ABSTRACT

Power generation using solar cell based on solar energy are used to save electricity cost in homes. This research proposed a smart new electrical network called smart meter. Smart meter system is born because of the necessity of monitoring and controlling for an inefficient electrical energy use.

On this research smart meter concept are used to real time energy use monitoring and controlling the devices on home using Internet of Things (IoT) which is based on Wireless Sensor Network (WSN). Internet of Things technology is used to remotely control using the internet network and also used Wireless Sensor Network to send data in two ways from gateway or acces point wirelessly. On this research the prototype is made using ACS712-30A current sensor, relay, NodeMcu ESP8266 and Firebase that can be used to store data on real time.

Based on the research communication can be done two ways using one NodeMcu ESP8266 as a server connected with five NodeMcu ESP8266 as a client, and the communication could be done up to 9 meter. But, if the NodeMcu ESP8266 as client keep increasing more and more will make the delay larger thus making the information data transmission longer.

Keywords: *firebase, NodeMcu ESP8266, sensor ACS712, smart meter, WSN*