

SMART TRAFFIC CLEARANCE AND SIGNAL CONTROL SYSTEM USING RSSI & RFID

Objective:

To develop a traffic control system with the goal of improving response time and ensuring safe passage through congested traffic areas.

Abstract:

- Traffic congestion is a significant challenge that affects the response time of emergency vehicles. The delay can result in loss of lives, property damage, and accidents. Therefore, an efficient traffic control system for emergency vehicles is critical.
- The proposed system is based on Radio Frequency Identification (RFID) and Radio Signal Strength Indicators (RSSI) to monitor and control traffic flow. The system works by installing RFID tags on emergency vehicles, and RSSI receivers on traffic lights and other vehicles. When an emergency vehicle approaches, the RFID tag sends a signal to the RSSI receiver, which triggers a green light for the vehicle.
- The system also utilizes vehicle-to-vehicle communication. The system allows emergency vehicles to communicate with other vehicles on the road to control their speed and movements. In this system, each vehicle is equipped with a device that communicates with other vehicles on the road.
- When an emergency vehicle approaches, it sends a signal to other vehicles, requesting them to move to the side of the road.
- The system also allows the emergency vehicle to control the speed of other vehicles, ensuring that they do not obstruct the path of the emergency vehicle.

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