

4.3.3

Use of GIS to locate resources for clearing Highway Incidents: Bay Area Incident Response System (BAIRS) Experience

Presenter

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The Bay Area Incident Response System (BAIRS) is a framework of software, hardware, data and staff to receive, store and analyze incident data in order to quickly locate and assign the most appropriate equipment, materials and personnel to an incident. The development of BAIRS was initiated due to a request from local transportation agencies for Caltrans to improve its response to those incidents requiring maintenance personnel and equipment. Therefore, BAIRS was specifically developed to reduce the amount of time to get incidents cleared up using the Division's personnel and equipment.

The users of BAIRS are the traffic management center (TMC) dispatchers and District 4 maintenance supervisors. BAIRSGIS is a Windows-based client application for a dispatcher's workstation or a maintenance supervisor's laptop computer. BAIRSGIS enables a dispatcher or maintenance supervisor to spatially locate and display open incidents in real-time. Once an incident has been located (has been assigned x and y coordinates) a user of BAIRSGIS can utilize several spatial query tools for locating nearest staff and resources to the incident. The BAIRSGIS graphical user interface consists of a map along with several query forms. The map displays the incident location as well as the locations of needed resources such as personnel and equipment. The query forms allow the user to specify the types of equipment and personnel needed for the incident and then lists these resources based on their proximity to the incident or a maintenance yard.

During the presentation, we will demonstrate the BAIRS GIS Application, as well as discuss some of benefits of using the GIS technology for locating appropriate resources for clearing the incidents on the highway in a timely fashion.