ABSTRACT

Home automation is a system that automatically control the electronic devices in our home. Home automation can be used to controlling the electronic devices that can improve the efficiency of energy use in our home. In order for home automation systems can be used anytime and anywhere, home automation need a additional systems that can be used to data acquisition, controlling and monitoring in home automation systems.

In this final project, the authors design and implement SCADA system for home automation system process. SCADA uses OPC server and OPC client to control PLC and acquire PLC data. The result data of the acquisition will be displayed on the HMI and stored in the database for monitoring purposes.

As a result of this research is to created SCADA system that runs in accordance with its function. So SCADA can be used to data acquisition , controlling, and monitoring the condition of the hardware. From the test results obtained communication time on SCADA systems. PLC requires 0.052 seconds with a standard range of ± 0.023 seconds to process data. The data acquisition process requires 0.922 seconds with a standard range of ± 0.140 seconds. And the SCADA system performs 1 control process, data acquisition, and data storage is required 1.064 seconds with a standard range of ± 0.364 seconds

***Keywords**: Home Automation, PLC, SCADA*