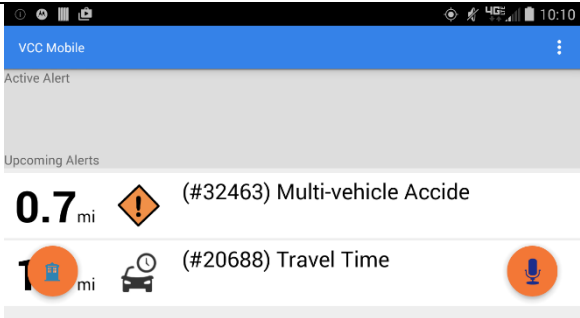


CVI-UTC Project Information	
Project Title	Mobile User Interface Development for the Virginia Connected Corridors
University	Virginia Tech Transportation Institute
Principal Investigator	Michael Mollenhauer Alexandria Noble Zac Doerzaph
PI Contact Information	mmollenhauer@vtti.vt.edu anoble@vtti.vt.edu zdoerzaph@vtti.vt.edu
Funding Agencies	CVI-UTC (Tier 1 UTC)
Agency ID or Contract Number	DTRT12-G-UTC20
Project Cost	\$149,857
Start and End Dates	7/1/2015 – 6/30/2016
Project Duration	1 year
Brief Description of Research Project	<p>VDOT has made significant investments in the development of the Northern Virginia Connected Vehicle Test Bed. The test bed provides a complete Connected Vehicle (CV) environment including a cloud computing environment, DSRC road side equipment (RSEs) on freeways and arterials, a cellular communications server, and a heavily congested roadway network within which to develop and test CV applications. In addition, VDOT is eager to begin deploying and validating applications on the test bed to help shape strategic decision making with respect to CV technology statewide.</p> <p>Existing applications could potentially provide the desired functionality of imparting information to road users, but the suppliers are do not currently support “while driving” usage to reduce liability as it pertains to driver distraction. Therefore, the Virginia Tech Transportation Institute (VTTI) will advance the state of the art by developing a multi-functional application with a user interface that is appropriate for use while driving.</p> <p>The application that was developed is a smart phone (Android platform) based application which provides drivers with information about road conditions ahead and also allows users to contribute information about they are experiencing. This application works with DSRC and LTE communications and will allow for rapid, near term deployment of connected vehicle technology. This application allows a substantial component of connected vehicle technology to be experienced by a large number of users without the cost of purchasing a new vehicle.</p>

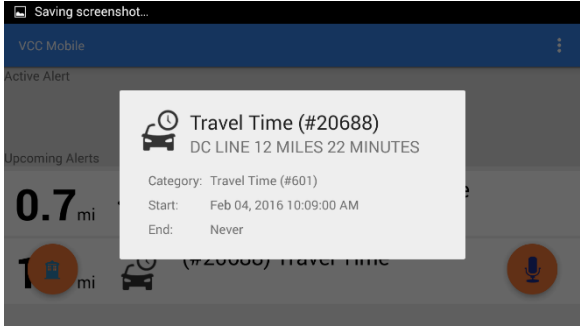
This project represents the development effort required to build an initial mobile application featuring concepts based on several CVI-UTC research projects as well as applications provided by VDOT that fit within their strategic interests and transportation technology implementation plans. An initial mobile application is being developed that can provide real benefits for an initial beta test user group that will increase safety and mobility across many modalities.

Describe Implementation of Research Outcomes (or why not implemented)

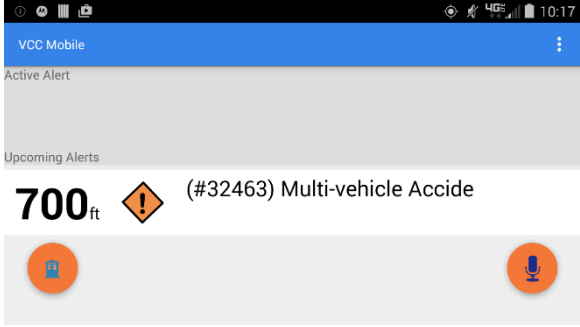
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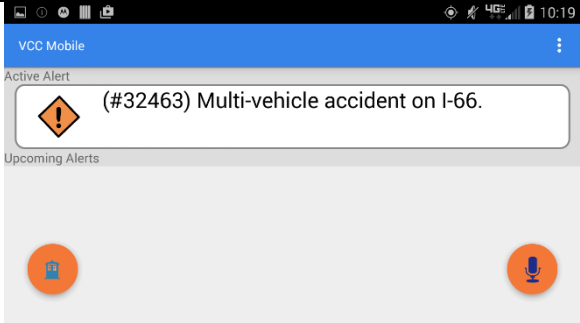
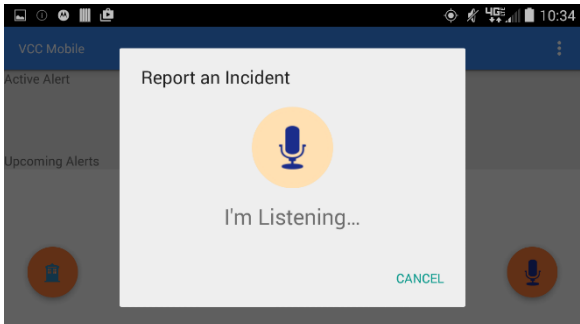
The mobile application provides tiles of roadway information and message types.



The driver can click on the message to see/hear more information



As the driver continues to move toward the obstacle the distance decreases.

	 <p>When the driver has reached the alert range of the obstacle the alert becomes active and the notification is read to the driver.</p>  <p>Drivers are also able to report roadway conditions, hazards, and observations through the mobile app.</p>
<p>Impacts/Benefits of Implementation (actual, not anticipated)</p>	<p>This study is still in progress, actual benefits of implementation will be determined after completion of the on road beta test.</p>
<p>Web Links</p> <ul style="list-style-type: none"> • Reports • Project Website 	<p>http://cvi-utc.org/mobile-user-interface-development-for-the-virginia-connected-corridors/</p>