MAXIMIZING NETWORK LIFETIME WITH ENERGY EFFICIENT ROUTING PROTOCOL FOR WIRELESS SENSOR

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ABSTRACT

In the research field of Wireless Sensor Networks, how to reduce the energy consumption of WSN so that the lifetime of WSN can be prolonged is one of the hottest spots. Wireless sensor networks (WSN) lifetime is either superficial or impractical, which prevents us from thoroughly understanding the efficiency of these proposed routing protocols. Routing protocols have significant impact on the overall energy consumption of sensor networks. This project present variety of maximizing system lifetime wireless sensor networks with different energy consumption. Energy consumption for three routing protocols had been analyzed which are direct communication, minimum transmission energy and low adaptive energy clustering hierarchy. The energy consumption for Low Energy Adaptive Clustering Hierarchy (LEACH) routing protocol give the maximum lifetime compared to the others. Clustering is an energy efficient and scalable way to organize the WSN. The main objective of this research is to maximize the lifetime of the wireless sensor (WSN). Simulation via Matlab shows that by applying energy consumption for LEACH routing protocol had increase the network lifetime by as much as 65.2% compared to DC and MTE.

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TABLE OF CONTENTS