

Behavioral analysis of amplifier in long haul communication system: Performance analysis of EDFA and Raman amplifier using soliton pulse in long haul communication system(Conference Paper)

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Abstract

In the age of advancement in each and every sector of scientific achievement, communication sector have proved a radical improvement both in terms of efficiency and cost effectiveness. For several reasons, especially for communicating in case of long distance communication which is termed as long haul communication, amplifiers are used for improving the efficiency of transmitted data through the communication medium which is typically optical fiber. Several types of amplifiers are used in these cases such as, EDFA (Erbium Doped Fiber Amplifier), Raman Amplifier etc. In this research study, the performance of EDFA and Raman Amplifier has been studied through an optical virtual environment in case of long haul communication. The specified optical virtual environment is created in a software (OptiSystem V-13) which has led the researcher to get the simulated results. Power Spectrum, BER (Bit Error Rate) and Quality Factor (QF) have been observed to analyze the performance of these two amplifiers.

Author keywords

EDFALong haul communicationOptisystemetcRaman

Indexed keywords

Engineering controlled terms: Bit error rateCost effectivenessEfficiencyFiber amplifiersOptical communicationOptical communicationOptical fibersRaman scatteringVirtual reality

Engineering uncontrolled terms BER (bit error rate)Communication mediumLong distance communicationLong haul communicationOptisystemetcPerformance analysisRamanScientific achievements

Engineering main heading: Erbium doped fiber amplifiers

- **ISBN:** 978-145033552-2
- **Source Type:** Conference Proceeding
- **Original language:** English
- **DOI:** 10.1145/2818567.2818689
- **Document Type:** Conference Paper
- **Sponsors:**
- **Publisher:** Association for Computing Machinery