

# ACCIDENT STATUS REPORT

S.KARTHIKEYAN, UG student, Final Year IT, M.Kumarasamy College Of Engineering, Karur.

S.KAVYA, UG student, Final Year IT, M.Kumarasamy College Of Engineering, Karur.

S.KEERTHIKA, UG student, Final Year IT, M.Kumarasamy College Of Engineering, Karur.

R.SRIRAM, UG student, Final Year IT, M.Kumarasamy College Of Engineering, Karur.

## ABSTRACT

Accident Status Report (ASR) is specifically developed to exemplify the Road Safety by drastically reducing the accidents. ASR is a wide-ranging system which greatly helps in decisive accident analysis in a more elegant way. E-filing is done in ASR Android App or in Website by the MVI based on Accident Inspection Request Letter from Police department. In addition to the above, the details given by the Investigation Officer, severity of vehicle damage due to the accidents and other Eye witness if available can also be scrutinized by the MVI and thus concludes the reason of the accident. Along with

valid data, multimedia contents in accordance to a particular accident can also be uploaded as additional attachments. With that single valid entry all the fields in the report need not be replicated. Dynamic and Seamless Generation of the reports and Map analysis can be done to provide the remedial measures for preventing the accidents in the black spot areas. The status of the accident can be viewed by the Transport Commissioner, Joint Transport Commissioner (Road Safety), Deputy Transport Commissioner, RTO and Chairman District Road Safety Council based on their jurisdiction within a short span of time.

## **ROAD SAFETY**

Road safety is a multi sectoral and multi-dimension subject. It includes orderly development and management of roads, provision of safer vehicles, and a comprehensive response to accidents. It relies on modern traffic management systems and practices, improved safety standard in design, construction, operation and maintenance of roads, and production and maintenance of safer vehicles.

## **CAUSES OF ROAD ACCIDENTS**

Road accident is most unwanted thing to happen to a road user, though they happen quite often. The most unfortunate thing is that we don't learn from our mistakes on road.

1. Over Speeding
2. Drunken Driving

3. Distractions to Driver

4. Red Light Jumping

5. Avoiding Safety Gears

like St Belts and Helmets



### **Over Speeding**

Most of the fatal accidents occur due to over speeding. It is a natural psyche of human to excel. If given a chance man is sure to achieve infinity in speed.

### **Drunken Driving**

Consumption of alcohol to celebrate any occasion it's common. But when mixed with driving it turns celebration into a misfortune, Alcohol reduces concentration.



### **Distraction to Driver**

The distraction while driving could be minor but it can cause major accidents. Distraction could be outside or inside the vehicle. The major distraction now a day is talking on mobile while driving. Act of talking on

phone occupies major portion of brain and the smaller part handles the driving skills.

➤ **Red light jumping**

It is a common sight at road intersections that vehicles cross without caring for the light. The main motive behind red light jumping is saving time. The common conception is that stopping at red signals is wastage of time and fuel.

➤ **Avoiding Safety Gears like seat belts and helmets**

Use of seat belt in four-wheeler is now mandatory and not wearing seat belt invites penalty, same in the case of helmets for two wheeler drivers. Wearing seat belts and helmet has been brought under law after proven studies that these two things reduce the severity of injury during accidents.

## **MEASURE AGAINST ROAD ACCIDENTS**

Measures taken to minimize accidents .The main thrust of accident prevention and control across the world has been on 4 Es.

(i) Education

(ii) Enforcement

(iii)Engineering and

(iv)Environment and

Emergency care off-road accident victims.

**James Elander, Robert West, and Davina French, (1993)“**

**Behavioral Correlates of Individual Differences in Road-Traffic Crash Risk: An Examination of Methods and Findings.”**

This article considers methodological issues relevant to the study of differential crash involvement and reviews the

findings of research in this area. Aspects of both driving skill and driving style appear to contribute to crash risk. Of the former, hazard-perception latency appears to play an important role, and this may be attributable to generalized abilities to identify visual targets in a complex background and to switch attention rapidly.

Of the latter, faster driving speed and willingness to commit driving violations increase crash risk, and these factors may be explicable in terms of personality and antisocial motivation. The article concludes with an examination of the practical implications and of the ways in which research in this area might usefully proceed.

**De Blaeij, Arianne; Florax, Raymond J.G.M.; Rietveld, Piet; Verhoef, Erik T, (1993)“ The Value of Statistical Life in Road Safety: A Meta-Analysis.”**

Traffic accidents are a major issue in transport policies around the world. For example, in Europe approximately 40,000 fatalities occur in traffic accidents every year. In addition, the number of nonfatal accidents amounts to a multiple of this figure. Over the past few decades, the long run trend in road accidents has shown a decreasing number of casualties, even though transport volumes have increased substantially.

It may well be, that the implementation of a broad range of safety enhancing measures in vehicles, infrastructure as well as in traffic behavior goes a long way in explaining this relative increase in road safety. Obviously, there is no guarantee that these improvements in accident rates will continue to occur, among other things because the introduction and adoption of additional safety enhancing

measures imposes an increasing burden on both household and government budgets. Hence, a cost-benefit approach may help to better understand the economic efficiency of additional outlays on road safety improving policy measures. Accident costs, comprising both fatal and non-fatal damage costs, make up for an important part of the external costs of traffic.

**Thomas F. Golob, Wilfred W. Recker, (2001) “Relationships Among Urban Freeway Accidents, Traffic Flow, Weather and Lighting Conditions.”**

Linear and nonlinear multivariate statistical analyses are applied to determine how the types of accidents that occur on heavily used freeways in Southern California are related to both the flow of traffic and weather and

ambient lighting conditions. Traffic flow is measured in terms of time series of 30-second observations from inductive loop detectors in the vicinity of the accident prior to the time of its occurrence.

## **ACCIDENT STATUS REPORT**

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witness if available can also be scrutinized by the MVI and thus concludes the reason of the accident. Along with valid data, multimedia contents in accordance to a particular accident can also be uploaded as additional attachments. With that single valid entry all the fields in the report need not be replicated. Dynamic and Seamless Generation of the reports and Map analysis can be done to provide the remedial measures for preventing the accidents in the black spot areas.

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## **MODULES DESCRIPTION**

### **Login**

Based upon authorization of Transport department officials username and password has been given to use the corresponding credentials in the ASR App. And they can login in the web portal depending upon the authorization. This login is very secure because of encryption process in the server side. The login page contains a customized view for the end users.

### **MVI – Usage**

- E-filing of accident details for a particular accident with various input details
- Approving the cases entered by data entry operator for the next level of process
- Reviewing the approved cases as viewed by

commissioner for the doubts.

- Report generation- A.I.R (TNMVR 378) , Watch Register (Circular 12 -1993), Booklet Forms (DTC Trichy Booklet) , Report to Insurance Company (TNMAT RULE 1989)
- Analysis based on Map(Unit office wise)
  - Fatal/Non-Fatal
  - Road category(NH,S H,ODR,VDR)

#### **RTO – Usage**

- Reviewing the approved cases of all the unit offices under his control
- Viewing the reports - A.I.R (TNMVR 378) , Watch Register (Circular 12 -1993), Booklet Forms (DTC Trichy

Booklet), Report to Insurance Company (TNMAT RULE 1989)

- Analysis based on Map(District wise)
  - Fatal/Non-Fatal
  - Road category(NH,SH,ODR, VDR)

#### **DTC – Usage**

- Reviewing the approved cases of all the districts that comes under his/her Zone
- Viewing the reports of districts that comes under his zone - A.I.R (TNMVR 378) , Watch Register (Circular 12 - 1993), Booklet Forms (DTC Trichy Booklet), Report to Insurance Company (TNMAT RULE 1989)

- Analysis based on Map(Zone wise)
  - Fatal/Non-Fatal
  - Road category(NH,SH,ODR,VDR)

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### TC – Usage

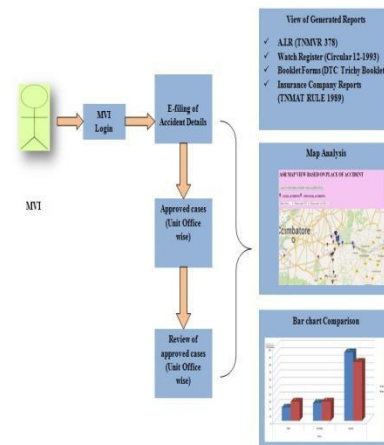
- State wide view of Accident details - on the go
- Independently the TC can analyze all the generated reports
- Views accident cases with fatal > 2, fatal < 3 and non-fatal cases separately in inbox

### JTC RS – Usage

- Views accident cases in two categories with fatal > 2, fatal < 3 and non-fatal cases separately in inbox
- Viewing the reports for all districts - A.I.R (TNMVR 378), Watch Register (Circular 12 - 1993), Booklet Forms (DTC Trichy Booklet), Report to Insurance Company (TNMAT RULE 1989)
- Analysis based on Map
  - Fatal/Non-Fatal

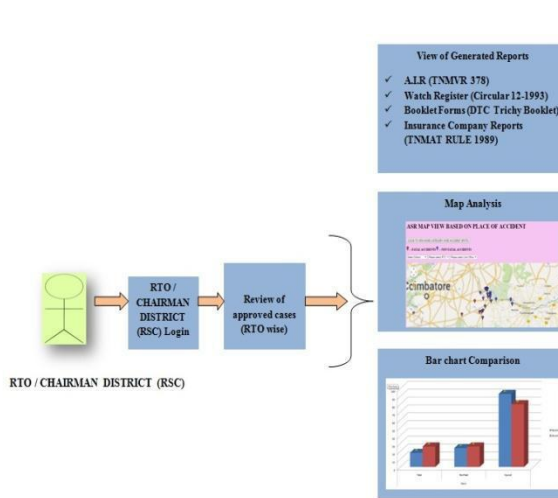
## DESIGN VIEW

## USE CASE VIEW OF MVI DIAGRAM

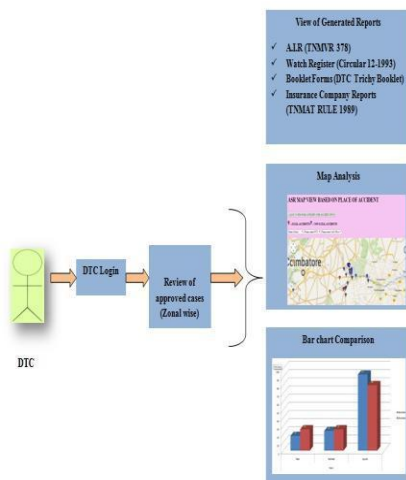




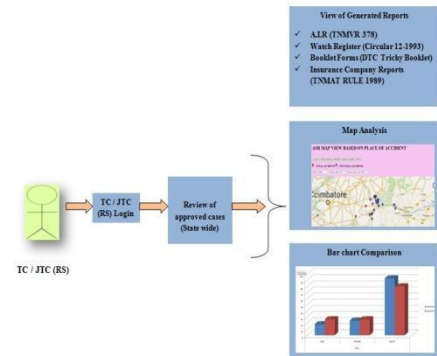
## USE CASE VIEW OF RTO DIAGRAM



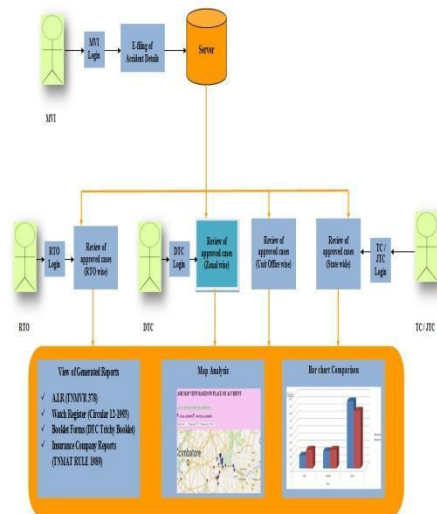
## USE CASE VIEW OF DTC DIAGRAM



## USE CASE VIEW OF TC DIAGRAM



## ASR SYSTEM FLOW



## REFERENCES

- 1) James Elander, Robert West, and Davina French, (1993)“ Behavioral Correlates of Individual Differences in Road-Traffic Crash Risk: An Examination of Methods and Findings.”

- 2) De Blaeij, Arianne; Florax, Raymond J.G.M.; Rietveld, Piet; Verhoef, Erik T, (1993)“ The Value of Statistical Life in Road Safety: A Meta-Analysis.”
- 3) Thomas F. Golob, Wilfred W. Recker, (2001) “Relationships Among Urban Freeway Accidents, Traffic Flow, Weather and Lighting Conditions.”

