Abstract

This paper presents the simulation results of binary digital modulation schemes. In this paper, for BASK and BPSK modulation techniques used FPGA algorithm, multiplier don’t using. If multiplier block is used for multiplication bit stream with carrier signal, used time will rises. In addition using multiplier block obtained simulation results were analyzed and compared to other simulation results. Source consumptions of FPGA-based BASK modulation technique and BPSK modulation technique were compared. Also, for different modulation algorithm, source consumptions of BASK and BPSK modulation technique were analyzed using VHDL and Quartus 9.2 complier. Designed modulators using VHSIC (Very High Speed Integrated Circuit) Hardware Description Language (VHDL) was realized on high speed FPGA (Field Program Programmable Gate Array). Because for used modulation technique data rate transfer is fairly important in wireless communication systems. The highest speed data rate transfer can be realized using fiber optic cables. In addition, BER (Bit Error Rate) of BASK and BPSK modulator was compared using MATLAB simulation program. Binary data rate is same for BPSK and BASK. BPSK and BASK modulations were designed on FPGA using VHDL hardware description language.

References
FPGA-based BASK and BPSK Modulators Using VHDL: Design, Applications and Performance Comparison


Index Terms

Computer Science
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Keywords
Fpga Bpsk Bask Vhdl