Abstract

Network Simulator (NS) is a discrete event simulator targeted at networking research that provides substantial support for simulation of various networks. Performance evaluation in effective manner is the main concern of this paper. This paper, presents a mathematical model to work with the pre-simulation TCL file and post-simulation trace file evaluation for the 802.15.4 networks. The impact of BO and SO on performance of 802.15.4 with varying duty cycle is analyzed considering various parameters like packet delivery ratio, average end-to-end delay and energy consumption in different state: receiving, transmitting and idle mode.

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**Index Terms**

Computer Science  
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Keywords

NS2, MAC, CAP, CFP, GTS, 802.15.4