Abstract

Innovations in optical fiber technology are revolutionizing world communications. The focus of this paper is the development of optical fibers that within 20 years displaced copper wire as the transmission medium of choice for most commercial applications in telecommunications systems and computer networks worldwide. High speed and ultra-high capacity of optical communications have emerged as the essential techniques for backbone global information...
transmission networks. As the bit rate of the transmission system gets higher and higher about 40 Gb/s to 100 Gb/s to several terabits, the modeling of proposed modulation techniques is very important so as to avoid costly practical demonstration. This paper thus describes the various losses associated with fiber and its simulation models and its analysis in OptSim. In this work we will be focusing on chromatic dispersion and fiber induced losses. Initially, it will be observing effects of this chromatic dispersion and fiber induced losses on optical communication and then providing a certain technique to minimize the same losses.

References

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- OptSim, RSoft software manuals.

Index Terms

Computer Science
Emerging Trends in Technology

Keywords

SMF  DCF  CW laser  PRBS  EDFA  Optsim  Digital modulation schemes  NRZ  Linear MZ
Eye diagram

BER