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(57) Abstract :
The present disclosure relates to traffic management system and method is provided for prioritizing lanes with higher traffic volumes. The system includes proximity sensors (10) in multiple lanes to detect vehicle counts or lengths. A priority encoder-based controlling unit (20) receives data from these sensors and determines a priority lane by comparing detected traffic data with a predefined threshold. A traffic signal unit (30) then activates a green light for the identified priority lane, keeping other lanes red. The controlling unit (20) may rank lanes based on traffic volume, sequentially assigning green lights, and the threshold can be adjusted dynamically, considering historical data or time factors. Additionally, the proximity sensors (10) might utilize infrared or ultrasonic detection techniques. A central control unit (40) can manually override decisions. The method involves detecting vehicles, transmitting data, comparing detected lengths, activating appropriate signals, and provides options for dynamic threshold adjustments and manual overrides.

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