Abstract

The IEEE 802. 15. 4 the ZigBee protocol finds numerous applications for commercial buildings and home automation, security, healthcare, medical monitoring, vehicle monitoring, agriculture and environmental monitoring etc. In this paper we have evaluated the effect of topologies variation i.e. Tree, Star and Mesh on load, delay and throughput in different bands using Zigbee wireless sensors by means of OPNET modeler. It is observed that star, tree and mesh topologies have less delay and maximum throughput in 2450MHz band as compared to other bands i.e. 915MHz and 868MHz. The obvious reason for this observation can be less resource overheads in 2450MHz band than other two bands resulting in better network metrics.

**Index Terms**

Computer Science

Wireless
Keywords
Delay; Load; Throughput; Topology; ZigBee