ABSTRACT

The energy use of industrial buildings contributes substantially to energy consumption, especially electrical energy. Energy management is a concept that is offered nowadays because it is expected to save the use of electrical energy such as automated systems, intelligent building management system, energy efficiency measure, wireless technology, and much more. In this final project, designed a prototype of energy management with Arduino Uno client-server system. Interface control is done through Android-based smartphones. The cloud system is used in this final project as a connecting gateway between Android devices and Arduino Uno.

In Android app will be applied location-based automated where control is done based on user location. Location-based automated energy control applications are applications developed on smartphones. This application utilizes the Global Position System (GPS) that is on the smartphone. If the user enters the specified location, then the application will send the control signal as configured by the user. If the user heads home, then the Air conditioner (AC) and lights are activated. If the user leaves home, then the device will change its energy consumption. In this final project, there are 3 rules in energy usage. Each rule varies its energy consumption, ie: high, medium, and low. The use of location-based automated is expected to be able to regulate energy use in buildings.

Keywords : *energy management, location-based automated, android*