IncidentReport

Responder Communication System

Problem Statement

Inconsistent descriptions of an incident can result in the wrong equipment arriving at the scene, delaying clearance of the incident. Every minute a lane remains blocked adds four minutes of extra delay, resulting in additional congestion, GHG emissions and secondary incidents. Additional delay increases the time that responders and motorists are in harm's way. Also, there is a lack of quality data to track incident clearance times and measure the impacts of incident management improvements.

A picture is worth a thousand words

The responder communication system is an innovative solution that uses existing technology to improve communication of incident details with minimal cost and effort. Reduced incident clearance times decrease congestion, GHG emission & secondary incidents. The system empowers responders with an easy to use system to improve interagency coordination, motorist and responder safety and response agency capabilities. In addition, data is automatically collected directly from responders to help build an incident timeline and demonstrate measurable benefits of the system.

Project Background

The Responder System was identified by the Caltrans and the Regional Incident Management Task Force (IMTF), comprised of staff from MTC, Caltrans District 4 and the California Highway Patrol (CHP), as a strategy to streamline and enhance the critical exchange of information between traffic incident responders. A pilot communication system, including tablet computers, digital cameras and standard communications applications was deployed in September 2010 along the I-880 Corridor for testing by Caltrans District 4 Maintenance staff.

Based on an evaluation of the initial six month test deployment, staff recommended extending the pilot deployment and expanding the system to include smart phones and tablets in addition to the existing laptops. The expanded pilot was approved by the Freeway Management Executive Committee (FMEC), comprised of executive staff from MTC, Caltrans and CHP, and in March 2011 iPhones and iPads were deployed to a test group of Caltrans District 4 Maintenance staff. At that time, development of a mobile application was planned to enhance the system and leverage capabilities available on the new devices.

Mobile Application Launch, Evaluation Period & Next Steps

In September 2014, the IMTF launched a mobile responder application and communication system for iOS. The first-of-its-kind system, developed by MTC and Monsoon Company (www.monsoonco.com) with input from IMTF member agencies, includes a mobile application, server interface, backend architecture and cloud based data storage.

The mobile application allows responders to snap a simple photo of an incident scene, quickly add key details, and instantly send to a pre-defined group through a secure server. The application automatically captures the GPS location and arrival time for each responder. Participants receive customized alerts when new information is ready for viewing. The system is designed to provide a high level of security by limiting access to photos through a secure server and discarding information after a set period of time. Standard procedures help to avoid the capture of personally identifiable information.

Following completion of a six month evaluation period by Caltrans District 4 Maintenance staff**,** the application will be considered for deployment to other responder agencies to maximize the benefits of the system. Future incorporation of the CHP incident data feed and interoperability with other systems will also be explored to further enhance system functionality and data collection capabilities.

Benefits

Reduce Incident Duration
Reduce Secondary Incidents
Increase Responder Safety
Reduce Incident Clearance Time
Reduce Congestion and GHG Emissions

Schedule

Development Complete	August 2014
Field Launched	Sept 2014
Evaluation Period	Sept 2014-Mar 2015
Data Analysis & Report	May 2015
Expanded Deployment	August 2015

Contact

For more information or to request a demo of the system, please contact Sarah Burnworth at sburnworth@mtc.ca.gov.