

# **DEVELOPING AN EMERGENCY SERVICE MANAGEMENT SYSTEM FOR AMBULANCES AND FIRE\_FIGHTING VEHICLES**

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Emergency services can be defined as the organizational mechanisms that deal with specially, accidents and urgent problems such as fire, illness or crime. In this respect, Emergency Service Management Systems are very functional to minimize the risks of an emergency situation and to give necessary responses for early recovery from different kinds of emergencies or disasters. When observing the recent situation of Sri Lanka, as a developing country, the necessity of improving the prevailing system becomes a foremost aspect. This research mainly focuses on the problems that are faced by the emergency services and the solutions that can be taken in such a situation. For instance, the best route for the ambulances and fire brigade vehicles to reach to a location of the respective incident and to the hospital has been proposed as a solution in this study.

The main objectives of the study are identifying road traffic flow system and its traffic conditions for different time periods of a day and suggesting the best route for ambulances and fire service vehicles to reach to incident location and to a nearby hospital. The historic traffic pattern data were used as inputs to make the model which was created in a Geographical Information Systems environment. It is valuable to interconnect the chosen emergency service suppliers and give important information to fulfill their tasks to provide an efficient service to the country. This research is conducted by concerning only ambulances and fire brigade services in an area of the Colombo city. It is expected that the proposed new system would be beneficial to provide the country with improved emergency service efficiently and productively.