Abstract

Security protocol on the network is very important and affect the sustainability of the network. Wireless sensor network is a network that is vulnerable in terms of security, this vulnerability can cause leakage of information, falsification of information, even infiltration into the network that can ruin the flow of information on the network. The limited memory capacity and energy on the sensor cause not any security protocol can be used. This work meant to analyze the performance of Localized Encryption and Authentication Protocol (LEAP) and Random Key Pre-distribution (RKP) security protocols that can be used in wireless sensor networks and compare which is better using NS3 application.

Keywords: *Wireless Sensor Network, Localized Encryption and Authentication Protocol,* LEAP, *Random Key Pre-distribution,* RKP, NS3