

Save Lives: The Application of Geolocation-Awareness Service in Iranian Pre-hospital EMS Information Management System

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Abstract : For emergency and relief service providers such as pre-hospital emergencies, quick arrival at the scene of an accident or any EMS mission is one of the most important requirements of effective service delivery. Response time (the interval between the time of the call and the time of arrival on scene) is a critical factor in determining the quality of pre-hospital Emergency Medical Services (EMS). This is especially important for heart attack, stroke, or accident patients. Location-based e-services can be broadly defined as any service that provides information pertinent to the current location of an active mobile handset or precise address of landline phone call at a specific time window, regardless of the underlying delivery technology used to convey the information. According to research, one of the effective methods of meeting this goal is determining the location of the caller via the cooperation of landline and mobile phone operators in the country. The follow-up of the Communications Regulatory Authority (CRA) organization has resulted in the receipt of two separate secured electronic web services. Thus, to ensure human privacy, a secure technical architecture was required for launching the services in the pre-hospital EMS information management system. In addition, to quicken medics' arrival at the patient's bedside, rescue vehicles should make use of an intelligent transportation system to estimate road traffic using a GPS-based mobile navigation system independent of the Internet. This paper seeks to illustrate the architecture of the practical national model used by the Iranian EMS organization.

Keywords : response time, geographic location inquiry service (GLIS), location-based service (LBS), emergency medical services information system (EMSIS)

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