

## Bomb threat? An app for that, too

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The FiRST application will accommodate various smartphones. Credit: Courtesy of Applied Research Associates, Inc.

At approximately 6:30 pm on Saturday, May 1, 2010, a smoking SUV in Times Square was reported by alert street vendors. Acting quickly, NYPD evacuated vast stretches on 7th and 8th Avenues, including Broadway theatres and several other buildings and hotels in the area. The entire area was barricaded. Times Square on a Saturday evening before the shows is teeming with people, and the terrorist knew that. The bomb failed, but had it detonated, it would have killed and wounded many, according to NYPD.

In the first chaotic moments after suspicion of a bomb threat, first responders have a myriad of questions, assessments, and decisions to

make, all at once, and all the while the scene could be changing rapidly. Is the bomb real? How large is the potential blast radius? Where will we evacuate people? Are there any [critical infrastructure](#) or special-needs population centers in the vicinity? Any schools, hospitals nearby? What roads should be closed? Which roads should stay open for evacuees? And on and on...

What if they could get all this information in one place?

Now they can: The U.S. Department of Homeland Security's (DHS) Science and Technology Directorate (S&T) and its public and private sector partners have developed a must-have "app": the First Responder Support Tools (*FiRST*) for computers and smartphones.

The *FiRST* application was developed in partnership with the DHS National Protection and Programs Directorate's (NPPD) Office of Infrastructure Protection (IP) along with its Office for Bombing Prevention (OBP), and Applied Research Associates, Inc. (ARA). The *FiRST* app provides information directly to first responders on their smartphones or laptop computers in order to quickly define safe distances to cordon-off around a potential bomb location, calculate rough damage and injury contours, suggest appropriate roadblocks, determine when mandatory evacuation or shelter-in-place circumstances apply., and to identify nearby areas of particular concern: schools, hospitals, care centers. The application also provides the geospatial information regards to potential injury, glass, or structural damage impact area.

"That's why it works," said Christine Lee, *FiRST* program manager in S&T's First Responders Group. "Bomb threat scenarios do not reflect a one-size-fits-all approach, and this app allows users to customize information to help them make informed decisions for response."

The *FiRST* application also includes HAZMAT response information based on the Emergency Response Guidebook (ERG) which includes information on over 3,000 hazardous materials. In addition to providing health precautions and response guidance, *FiRST* also retrieves current and forecast weather to show downwind protection zones for over 600 materials that are inhalation hazards.

*FiRST* is available to first responders for a nominal fee (about \$12 for mobile devices and \$100 for Window PC version). The app will be of interest and applicable to anyone who might need to address a potential bomb or HAZMAT spill response, such as industry, HAZMAT transport, or security personnel. HAZMAT information is available to all users. Specifically defined DHS bomb standoff data is considered sensitive and is automatically made available to those that register the application with a .gov, .mil, or .us email address. Users without a .gov, .mil, or .us email address can be approved for access on a case-by-case basis in coordination with the Office of Bomb Protection. (However, any user can input into the app and define his own custom bomb and standoff distances, which might be applicable to certain jurisdictions and/or localities.)

The *FiRST* app uses services readily available with current smartphones: email, phone, Google Maps, Google Search, and weather and road network data. "We use existing hardware that responders are already familiar with because responders can't waste time navigating a complex interface during the chaos of an incident," said Carl Jerrett, ARA program manager. "No longer will they have to carry additional tools such as hard-copy blast standoff guidance cards, rulers, or maps." Sergeant Thomas Sharkey, the District of Columbia Metro Transit Police Bomb Squad Commander, said "Unlike other confusing software on desktop computers, this application is easy to purchase, easy to install, and even easier to use."

Once a first responder enters a general definition and location of the bomb or HAZMAT incident into the *FiRST* app, the results are instantaneous. They can run a roadblock analysis to identify which roads are best suited for closure in order to isolate a bomb threat within that specific region. Google Search features are available to identify and display locations where increased numbers of the public may be at potential risk. "*FiRST* allows responders to label a map with critical information, and this information not only helps first responders better understand an incident, but these maps can then be shared with other responders," said Jerrett. Users can quickly send results to colleagues via email, which includes a text summary, a map image, and GIS file attachments that are viewable in applications like Google Earth or WebEOC.

The *FiRST* app is available for iPhones and iPads, Androids, and Windows personal computers. The application is available for purchase at a nominal fee on iTunes, the Google Play, and ARA's e-commerce website (<http://www.ara.com/products/first>).

*FiRST* field evaluations were conducted last year by the Washington Metropolitan Area Transit Authority, bomb squad, police, EMT, firefighter, and hazmat units. United States Secret Service personnel observed the evaluations as well. After the application testing and evaluation phases were completed, Sharkey said, "This [app](#) is a must-have for bomb technicians and first responders."

**More information:** For more information on this technology, please visit [www.firstresponder.gov/Pages/F...\\_Details.aspx?SSID=23](http://www.firstresponder.gov/Pages/F..._Details.aspx?SSID=23)

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