Abstract

Wireless Sensor Network (WSN) consists of large number of sensor nodes that are capable of communication, computation and sensing. Inherent limitations of WSN include limited storage, processing and transmission power. As compared to other network topologies, WSN has less communication Protocols mainly Zigbee/IEEE 802.15.4. IEEE 802.15.4 is a new standard, uniquely designed for low rate Wireless Personal Area Network (LR-WPAN), which is developed for applications that demand low throughput. IEEE 802.15.4 was designed for short range, low power, low complexity, low rate and low cost wireless network which provides two way wireless communication technology. For the analysis purpose, we have considered AODV as the Adhoc-routing protocol. Simulation has been carried out by using Qualnet Simulator 6.1. In this paper, we proposed a mobility control scheme and the impact of mobility over the
performance of WSN is seen. In this paper, we have designed two scenarios, one is used with Random waypoint Mobility and the other is used by Mobility with Flag. Results of both the mobility schemes are compared to find out which mobility scheme gives overall best services. This paper provides the performance evaluation of quality of service parameters such as total packets received, received throughput, average end to end delay, average jitter and energy consumption as the performance metrics.

References

- Sinem Coleri Ergen, ZigBee/IEEE 802.15.4 Summary, September 10, 2004.

Index Terms

Computer Science Wireless Communication

Keywords

Wireless Sensor Network IEEE 802.15.4 AODV Qualnet 6.1 Mobility Model.