Improve the signal to noise ratio using and subtraction technique in optical cdma

Abstract

AND subtraction technique is proposed and presented in this paper. The theory is being elaborated and the simulation results have been done by comparing AND subtraction technique against Complementary subtraction technique by using DW code. The result shows that the OSNR for AND subtraction technique give 39.5 dB at 10 km, while Complementary technique is only 24.5 dB. In this paper we have proved that AND subtraction technique gives better optical signal to noise ratio (OSNR) performance due to reduce the multiple access interference (MAI) compared to the Complementary subtraction technique.