LITERATURE SURVEY ON SIGNS WITH SMART CONNECTIVITY FOR BETTER ROAD SAFETY

R.Arun Pandiyan K G.KarthicBabu

Tagore Engineering College

ABSTRACT

Road traffic safety refers to the methods and measures used to prevent road users from being killed or seriously injured. Growth in population has led to growth in technology. People use car on large number and number of accidents taking place, is increasing day-by-day. Road accidents are undoubtedly the most frequent happening cases and overall, the cause of the most damage. There are many dangerous roads in the world like mountain roads, narrow curve roads, T roads. Some mountain roads are very narrow and they have many curves. The problems in these curve roads is that the drivers are not able to see the vehicle or obstacles coming from another end of the curve. If the vehicle is in great speed then it is difficult to control and there are chances of falling off a cliff. Hence there is a need of many road safety systems. By using the advanced technology to create smart connectivity for better road safety.

| BOOK/ JOURNAL | TOPIC | AUTHOR NAME | YEAR | INFERENCE |
|------------------------------|---|---|------|--|
| THE ROYAL SOCIETY PUBLISHING | Advances in smart roads for future smart cities | Chai K.Toh, Julio A. Sanguesa, Juna C. Cano and Francisco J. Martinez | 2020 | In the paper, they discussed the recent 10 technological advances and developments in the area of smart roads. They include: (i) energy-harvesti ng road, (ii) musical road, (iii) automatic weighing road, (iv) electrifiedroad, (v) roads with wireless digital traffic signs, (vi) roads with automatic traffic violation detection and notification, (vii) roads that talk (V2X), (viii) roads with smart intersections, (ix) roads with fast emergency rescue, and (x) roads with smart street lights. These advances will aid in the progress, development and realization of smart transport for future smart |

| | | | | cities. |
|----------------------------|---|--|------|--|
| ICT INNOVATIONS 2017 | Internet of Things Based Solutions for Road Safety and Traffic Management in Intelligent Transportation Systems | Arnav Thakur, Reza Malekian, Dijana Capeska Bogatinoska | 2017 | Vehicle to vehicle communication and vehicle to infrastructure based channels are studied. Wireless communication technologies suitable for the channels are |

| | | | | studied. Additional benefits and services that can be added to a system with the IoT approach are also studied. The effectiveness of such a system is studied with the use of validation framework. Multiple case studies of current and future IoT based ITS along with the challenges in the application is discussed. |
|--|--|--|------|--|
| JOURNAL OF ADVANCED TRANSPORTATION | Development and Testing of Road Signs Alert System Using a Smart Mobile Phone | Eric M Masatu, Ramadhani Sinde, Anael Sam | 2022 | In this study a system for alerting drivers about road signs has been |

| | | | | developed and tested using a smart mobile phone. |
|---------------|---|--|------|--|
| SAGE JOURNALS | Reading Vehicular Messages from Smart Road Signs: A Novel Method to Support Vehicle- to-Infrastructu re in Rural Settings | Enes Karaaslan, Burak Sen, Tolga Ercan,Haluk Laman,James pol | 2021 | The objective of this paper is to investigate the operational challenges of the proposed low-cost solution in different V2I applications, including a Map Data message in an unsignalized traffic intersection, traveler information message in a work zone, and a red light violation |
| | | | | warning with the help of a smart sign. The proposed system showed some important advantages, such as invulnerability to third-party alterations and robust operation under harsh environmental conditions. |