

Abstract

Power utility companies have suffered revenue losses due to uncollected bills and energy tampering for many years. The use of powerline communication to overcome the problems has been proposed. This needs tampering detection and transceivers capable of communicating data through powerline channel. This paper identifies different methods of tampering, presents simulated results for tampering detection scheme and proposes a Direct Sequence Spread Spectrum (DSSS) with Binary Phase Shift Keying (BPSK) transceiver design for energy metering as a solution to the problem. The choice of DSSS-BPSK modulation scheme is based on its robustness and its ability to spread signal into wide band to protect jamming and interference. The performance of the designed tampering detection, transceiver and selection of suitable parameters is performed by using matlab software