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| **Title:** | OCDMA System Using Two Code Keying Encryption Introducing a SOA Based CMUX And CDEMUX Over a WDM System | | |
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| **Abstract:** |  |
| This paper introduces an Optical Code Division multiplexing (OCDMA) system using two code keying encryptions. In this paper proposed OCDMA system is designed using Semiconductor optical amplifiers (SOAs) which has nonlinear character and can implementor different logic functions. SOA based 2 × 1 Codeword Multiplexer (CMUX) is designed to multiplex the user data and a 1 × 2 Codeword DE Multiplexer (CDEMUX) to demodulate the user data. Then a multiple user access is provided using WDM system to design the whole OCDMA system. Transmission distance of 70 km is achieved with acceptable bit error rate and Q factor. Open eye diagram is also verified at the receiving end. | |