Abstract

Wireless sensor networks (WSN) are characterised by their energy constraints. The limited amount of available energy means energy efficiency is an important goal for every WSN since the energy consumption directly impacts the lifetime of the network. Choosing an energy efficient routing protocol is thus essential to minimise the energy consumption. One popular and important routing protocol for WSN is LEACH. In this thesis we analyse the energy efficiency of LEACH. More specifically, we analyse LEACH with different network sizes and different energy quantity. We will test different values for these test cases and observe how it impacts the lifetime of a WSN. The experiments are all simulated using the NS3 simulator. We have implemented the LEACH protocol in NS3 in order to analyse its energy efficiency.