

Abstract

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Optical Orthogonal Frequency Division Multiplexing for High Speed Wireless Optical Communications

In this paper, an all optical orthogonal frequency division multiplexing is proposed for achieving high bit rate and eliminating inter-symbol interference in optical wireless communications. The overall architecture is explained along with the design considerations that should be followed for parameters calculation. Analytical evaluation of the system in terms of probability of error is carried out in a diffused wireless optical channel. As a conclusion, the proposed system shows promising results for a high speed optical wireless channel.