

ABSTRACT

Lights are important for street lighting at night. The damaged of the street light caused the number of the traffic accidents and the traffic crimes increased. The facilities of applications to report the street light damaged are still inefficient. In the other side, the use of street light at night makes a lot of waste on electric power. To solve this problem, it is necessary to monitor the condition of street lights at a real time and use an effective and efficient light setting to make the power use are efficiently controlled.

In this research, the researcher designed and developed a street light with smart lighting and website basis to monitor the conditions of the traffic street light at a real time. The system works begins with the Light Dependent Resistor (LDR) that detect the environmental light as an indicator to make the street light on, then the ultrasonic sensor and PIR will detect the existence of object movement. Furthermore, the data will be processed by Arduino and the results of the data processed will be sent by using LoRa. Data will be received and displayed on the website.

The research result revealed that by using this system, the used of the street lights decrease to 48% from 12 works hour and it becomes more efficient compared with before. Another advantage is the user can monitor the damaged of the street lights without a hitch directly by using the internet.

Keywords: Smart Lighting, Sensor Ultrasonik, LDR, LoRa.