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Review on Recent Traffic signs in Lane Markings

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Abstract - *India is a developing country and its cities are undergoing quick development and upgrading as a result there is high growth in the road traffic. Number of road users were dyeing every day because of road accidents. We need to provide road surface marking is any kind of device or material that is used on a road surface in order to take authorized information. Lane detection is a process that is used to locate the lane markers on the road, with the help of this lane markers presents these locations to an intelligent system. This system decreases the road accidents and also helps to improves traffic conditions.*

This study tested the effects of lane width, lane position and edge shoulder width on driving behavior for a three-lane underground urban expressway. Driving speed, lane deviation and subjective perception of driving behavior were collected as performance measures. When the lane and shoulder are narrow, drivers in the left or right lane tend to shy away from the tunnel wall, even encroaching into the neighboring middle lane.

This paper aims to compare the Road marking of India and Abroad countries and to identify the Roadway Lane markings. This paper describes the evaluation of an adaptive traffic signals that can be used for Indian traffic condition. Places where the congestions and accidents are more, In order to reduce that situations the following type of signals can be suggested for the road condition. Lane sign conversions, Indicators & Delineators help to mitigate the traffic problems mainly in urban areas.

Key Words: *Driving Behaviour, TrafficData, Signs, surface marking, Lane width, Lane detection, Lane Markers, Lane position, Performance Measures, Mitigation Measures, Speed Indicators*

1. INTRODUCTION

Traffic congestion on highway systems is nothing but slower speeds, increased trip time and increased line up of the vehicles. When the number of automobiles exceeds the volume of the road, traffic congestion occurs. In the metropolitan cities of India traffic congestion is a major problem. Traffic congestion is caused when the demand exceeds the available road capacity. Traffic congestion has a negative impact on economy, the environment and the overall quality of life.

Road networks plays an important portion of civilization and are important for movement of people and goods. Information technology is a concept that has found its way into current civilization and advancements and new innovations in the area are emerging more often. The application of this technology in solving traffic related problems like congestion is approximately has been done and more research into it is going on. One of the ways the technology is being applied is using it to provide traffic information through the Advanced Traveller Information System (ATIS) applications.

Designing smarter automobiles, targeting to minimize the number of motorist based wrong decisions or accidents, which can be faced with during the drive, is one of hot topics of today's automotive technology. In the design of smarter vehicles, several research issues can be addressed; one of which is Traffic Sign Recognition (TSR).This TSR systems, the goal is to Warn motorists about the limitations, hazards or other information conveyed by traffic signs, beforehand. Meanwhile the existing signs are designed to draw drivers' attention by their colors and shapes, processing of these features is one of the crucial parts in these systems.

The calculation of a new traffic management, before its implementation, requires to assess the impact of the future values of the traffic variables on accidents. For safety reasons, a driver acclimates his speed, relative speed, time gap and lane, according to the infrastructure slopes, intersections, traffic conditions speed of the vehicle ahead or on the adjacent lane, density and weather conditions. Certainly, the performances of vehicles and drivers decrease on slopes and bends, and some danger may come from close vehicles.

Relations between traffic conditions, infrastructure fundamentals and accidents are discrete or continuous. Discrete relations provide the risk by vehicle-kilometer and by class. According to the authors, a class may combine traffic, weather and infrastructure conditions. Making a discrete relation "continuous" is possible by varying the thresholds. The role of speed in road safety has been demonstrated. "Speed" refers to different quantities: the speed limit at a national level, on a network, on a particular section; speeds of separate motorists recorded at particular points, or their distribution on a route; Average speed on a spatial range; temporal average at a given point, by lane, or for all lanes.

2. OBJECTIVES

1) To move freely on Lane sign Conversions are useful.

2) Lane Traffic Indicators gives information about the traffic ahead.
3) Lane Delineators diverts the traffic if any obstructions are having infront.
4) Smart Speed Indicators
5) Traffic data up [date through SMS]

3. COMPARISIONS OF THE TRAFFIC INDICATORS BY FOREIGN COUNTRIES WITH INDIA

I. LANE DELINEATORS

These provide traffic guidance and are mainly used at dangerous curves and central verges. Our range of delineators is in great demand because of following

Features :

a) Durable
b) High Visibility
c) Perfect for demarcating traffic flow

SOLAR DELINEATORCLAMP DELINEATOR & BLINKERS

Solar delineators that are fabricated using polycarbonate, ABS and aluminum. These provide traffic guidance and are helpful in avoiding accidents. It is available in various colors such as red, yellow, blue, white and green. In addition, solar delineators are provided in different visibility level of 500 meters and 800 meters.

These are available in various sizes and designs as per the specifications of our client. In addition, these are available with 6 volts rechargeable battery with electronic charger.
Total Height: 140 mm/ Diameter 95 mm.
Delineation Area 120 mm
Color: Red, Blue and Yellow
Electronics: 36 Leds6 Volts Rechargeable Battery with Electronic Charger

II. LANE SIGN CONVERSIONS

Road signs in the Democracy of India are similar to those used in some parts of the United Kingdom, except that they are multilingual.

Most urban roads and state highways have signs in the state language and English. National highways have signs in the state language, Hindi and English.

Foreign Country

INDIA

Marking on road and highway indicator is use to display the route and boundaries of highway. They are mainly important on cities roads and crossings as there is the maximum chance road accident and increase in traffic volume value and also promote road safety and bring out smooth and harmonious flow of traffic along guided paths of travel but

due to lack of street lights; the visibility of road marking is very low at night time.

III. LANE TRAFFIC INDICATORS

Foreign Country


INDIA

When on a 4 ways highway (2 lanes on each side), always stay on the leftmost lane and use the right lane to only overtake the vehicle in front. The driving performance variations in case you are on a 6 lane Highway (3 lanes on each side).The speed of vehicles increases as one moves from the leftmost lane to the rightmost lane. Any lane switching in a 4 lane or a 6 lane highway must first start with the relevant indicator light to change lanes. The accord around the world is that once your indicator of the car in front of you is On, the motorist in forward-facing would change his/her lane within the next 5- 10 seconds. Hence it is all the more important to respect the driver in front of you if he/she turns on the indicator to change the lane.

IV. SMART SPEED INDICATORS

Foreign Country


INDIA

The above are the different types of indicators to reduce the traffic in each lane by using the indicators by Forign Countries and India.

V. MEASURES TO MITIGATE TRAFFIC PROBLEMS

Traffic signals that are properly designed, located, operated, and maintained will have one or more of the following advantages is:

a) They provide for the methodical movement of traffic.
b) They increase the traffic-handling capacity of the intersection if: a. Proper physical layouts and control measures are used, and b. The signal operational

parameters are reviewed and updated (if needed) on a regular basis to maximize the ability of the traffic control signal to satisfy current traffic demands.

c) They reduce the frequency and severity of certain types of crashes, especially right-angle collisions.
d) They are coordinated to provide for continuous or nearly continuous movement of traffic at a definite speed along a given route under favourable conditions.
e) They are used to interrupt heavy traffic at intervals to permit other traffic, vehicular or pedestrian, to cross. Additionally, properly designed, operated and maintained traffic signal systems yield significant benefits on fuel consumption and air pollution.

4. CONCLUSION

This paper describes the evaluation of an adaptive traffic signals that can be used for Indian traffic condition. Places where the congestions and accidents are more, In order to reduce that situations the following type of signals can be suggested for the road condition. Lane sign conversions, Indicators & Delineators help to mitigate the traffic problems mainly in urban areas.

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