

OCDMA multi service with zero cross correlation code in free space optics

ABSTRACT

In this paper a variable weight code for Optical Code Division Multiple Access (OCDMA) is proposed to provide differentiated services in optical network. We call it multi service zero cross correlation (MS-ZCC) where it has zero-cross correlation. Using simulation, the performance of this code is compared with the conventional variable weight (VW)-ZCC code in free space optic (FSO) environment. The newly proposed code MS-ZCC shows an improvement of 300 meters link distance for weight 2 and 8, compared to VW-ZCC.

Keyword: Free space optics; Optical code division multiple access; Quality of service; Variable weight code; Zero cross correlation