

Heart rate monitoring system based on power line communication

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ABSTRACT:

Nowadays, Power Line Communication (PLC) using pre-established Power Lines (PL) becomes more attractive for high data transmission technology. With the development of this technology utilizing distribution line, the medical data such as human Heart Rate (HR) can be transmitted over the power line channel. This paper presents a case study of HR Monitoring System (HRMS) involving the use of PLC as a channel to transfer the patient HR measured by Pulse Oximetry (PO). The collected data from the hospital will be stored in the system. The transmission of data on PLC is achieved by using Orthogonal Frequency Division Multiplexing (OFDM). The performance of the above techniques is evaluated based on the Bit Error Rate (BER).

KEYWORDS

Heart Rate; Monitoring System; Power Line Communication