Implementation of an Optimization Routing model for Real Time Emergency Medical Service System

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Abstract

In today's traffic congestion reducing the travel time of an Emergency Vehicle (EV) is essential to increase the chance of casualty's survival.

This research mainly deals with the design of an Optimization Routing model for Emergency Medical Service System (EMSS). Optimization model for Emergency Medical Service System (EMSS) plays a major role towards society protection.

This examines the real time flexible dispatching strategy so that crucial response time can be saved for EMSS. In the Emergency Medical Service system, the response time plays a crucial role in minimizing adverse impacts. Fatalities and the loss of property can be greatly reduced by improving of the response time to incidents.

Real-time traffic and travel time data are available in EMSS dispatch center. This model helps to analyse developing flexible dispatching strategies with the help of duration information from home station. It can be envisioned that proper route diversion or reassignment will improve the performance greatly especially when there is significant traffic congestion or when severe incidents happen. Based on the numerical calculations and graphical representations it reveals to the fact that the different parameters are being analyzed such as duration prediction, incident/vehicles tracking, and consign optimization thereby it is validated for road networks.

Biography

Dr. C. Vijayalakshmi is currently working as Associate Professor in the Department of Statistics and Applied Mathematics, Central University of Tamilnadu, Thiruvarur. She received her Doctorate of Philosophy in Stochastic Processes, General Bulk Queues and their applications from Manonmaniam Sundaranar Univerisity and M.Sc. Operations Research and computer Applications from National Institute of Technology, Trichy, India. She has 22 years of teaching experience and 2 years of Industrial experience. She has written 5 monographs for Engineering students. Her credential includes the publication of 4 patents, 125 International/National Scopus Indexed Journal publications, 80 International/National conference proceedings , 10 Best paper awards, 2 projects completed. Under her guidance 15 students have been awarded Ph.D. She has organized 15 conferences and 3 with CSIR funding. She has received best project award, Academic excellence award and research awards at various levels.