World Academy of Science, Engineering and Technology
International Journal of Electronics and Communication Engineering
Vol:10, No:07, 2016

Study of Energy Efficient and Quality of Service Based Routing Protocols in Wireless Sensor Networking

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Abstract : A wireless sensor network (WSN) consists of a large number of sensor nodes which are deployed over an area to perform local computations based on information gathered from the surroundings. With the increasing demand for real-time applications in WSN, real-time critical events anticipate an efficient quality-of-service (QoS) based routing for data delivery from the network infrastructure. Hence, maximizing the lifetime of the network through minimizing the energy is an important challenge in WSN; sensors cannot be easily replaced or recharged due to their ad-hoc deployment in a hazardous environment. Considerable research has been focused on developing robust energy efficient QoS based routing protocols. The main focus of this article is primarily on periodical cycling schemes which represent the most compatible technique for energy saving and we also focus on the data-driven approaches that can be used to improve the energy efficiency. Finally, we will make a review on some communication protocols proposed for sensor networks.

Keywords : energy efficient, quality of service, wireless sensor networks, MAC
Conference Title : ICWCSN 2016 : International Conference on Wireless Communication and Sensor Networks
Conference Location : Zurich, Switzerland
Conference Dates : July 21-22, 2016