SMART TRAFFIC MANAGEMENT SYSTEM (IOT)*

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***Abstract*—Traffic Management is an issue which impacts us almost daily. Use of technology and real time analysis can actually lead to a smooth traffic management. The common reason for traffic congestion is due to poor traffic prioritization. Let us take the scenario of Bangladesh. It is 1 st most populous city of Dhaka. While the number of vehicles are increasing at a fast pace, the infrastructure in the city is not being able to match this growth. However, our solution to this problem is not limited to the Dhaka city only.**

***Index Terms*—component, formatting, style, styling, insert**

I. Introduction

It can be used for other urban cities as well where traffic jams during rush hours are becoming a routine affair, especially in the internal sectors where long queues of vehicles can be seen stranded. Therefore, we have tried to address the problem with the help of our project wherein the focus would be to minimize the vehicular congestion. We have achieved this with the help of image processing that can be obtained from surveillance cameras and eventually to deploy a feedback mechanism in the working of the traffic lights where the density of the traffic would also be factored in the decision making process.

II. ANALYSIS/ RESEARCH ON WHY PROBLEM EXISTS

A. The main reasons for traffic congestion and delay are analysed as follows:

- Poor Traffic Management
- Lesser use of automated techniques
- More number of Vehicles
- Unrestrained demand
- Insufficient Capacity
- Large Red Light Delays

III. Intelligent Traffic Management System

The government is trying its best to ensure swift movement of traffic on roads by constructing wider roads, flyovers, underpasses and expressways etc. But, giving wider roads to the burgeoning number of vehicles is not enough. You must ensure safety on roads along with traffic management and it can better be achieved by Intelligent Traffic Management System (ITMS).

Identify applicable funding agency here. If none, delete this.

A. Existing System:

- It is Difficult to identify the Traffic Violators
- There is no IOT based Traffic management System.

B. Proposed System:

- IOT based traffic management
- Easy to find the path for emergency condition in ambulance.
- The Traffic violators are captured and send to Police.
- Can be used anywhere,
- No need of human power to identify violators during night

C. ANALYSIS/ RESEARCH ON WHY PROBLEM EXISTS.

After doing extensive research, we reached the conclusion that there are several drawbacks of earlier methods - Wastage of time by lighting green signal even when road is empty. Image processing removes such problem. Slight difficult to implement in real time because the accuracy of time calculation depends on relative position of camera. This project provides a solution to reduce traffic congestion on roads overriding the older system of hard coded lights which cause unwanted delays. Reducing congestion and waiting time will lessen the number of accidents and also reduces fuel consumption which in turn will help in controlling the air pollution. This will also provide data for future road design and construction or where improvements are required and which are urgent like which junction has higher waiting times.

$$a + b = \gamma \tag{1}$$

Varied hardware devices are installed to collect data from different sources. This hardware includes automatic vehicle identifiers, sensors, camera, and GPS based automatic vehicle locators etc. The received data such as traffic count, travel speed, vehicle weight, surveillance, and delays etc. is forwarded to the master controller.

D. Number Plate Detection

The objective of the research paper is to capture the design a Vehicle Number Plate Identification System which can be used to identify and read the license number of any vehicle. The basic process involves taking the image of the front/rear of the vehicle which then gets processed and ultimately the number gets displayed on the LCD.

E. Some Common Mistakes

- The word "data" is plural, not singular.
- The subscript for the permeability of vacuum μ_0, and other common scientific constants, is zero with subscript formatting, not a lowercase letter "o".
- In American English, commas, semicolons, periods, question and exclamation marks are located within quotation marks only when a complete thought or name is cited, such as a title or full quotation. When quotation marks are used, instead of a bold or italic typeface, to highlight a word or phrase, punctuation should appear outside of the quotation marks. A parenthetical phrase or statement at the end of a sentence is punctuated outside of the closing parenthesis (like this). (A parenthetical sentence is punctuated within the parentheses.)
- A graph within a graph is an "inset", not an "insert". The word alternatively is preferred to the word "alternately" (unless you really mean something that alternates).
- Do not use the word "essentially" to mean "approximately" or "effectively".

An excellent style manual for science writers is [**?**].

F. Data transmission

Rapid and real-time information is collected and forwarded to the users. Rapid and real-time information is collected and forwarded to the users. The information is analysed and used to make traffic related announcements to the travellers through the internet, SMS, or on-board units of the vehicle.

METHODOLOGY

The cloud contains all the information in the database which has information like users, vehicles, Traffic offences, Safe limitfor each Road, Locations of each vehicles and roads etc. The network of these Vehicles is stored to identify and authorize and also track their features like conditions, driving range, max speed, safety measures etc. The officials are given premium benefits to monitor the vehicle registrations, available users, incoming applications, traffic violence and offence, and traffic flow. These officials can access and modify the blockage of routes in case of a VIP patrol or any other unavoidable closures in the road and the users can choose an alternate route

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Let's use technology to make our country move forward! Thank You!