Advanced Decision Support for Public Safety

Reducing Preventable Distracted Driving Incidents

Homeland Security
Science and Technology

BACKGROUND

Historically, law enforcement patrol vehicles have relied on two main tools for their communications and situational awareness needs: (1) land mobile radios and (2) a mounted single display computer or mobile data terminal (laptop). But in today's world, officers are expected to perform jobs that cannot be completed without the use of more advanced, complex systems. Patrol vehicles have essentially been transformed into a mobile office with distracting, yet necessary, equipment that allows officers to write citations, obtain motor vehicle registration and license information, receive location data or calls all at the same time, while many times driving at high speeds.

For all of their benefits, modern communications and information sharing systems have never been well suited for single occupant vehicle operations, as they require the use of both hands and focus the driver's eyes off the road. To put this in perspective, it has been estimated that a person who takes their eyes off the road for an average of five seconds is like covering the length of a football field while driving 55 mph blindfolded. Even a 20% reduction in preventable accidents would represent a large impact on the nearly $35 billion annual costs.

DHS S&T RESPONDING TO THE NEED

The Department of Homeland Security (DHS) Science and Technology Directorate (S&T) works with DHS operational components, first responders at all levels of government, emergency management and public safety, and other homeland security organizations to define priorities, gaps, and requirements to find or develop technology solutions. S&T's First Responders and Detection portfolio supports the Countering Weapons of Mass Destruction Office, Federal Emergency Management Agency, Federal Law Enforcement Training Centers, and first responders. To help address the need to reduce preventable distracted driving incidents, DHS S&T has partnered with the Johns Hopkins Applied Physics Laboratory (JHU APL) to apply a system engineering approach for employing an Advanced Decision Support to help reduce preventable distracted driving incidents.

PARTNERING WITH FIRST RESPONDERS & PRIVATE INDUSTRY

S&T has also begun working closely with a variety of stakeholders from local, state, federal, academia, and the private sector to ensure a thorough, ongoing understanding of the communications, data and information sharing needs of the law enforcement officers in conjunction with their patrol vehicles, while the vehicle is at rest or in motion. Solutions (e.g., communications and situational awareness tools, data and information sharing technologies, algorithms, analytics, COTS, and human factors components) are being assessed and considered. S&T also recognizes that solutions will have to readily integrate with existing infrastructure and personal equipment and gear, while supporting and enhancing human systems performance with limited or no interference.

APPROACH

The project will be implemented using a systems-based approach as depicted in the visual below:

DHS S&T would like to hear from stakeholders. If you are interested in participating or contributing your insight or expertise, contact us at the email below.