Impact of BO and SO on Beacon-Enabled IEEE 802.15.4

Abstract

Today in every field wireless technology is used, for as Medical, Factory Automation, Search, Rescue, etc,. IEEE 802.11 is an option but infrastructure cost is too high, so the option is IEEE 802.15.4, especially Low-Rate Wireless Personal Area Network (LR-WPAN). The low rate WPANs is intended to serve a set of industrial, residential and medical applications with very low power consumption and cost and with relaxed needs for data rate and QoS. The low data rate enables the LR-WPAN to consume very little power. The applications are Integrated Medical Systems, Automatic Traffic Control, Energy Conservation, and many more. In this paper, the impact of Beacon order (BO) and Superframe order (SO) on beacon-enabled IEEE 802.15.4 is analyzed. The QoS parameters which are of concern are throughput, packet loss rate, average end-to-end delay and energy consumption.
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Index Terms

Computer Science
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Keywords

WPAN  Beacon Order  Superframe Order  QoS  LR-WPAN  and Beacon-enabled IEEE 802.15.4.