM) for broadcast data in downlink direction. Single feeder fiber is used in colorless WDM PON architecture supporting both 10 Gbps point-to-point and 10 Gbps broadcast services data. Error free transmission is achieved with low BER and eye diagrams are verified through simulation at a distance of 25 Km.

References


**Index Terms**

Computer Science

Communications
Keywords

Passive Optical Network (PON); Wavelength-division Multiplexing (WDM); Differential Phase Shift Keying (DPSK); Bit Error Rate (BER); Intensity modulation (IM); On Off Keying (OOK).