Abstract

Home automation is an automated system of household works, that can includes : lighting control, ventilation system, air conditioner, and several other systems. Problem that happens upon common home automation system is segmented implementation field and the lack of integration. That way, every system segments work independently in terms of receiving input, processing information, and giving output response. This will hinder the system to work synergically. To solve that problem, wireless sensor network can be implemented.

Wireless sensor network is a group of distibuted automatic node that monitor environmental condition (example : temperature, humidity, light intensity) and cooperatively shares or pass data to other nodes. WSN is made of nodes, which each nodes connected to one or more sensor and actuator. In this final assignment, designed and implemented xbee based wireless sensor network. This way, the implemented home automation system will be more synergic.

The result of this final assignment is that the wireless sensor network for lamp controlling home automation can be made succesfully. Based on testing that had been done on the system, optimal parameter are achieved. Those parameters are : baud rate at 38400 bps with 100% accuracy and maximum performance, and delay time at 800 ms with 87,5% accuracy and maximum efficiency.

Kata kunci : *homeautomation, wirelesssensornetwork, synergy.*