1. TRC14RP1_Emergency Information system for Trivandrum City

A mobile based application for providing emergency response is being developed. A database for the web application to store and retrieve information about emergency services, client side to add/edit/delete data in database, map features using the data from the database were implemented. User interface of the web application using CSS was modified and admin login forms, live clock in the web application and validation for the data using JavaScript. Map features were implemented using the data from the database;the emergency services were plotted with the help of data in the database and Google Maps API. The system displays the contact details such as mobile number or landline number of the emergency services along with duration and distance between the accident location and emergency services (Fig.1). Secured admin login form for the web application was implemented using SESSION.
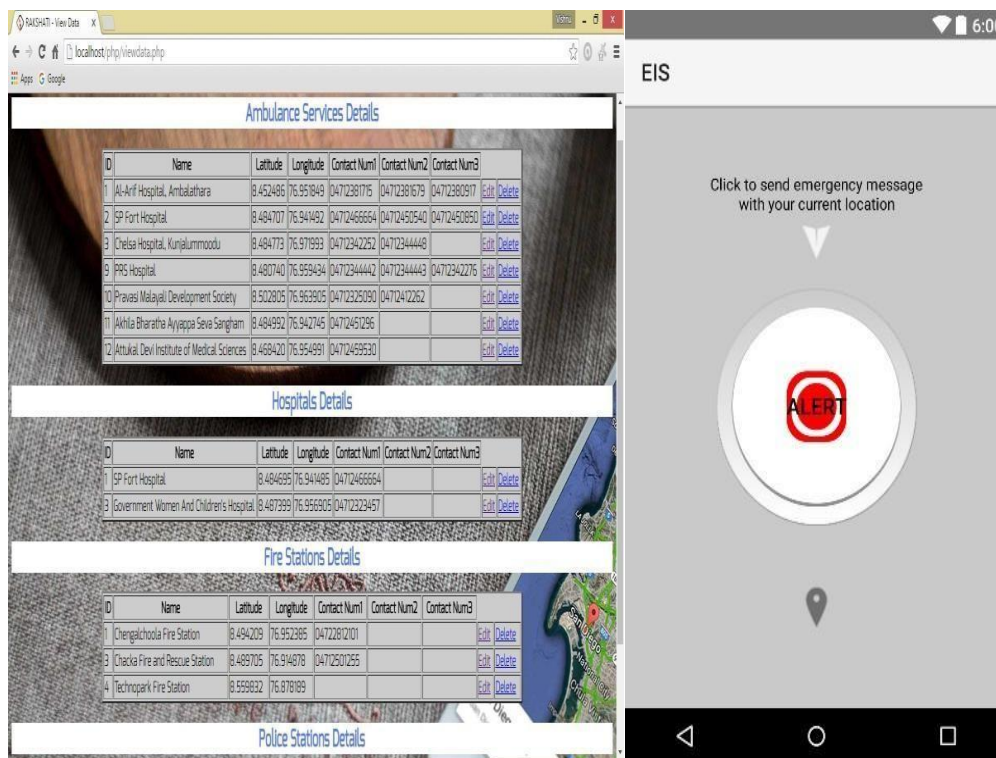

Fig. 1 Emergency Information system for Trivandrum city

2. TRC14RP3_Experimental Investigation on the Effect of Nano clay Additives the Properties of Bituminous Concrete Mix.

Use of nano materials as a modifier to bituminous mix so as to improve the performance of the mix is becoming popular now a days. Laboratory investigation was carried out to study the influence of nanoclay on the strength characteristics of bituminous mix. From the

experimental investigations it was found that maximumimprovement in the properties was observed for 4% nanoclay content. For 4% nanoclay content, stability increased by 40%, dynamic modulus increased 15%, stiffness modulus increased by 26% and rut depth decreased by 26% when compared to unmodified mix.

3. TRC14RP4_Traffic noise analysis for Thiruvananthapuram city using GIS

Noise database was created with the measurements obtained from the different zones of the city- silence zone, commercial zone and the entire city. Traffic noise was measured by using Sound Level Meter in ten second interval for duration of half an hour. At each location data was collected during morning peak, off peak and evening peak hours. The traffic characteristics [traffic volume in Passenger car unit and speed of the vehicle in km/hr] were extracted using AVS software. Noise prediction models using Artificial Neural Network and Adaptive Neuro - Fuzzy Inference System, preparation of Noise Level Map using Arc GIS for identifying suitable hedge species for noise attenuation on highways was developed (Fig.2).
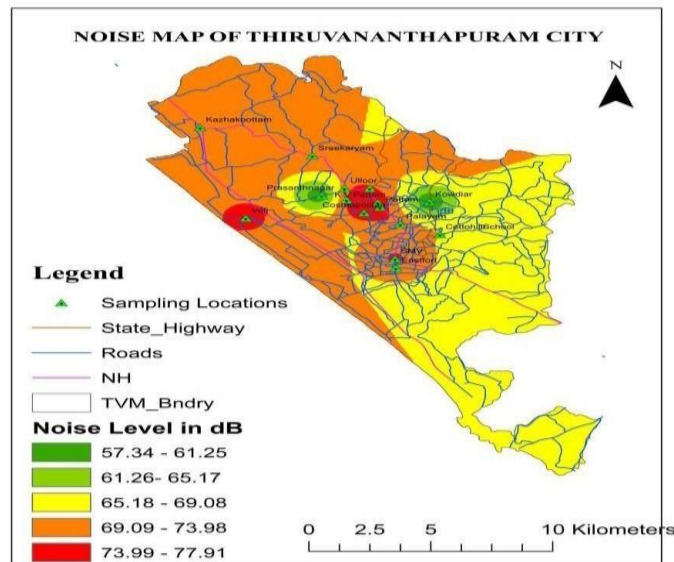

Fig. 2 Noise Map for Trivandrum city

4. TRC14RP5_Automated Pothole Detection and Quantification Using Depth Sensor, Kinect

The purpose of this study was to develop an effective method for automated detection of potholes and volume estimation using Kinect sensor technology. The work also aims to

design the cold mix and to apply it in the field to study its performance and to estimate the quantity required to fill unit volume of pothole of cold mix (Fig.3).

(a)   (b)

Fig. 3 (a) Automatic detection of pavement distress and (b) character estimation using single camera