



# First Responder Support Tools (*FIRST*) Bomb Response

From 1978 through March 2010, the Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF) has investigated over 25,000 bombings and attempted bombings, more than 900 accidental explosions and more than 21,000 incidents involving recovered explosives or explosive devices. Each of these incidents required the on-scene commanders to quickly evaluate how to keep civilians and responders safe during the initial incident investigation and response. The DHS Office for Bombing Prevention distributes copies of the Bomb Threat Stand-off Card to the First Responder community to help responders establish safe evacuation distances from suspected bombs. However, these cards are only useful if the responders have the cards on-hand and are able to judge the stated distances appropriately. In addition, responders can't establish the evacuation perimeter unless they are able to communicate the location of the isolated area to various responding communities and personnel.

## About *FIRST* Bomb Response

*First Responder Support Tool (FIRST) Bomb Response* takes advantage of the ubiquity of smartphones, the familiarity people have in using their phone's inherent capabilities, and the ease of sharing information over a network to provide a simple, yet powerful bomb response tool. This application is available for the iPhone/iPad platforms, Android platforms, and Window PCs. *FIRST Bomb Response* works with the commercial application, HAZMAT Evac, to provide First Responder capabilities that seamlessly address evacuation responses for IEDs and HAZMAT spills.

*FIRST Bomb Response* does not focus on Bomb Squad activities, but rather focuses on first responder activities to control incident locations involving potential bombs. It provides standoff distances, rough damage and injury contours, and easy Points of Interest query capabilities that quickly shows areas of concern (e.g., schools, daycare centers, etc.) located within the incident stand-off zone. The application also provides access to roadblock optimization capabilities that suggests roadblocks to isolate an incident area. *FIRST Bomb Response*

uses Google Maps to display map and imagery for all supported platforms, which ensures all platforms display the same map and user functionality. It also allows you to easily distribute incident details and annotated map images by email or text message to ensure that responders with a need to know have the same information. In addition, *FIRST Bomb Response* provides IED and HAZMAT guidelines, reference information, and points of contact to call for questions and assistance.



## Core Benefits

The core benefits of *FIRST Bomb Response* are derived from the simplicity of the application (no training required), ease of integration in community systems and CONOPS (low cost with no special infrastructure), and

the ability to share map-based information (pictures are worth a thousand words). By automating evacuation calculations, displaying information on portable maps with a familiar user interface, and making information widely available to responders on a scene, *FIRST Bomb Response* provides the First Responder community with a dramatic increase in capability and efficiency.

**Reduced Human Error in Isolating Bomb Incidents** – By providing responders with a hand-held map of their specific incident area with evacuation zones, critical points of interest, and annotations, establishing the right evacuation area is easier and less error prone (i.e., no more “how far is 1900 feet?”).

**Shared Understanding Across Communities** – By using widely accessible capabilities and data, and sharing information by email or text messaging, responders can share information across command elements of police, bomb squads, fire departments, medical communities, emergency management centers, and political leaders at the local, state, and federal level as the responding needs dictate.

**Easily Accessible and Maintainable Data** – *FIRST Bomb Response* includes appropriate reference data to assist first responders in evaluating basic bomb stand-off criteria, points of contact to call for questions and assistance, and links to related organizations and important information for the First Responder community.

**Effective Without Network Connectivity** – First Responders can use *FIRST Bomb Response* without network connectivity. It allows you to save map data locally on the phone for use during incidents when you don’t have access to a network. It also provides stand-off distance and damage/injury contour text results as well as displayed on the map.

**Technical Assistance** – The project includes *FIRST Bomb Response* technical support on weekdays. The technical support access greatly improves the implementation of the application to ensure benefits of the program are shared across the US.

Initially targeted for bomb incidents, responders can use *FIRST Bomb Response* in almost any setting with a stationary public threat where protocol requires evacuation and isolation. *FIRST Bomb Response* is cost effective and dramatically improves responder situational awareness when they are required to coordinate a public evacuation. There are approximately 3000 bomb squad officers and over 200,000 first-line supervisors just with police and fire departments. *FIRST Bomb Response* software licenses for supported smartphone platforms will cost under \$10 per year and \$25 per year for Windows PCs. This provides a cost effective means for the First Responder community to conduct bomb incident response with the efficiency and safety the incidents require.

Applied Research Associates, Inc is currently developing *FIRST Bomb Response* with funding provided by the U.S. Department of Homeland Security Science and Technology Directorate (DHS S&T). The DHS Office of Bombing Prevention (DHS OBP) uses TRIPwire to control the program distribution and ensure that only authorized personnel can access these capabilities. The DHS-OBP, NABSCAB, and municipal bomb squad commanders are helping to design *FIRST Bomb Response* and heavily influence functionality requirements.

### **The Future of FIRST Bomb Response**

In August 2011, *FIRST Bomb Response* development and testing will be complete. All versions of *FIRST Bomb Response* (iPhone, Android, and Windows PC) will be available for use by September 2011. It will combine bomb response capabilities with existing HAZMAT spill evacuation capabilities to provide a comprehensive first responder evacuation and stand-off tool. DHS S&T will solicit feedback from the First Responder community regarding other useful incident scenarios that should be integrated with *FIRST Bomb Response*.

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