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A GIS-based Accident Database Management System



Key Features

- Customized Accident Report Form
- Exhaustive Analysis Features
- Very detailed Reporting Module
- Query Builder
- Dash-Board for a quick view of data
- Automated E-mails upon Accident Reporting
- Home Page, Settings etc



Benefits of RADMS application

- Web based system
- Easy to deploy, easy to use
- GIS advantage
- Comprehensive/ flexible reporting capabilities
- Extensive interfacing capabilities
- Powerful analysis engine
- Customization options



Requirements of good data collection systems

- Backbone of any road safety initiative
- Provides invaluable information to the wide range of agencies working in road safety
- Four main elements
 - a system to report and record crashes
 - data storage and retrieval,
 - a process of crash analysis, and
 - a method for reporting and otherwise distributing road safety information.



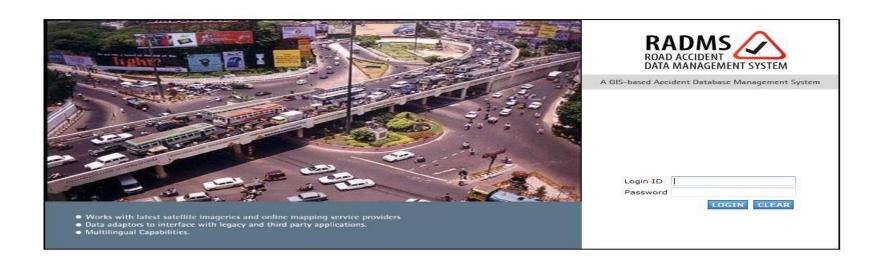
Non – Functional Features of the System.

- Security
- Transactions Management
- Auditing
- Logging
- Concurrency



Login

- RADMS application is accessed through a web browser
- Access by user name and password
- Only authorized users can enter into the application

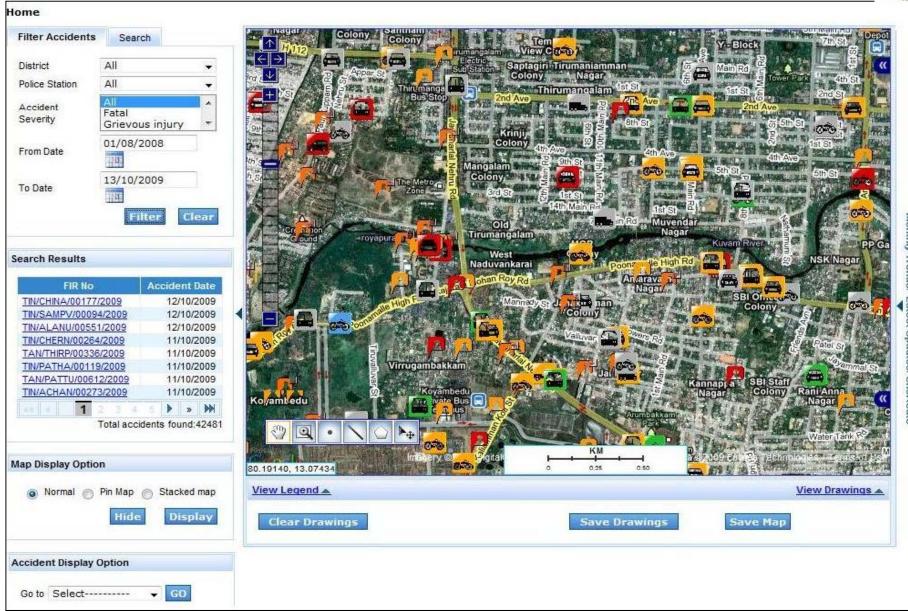




Home

- Home page is displayed when you successfully login into the application
- Shows the overview of the application at a glance
- Functionalities supported:
 - Search and View accidents on the map
 - View the accidents on the map using display options
 - Perform analyses on searched accidents
 - View the Monthly trend of accidents
 - View the Latest updates
 - Access My Shortcuts







Accident Report Form (ARF)

- Accident Report Form (ARF) is the form which records the entire details of an accident
- The Accident Report module helps you do the following:
 - Record details of an accident in the ARF
 - Search for and view details of an accident
 - Manage ARF(s)
 - View Pending Reports
 - Import and Export ARF(s)

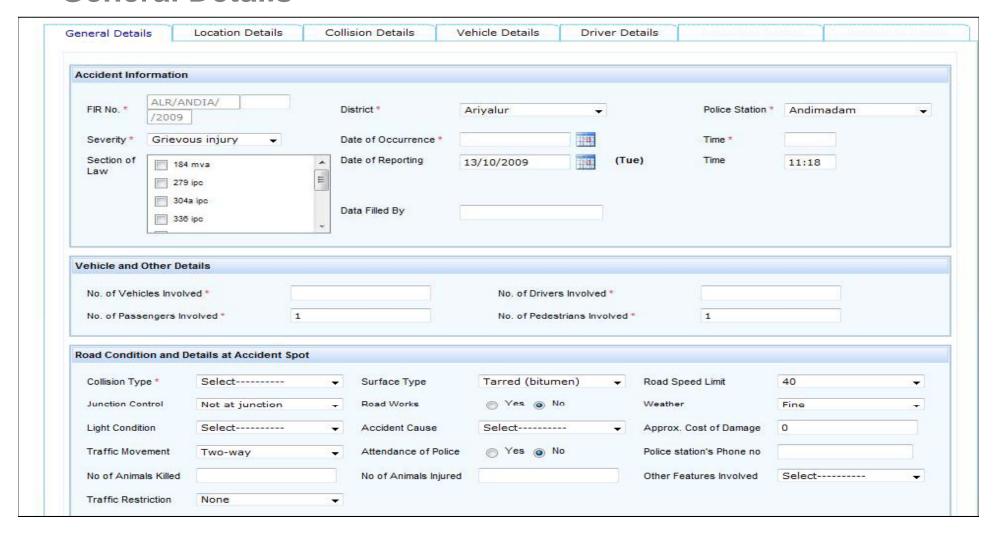


Record details of an accident

- Accident details are captured in RADMS through the Accident Report Form (ARF) screen
- The ARF would be initially entered by the Police Department
- The details captured are grouped under the following categories:
 - General Details
 - Location Details
 - Collision Details
 - Vehicle Details
 - Driver Details
 - Passenger Details
 - Pedestrian Details

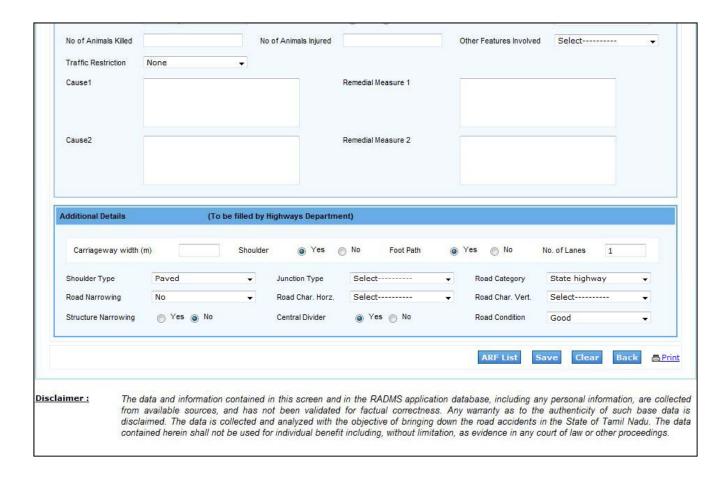


General Details



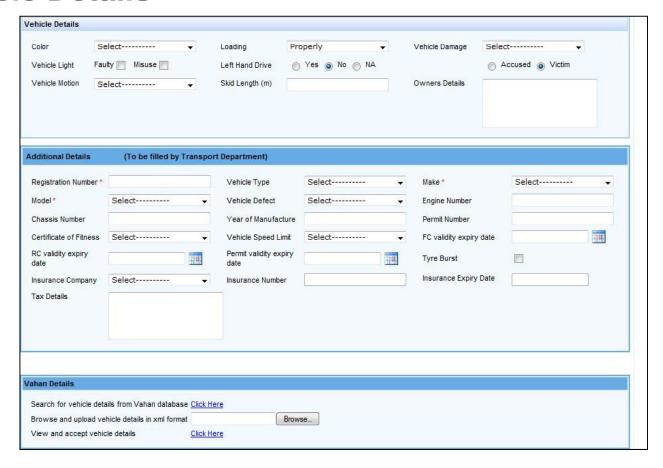


ARF - General Details contd...

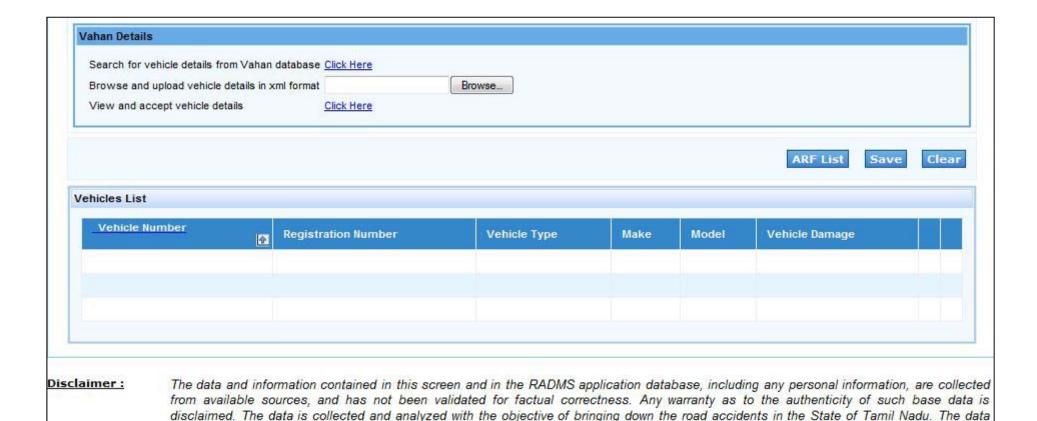




Vehicle Details



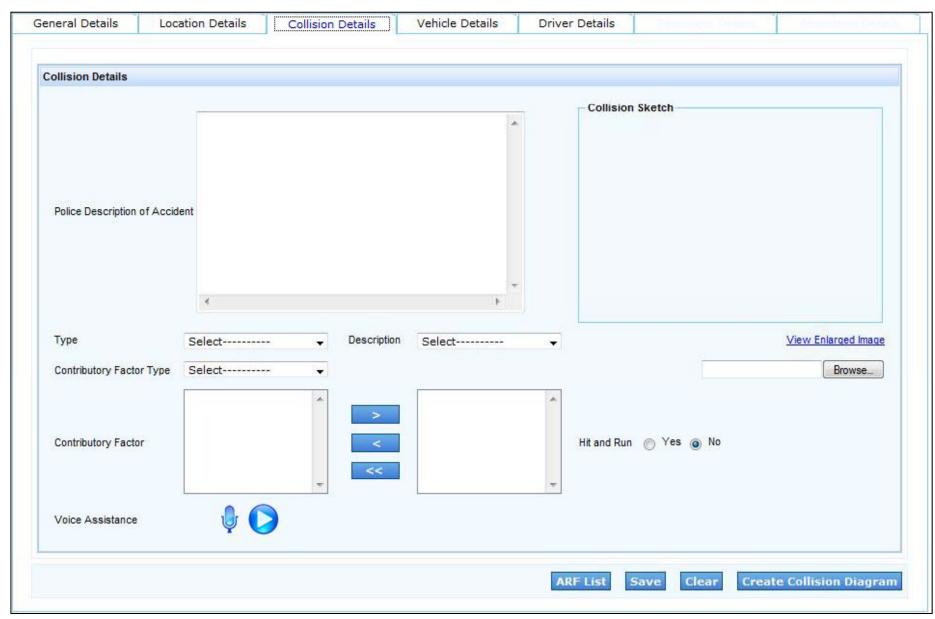




1 March 2012

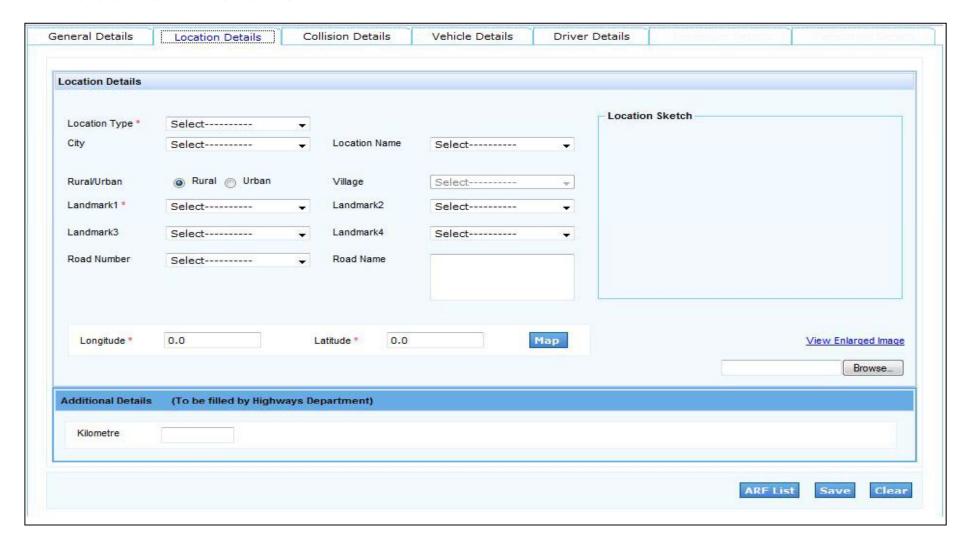
contained herein shall not be used for individual benefit including, without limitation, as evidence in any court of law or other proceedings.





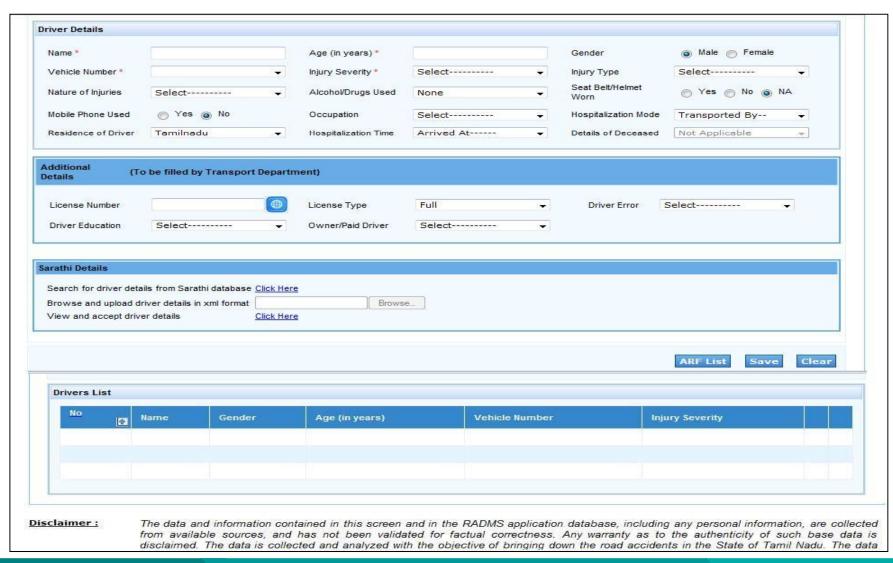


Location Details





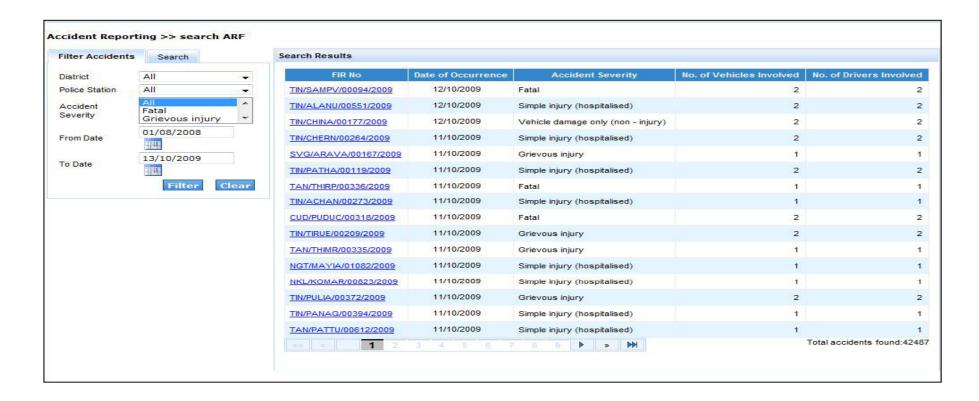
Driver Details





Search for and view list of accidents

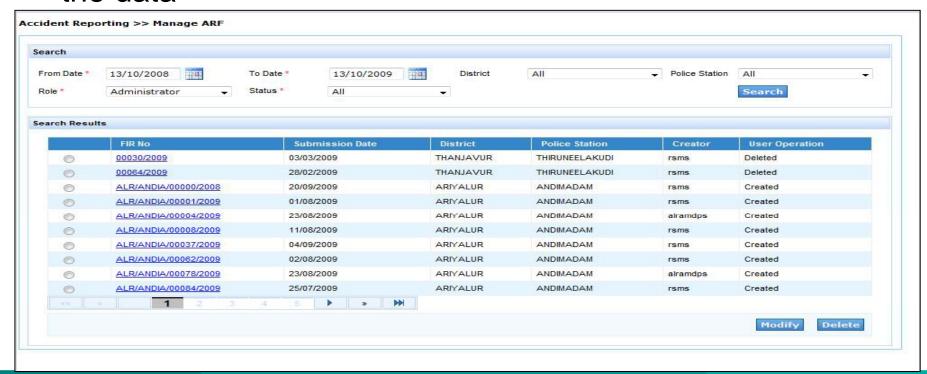
- The ARF can be searched using search/ filter criteria.
- The details of an ARF can be viewed





Manage ARF

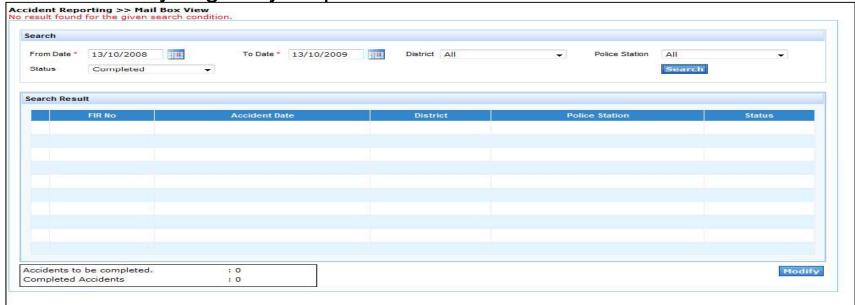
- The entered ARFs can be modified by the respective user to add further details of the ARFs
- The concerned authority should verify the correctness of the data





Mailbox View

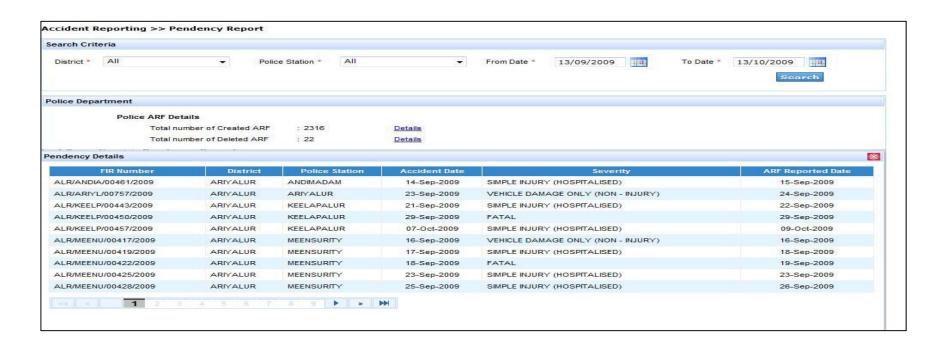
- The Transport and Highways users can view the ARF to be filled
- The ARF's filled by Police can be updated with Transport and Highways department details.
- Transport department users can view all the ARF's filled by Police
- ARF's that are Fatal or involves casualty more than 5 can be modified by Highway Department user.





Pendency Report

- The authorities of the three department can view ARF's that are pending.
- The same can be intimated to the concerned user





Import-Export ARF(s)

- The ARF(s) and master data from the central server can be retrieved into the RADMS Lite using Data Export.
- The ARF(s) from RADMS Lite can be synchronized into the central server using Data Import.
- Each RADMS Lite installation has a key that is used to identify the installations.

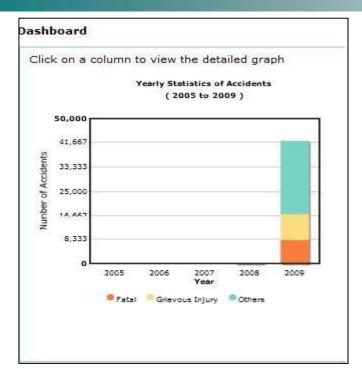


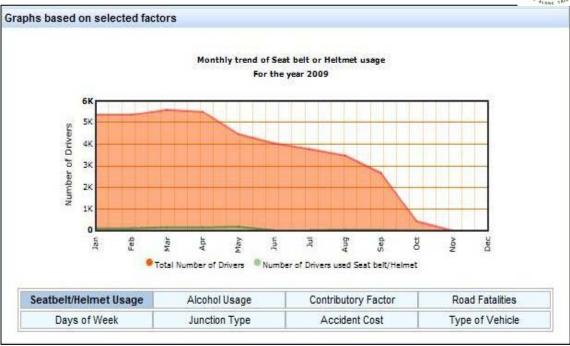


Dashboard

- View the trend of accidents across various parameters at a glance
- Easy to analyse and understand the location and cause of accidents
- Various graphs displayed
 - Yearly Statistics of Accidents
 - Graphs based on selected factors
 - Monthly Distribution of Accidents
 - District wise Distribution of Accidents
 - Accidents distribution across factors

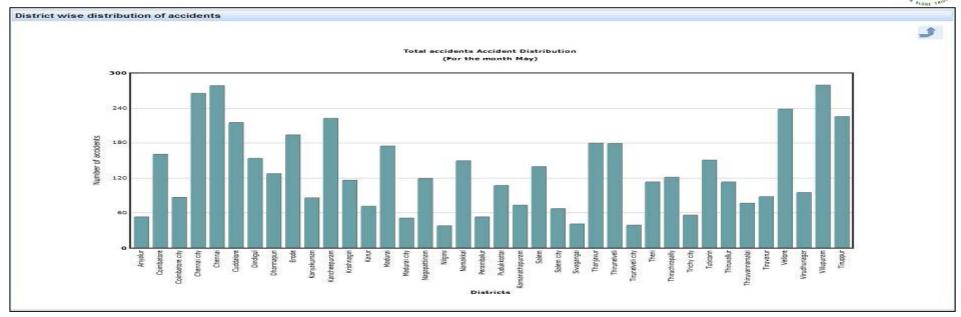


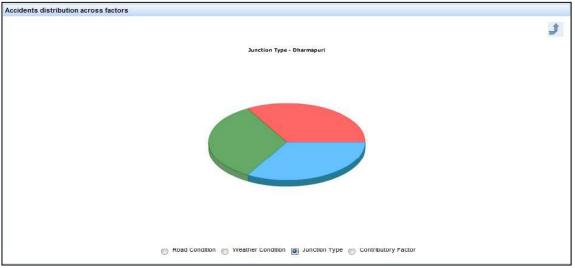














Analysis

- Powerful analysis engine
- Facilitates identification of the problems based on in-depth analyses of accident data
- Different analysis supported by RADMS:
 - Grid Analysis
 - Cluster Analysis
 - Monitor Site Analysis
 - Stick Analysis
 - Safety Benefit Evaluation



Grid Analysis

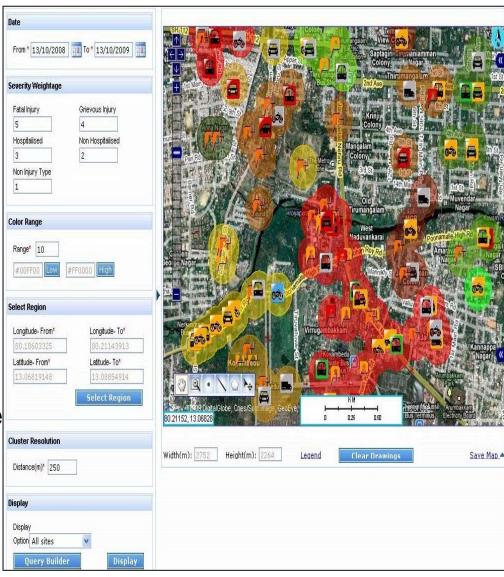
- Analysis carried out on a selected rectangular region
- Selected region divided into smaller grids of specified size
- Grid colour indicates the weightage of the grid according to the number of accidents of each severity





Cluster Analysis

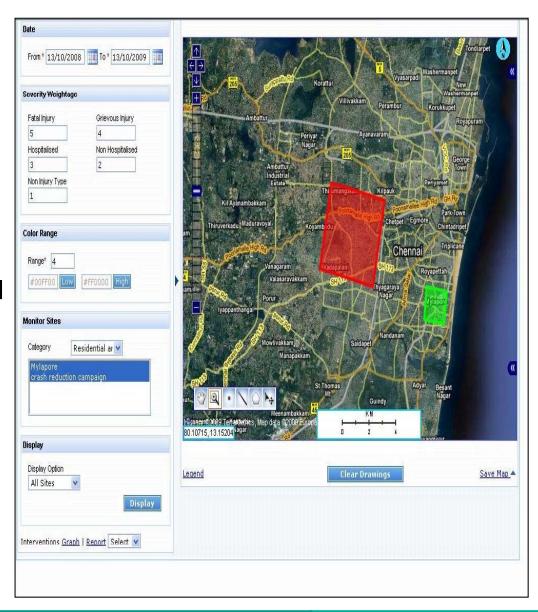
- Analysis carried out on a selected rectangular region.
- Accidents lying within the specified distance of each other grouped into clusters.
- Cluster colour indicates the weightage of the cluster according to the number of accidents of each severity inside each cluster.
- Analysis gives an idea of the density and severity of accidents in the selected area.





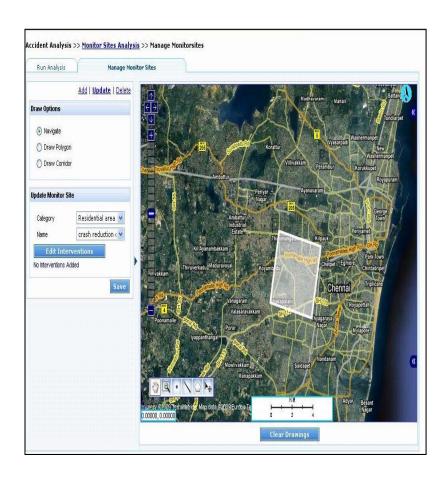
Monitor Sites Analysis

- Analysis done on regions saved as monitor sites
- Provides a visual comparison of accident severity in the selected monitor sites.
- Report and graph generated showing effects of interventions taken in a region.





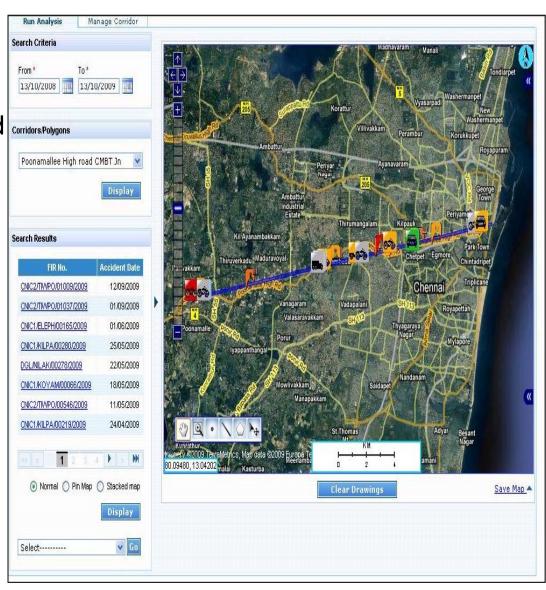
Monitor Sites Analysis – Create Sites





Corridor Analysis

- Searches and lists all the accidents inside a selected predefined area and within the given date range.
- Corridors can be created and saved.





Stick Analysis

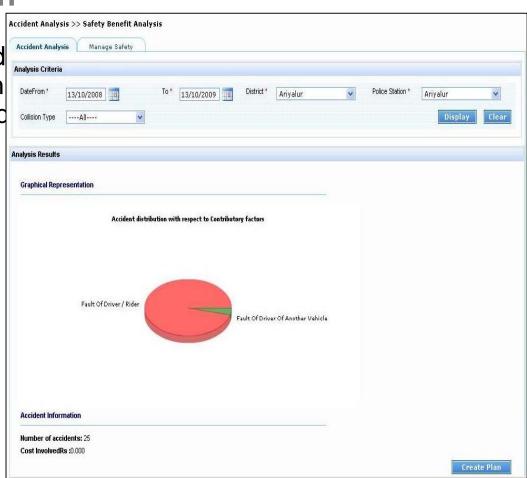
- Provides a visual representation of accident parameters.
- Stick refers to the selection of accident parameters.
- Facilitates identifying accident pattern based on selected parameters.





Safety Benefit Evaluation

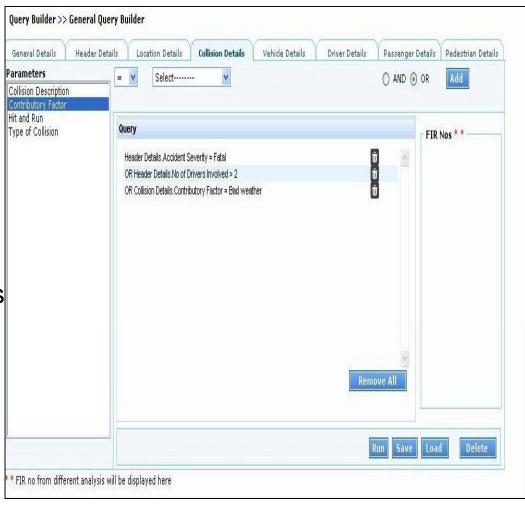
- Establish safety goals based on identified problems which are measurable, realistic and time specific
- Analysis screen shows the distribution of accidents based on contributory factor
- Plan, monitor and evaluate programmes for counter measures and associate costs and time lines.





General Query Builder

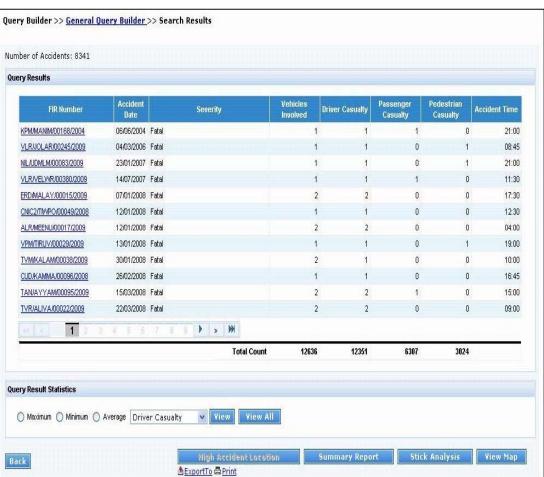
- Facilitates querying of accidents based upon accident parameters.
- Easy formation of queries combining different conditions.
- Functionality to save queries and run saved queries.





General Query Builder

- Result made available as PDF, CSV, XML, DBF.
- Summary report and Stick Analysis can be performed on the result.
- Result viewable on map.





Reports

- Reports can be used to publish facts for road safety personnel so that they can get a clear picture of the safety situation and format solutions, for providing a better and safer environment for all road users.
- Reports in RADMS are mainly classified as:
 - Standard Reports
 - Dynamic Reports
 - Summary Reports
 - IRC Reports



Standard Report

- A set of predefined reports which are widely used to analyse accidents
- There are 60+ predefined standard reports in RADMS classified into different categories



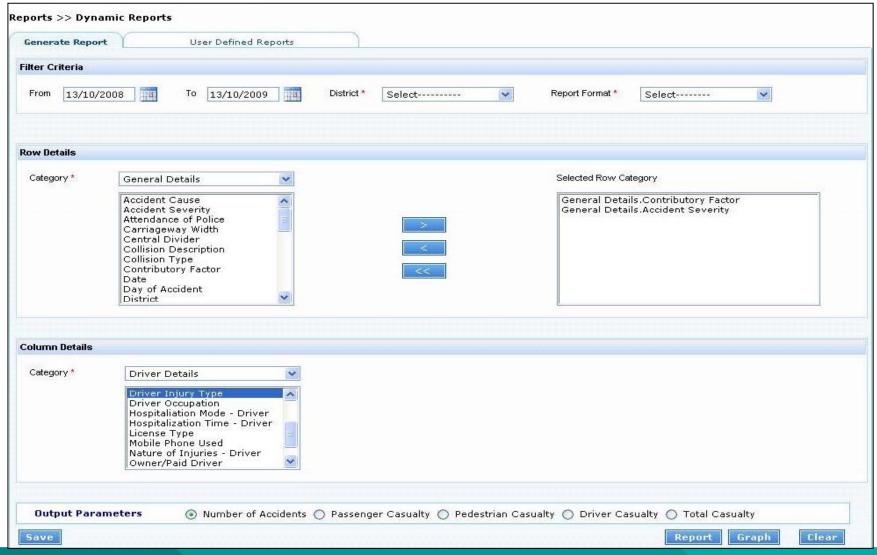


Dynamic Report

- RADMS has a dynamic reporting feature that allows creation of unlimited user defined reports
- The user will be able to create user defined reports by defining the row and column parameters
 - The parameters can be selected from any of the ARF fields entered
- The user can also save this report structure and use it later



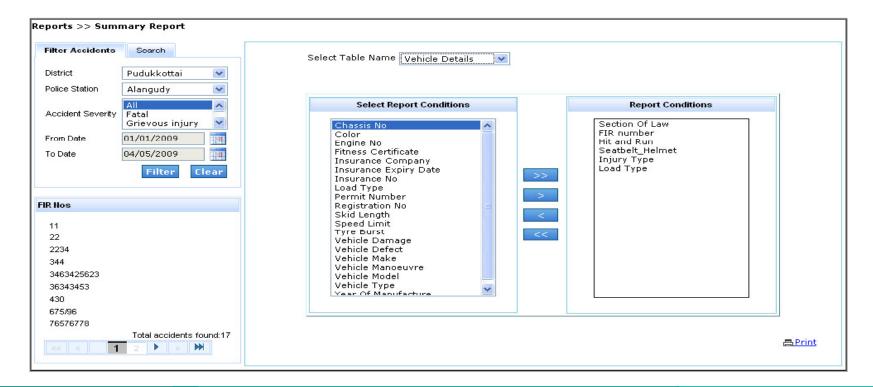
Dynamic Reports





Summary Report

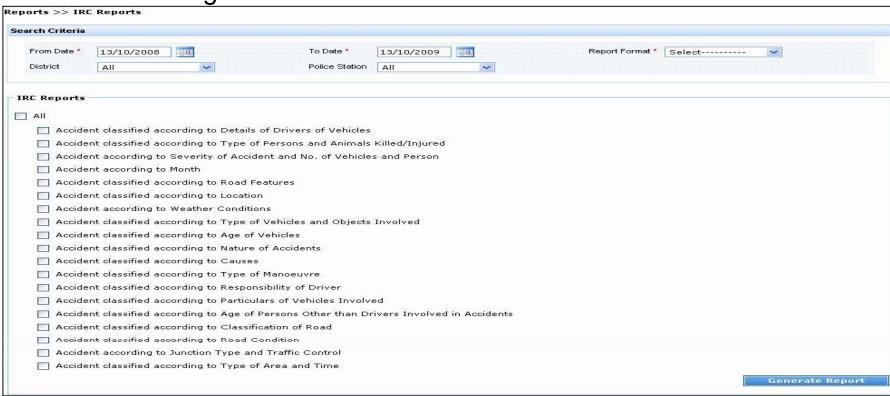
- Generates a summary of all the accidents that are retrieved from the system as a result of a search, query or an analysis.
- Details of the accidents which should be included in the report can be selected.





IRC Report

- A set of predefined reports which are widely used to analyse accidents by the Indian Road Congress
- There are 19 predefined IRC reports in RADMS classified into different categories





Thank You