# A Prototype of Traffic Management System Using Lora Shield at Rural Area

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## ABSTRACT

An efficient traffic management system will definitely reduce the percentage of accidents. Lora technology is one of the effective methods in implementing traffic management system in any area due to the long range and low power capability. This project built a prototype of a traffic management system in rural area routes where many vehicles pass-by. Many accidents happen in narrow roads such as the vehicles fall into the river to give-way to other vehicles. This prototype utilizes lora shield for the client and the server. The client is attached with the mini pir motion sensor and the traffic light while server is attached with traffic light only. This project is to build a prototype of a traffic management system using lora shield at the narrow road in rural area to avoid traffic and to evaluate the performance of LoRa network perform in term of signal strength at distance and signal strength between indoor and outdoor. There is one scenario that applied here, by using one client and one server. Client attached with mini pir motion sensor while server attached with breadboard, jumper wires and leds (green, yellow, red) to indicate traffic light. The distance of this client and server is the main key, when at 50 meters, the RSSI is -29 while at 150 meters, the RSSI is -99. For future works, use gateway as main controller to control the traffic light management.

**Keywords:** IoT, Traffic Management System, Leds, RSSI