

# **Traffic Light Controller Dengan Mamanfaatkan Data Kondisi Traffic Dari Map Server**

**Khulafaur Rasyidin<sup>1</sup>, Bayu Erfianto<sup>2</sup>, Andrian Rakhmatsyah<sup>3</sup>**

<sup>1,2,3</sup>Fakultas Informatika, Universitas Telkom, Bandung  
<sup>1</sup>rasyidin@students.telkomuniversity.ac.id,  
<sup>2</sup>erfianto@telkomuniversity.ac.id, <sup>3</sup>kangandrian@telkomuniversity.ac.id.

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## **Abstract**

Traffic lights will be needed along with the times, a very significant increase in the number of vehicles, especially in big cities. Intersections that often cause congestion should be regulated by a traffic light with the time duration that has been adjusted so that it will not cause traffic jams. Congestion occurs because the timing settings of the installed traffic lights still use the timing in normal traffic conditions. One way to avoid traffic jams is to make appropriate settings for the duration of the traffic lights. With this case, the idea is obtained to make a traffic light simulation automatically by utilizing the traffic flow data available on several map servers so that it can be integrated with the traffic light controller so that it is expected to be more adaptive to the congestion that occurs around the traffic light. This design makes a prototype of a smart traffic light that includes a single board computer integrated with the Internet of Things (IoT) and then can access Light traffic using the Traffic Flow API. By using this tool, the length of the traffic light will be adjusted to the conditions of the traffic queue based on the traffic data taken by the API.

**Keywords:** *Embedded Systems, Smart Traffic Lights, Utilization of Maps API*

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