Abstract

In Wireless Body Area Network (WBAN), detection of fault node improves reliability and security for long range transmission. In this paper, we propose a combined approach for reliable and secured data transmission in WBAN. The proposed architecture consists of sensor nodes, relay nodes, the intermediate processing nodes and body area network (BAN) coordinator where the nodes are modeled to have direct and relay mode. The secured communication is ensured among the node and BAN coordinator by following simple protocol. The secure data transmission is proposed through authentication check, duplication check and faulty node detection. The proposed method is applicable to long ranges of transmission. It is also supporting a retransmission concept. Advancement of work to secure level checking provides a prohibition unwanted responses of WBAN and retransmission improves the probability of sending all most all data. Faulty node detection powers our security checking methodology further. By simulation results we prove that the proposed approach reduces the packet drop, energy consumption and the delay.

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Index Terms

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Keywords
level ID body area network node header retransmission authentication check