

Technology Improves Security, Risk Management at Borders

By Tom Moses

Border security and the ability to alert law enforcement when materials at the border present increased risk are of vital importance in protecting the nation against threats by terrorists. Technology can be used to provide the means to enhance communication and assist law enforcement in making more timely decisions to better manage risk in the field. An excellent example is the Automated Commercial Environment (ACE) electronic truck manifest system, now being implemented at land border crossings by the U.S. Bureau of Customs and Border Protection (CBP).

Under ACE, carriers are required to transmit cargo information to CBP before arriving at ports of entry. These E-manifests can be filed using an electronic transponder either by Electronic Data Interchange (EDI) or via the Internet, using the web-based ACE Secure Data Portal. In addition to improving border security, the ACE system is expected to reduce port processing time for carriers, reduce errors, and enable the storage of trip information, avoiding the need to enter the same data multiple times.

FMCSA has been working with CBP in the development and deployment of the ACE system and the International Trade Data System (ITDS), which is an information technology initiative to coordinate, standardize, and simplify border clearance and other international trade and transportation processes. ACE and ITDS work in tandem with FMCA's collected data systems to provide inspectors with fast access to safety and security information about carriers, trucks, drivers, and cargoes. FMCSA is the first non-Department of Homeland Security agency to participate in the ACE/ITDS program, which is designed to distinguish between safe and unsafe vehicles and drivers before they reach the border.

CBP began a staged phase-in of ACE in January 2007, initially making it mandatory at land border ports in Arizona, Washington, and eastern North Dakota. Currently, the requirement for E-manifests has been expanded to include California, Michigan, New Mexico, New York, and Texas. In August, Idaho and Montana will be added to the list. CBP reports that ACE is making electronic risk management far more effective. The ACE Secure Data Portal provides a single, centralized on-line access point to link CBP with other government agencies and the trade community to optimize the ever-increasing flow of legitimate trade while enhancing border security.

Even further enhancement of border security through the ACE system would be possible by integrating E-manifest data with an automated information-processing and communication system that has been developed to analyze electronic data and send real-time alerts when data patterns associated with risk are detected. The technology is an integral part of the Public Sector Reporting Center (PSRC), demonstrated in 2004 during the U.S. DOT's year-long Hazardous Material Safety and Security Field Operational Test of technologies to prevent trucks carrying hazardous materials from being used in terrorist attacks.

PSRC technology uses exception-based, rule-engine software to compare data patterns with programmed values in data tables, searching for matches that indicate an emergency or developing incident requiring an immediate response. Automated event messaging and

alert notification, as well as improved information sharing, would enhance homeland security.

The rule engine could be linked to specialized databases containing E-manifest data; government mapping data; public, private, and for-hire response resources; and other information accessed through a proprietary data structure. Alerts would be sent in the form of an e-mail, fax, page, telephone text, or voice message. A single event could deliver an unlimited number of customized messages to an unlimited number of organizations with a need to know.

Agencies and departments responsible for everything from screening and intelligence to interdiction and emergency response could benefit by the integration of ACE data and PSRC technology. CBP personnel would receive alerts directing them to high risk cargo crossing the border, while responders would be provided with the necessary information about public and private response resources automatically.

Integration of PSRC technology and electronic data from the ACE system and other government and private resources would significantly enhance homeland security at U.S. land border crossings and beyond in tracking trucks carrying hazardous materials. The PSRC concept was developed to create a standardized approach to data collection and dissemination to the police, fire, and other emergency services. In the event of a terrorist attack, it could enhance communication, response capabilities, and resource deployment for law enforcement and security agencies.

About the Author – Tom Moses is president of Spill Center®, a company he founded in 1990 to provide contingency planning, risk management, and other support services for shippers and transporters involved with hazardous materials. He is a toxicologist and an attorney specializing in chemical security and environmental and safety regulatory compliance. He holds a certificate in Hazardous Materials Control and Emergency Response from Georgia Institute of Technology, and he is a member of the American Chemical Society, American Assoc. for the Advancement of Science, and the Environmental Law Institute.