

Abstract

Electricity is the energy source is essential for human life today. Power users are very diverse ranging large industries, cottage industry until the household is in dire need of electricity. But sometimes a lot of use of electricity wasted as the bathroom lights are always lit or street lights that do not always pass the vehicle causing electricity bills swell. In addition to street lights, pedestrian lights was one of the causes wastage of electricity for the lights will always be on throughout the night while only a few people who pass through the pedestrian path.

It was needed a capable system to monitoring the use of pedestrian path's light to be more efficient. The system will be built using multiple sensors that are infrared sensor, current sensors, and voltage sensors that is connected to the microcontroller. The results of each sensor can be seen on the web in realtime. Delivery of sensing results data to the server via ethernet cable. If there are no pedestrians passing the pedestrian path, then the lamp will not light. In addition the system using actuators such as Light Emitting Diode (LED) light, to make the power produced little but have adequate lighting.

Based on the final project that has been done, the experiments conducted for one hour by applying SmartLight makes the energy consumption to be reduced than those not applying SmartLight, that caused the lights will only illuminate when it detects a pedestrian, so that the lights did not live through the night.

Keywords: LEDs, microcontrollers, infrared sensors, pedestrian, energy.