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2016 First Responder Electronic Jamming Exercise



**Homeland
Security**

Science and Technology

THE ELECTRONIC JAMMING THREAT

First responders across the country face increased illegal jamming threats to GPS, radio, and wireless systems. These threats interfere with responder communications equipment and can compromise critical situational awareness. Although jammers are illegal to manufacture, import, market, sell, ship or operate in the United States, they are inexpensive and easy to obtain from foreign manufacturers. These illegal devices can delay emergency response times, escalate hazardous situations, result in loss of life, or facilitate illicit activities.

In 2015, the Department of Homeland Security (DHS) issued a joint bulletin with the Federal Communications Commission (FCC) condemning the deliberate interference of “operational channels commonly used by first responders” and the disruption of “vital communications or affecting emergency operations.”



A BETTER UNDERSTANDING OF JAMMING

The DHS Science and Technology Directorate (S&T) is proactively working towards identifying and combatting illegal jamming threats facing the first responder and federal law enforcement community. In July 2016, DHS S&T hosted the First Responder Electronic Jamming Exercise, a multi-agency operational exercise at the

White Sands Missile Range in New Mexico. The exercise assessed the impact of these threats on first responder communications systems and mission response, and identified gaps in training, techniques, and procedures.

Federal, state, and local first responder organizations from across the U.S. conducted emergency response scenarios during which deliberate jamming impacted some of their communications and navigation equipment. The exercise sought to better understand how jamming impedes responder systems, and to examine how responders recognize, react, and adapt to jamming.

The data collected was analyzed to:

- Identify vulnerabilities in our nation’s responder communications networks and determine solutions;
- Design jamming detection, identification, localization and mitigation technologies;
- Identify gaps in first responder training and provide recommendations to close them;
- Inform policy on resilient and redundant communications requirements; and
- Improve the ability of first responders to execute their missions in a jamming environment.

UNITY OF EFFORT

The DHS S&T First Responder Electronic Jamming Exercise hosted first responders from more than 40 federal, state, and local agencies, including the Federal Emergency Management Agency, U.S. Customs and Border Protection, U.S. Immigration and Customs Enforcement, U.S. Coast Guard, the FCC, the Los Angeles County Sheriff’s Department, the Harris County Texas Fire Marshall, and Office of Homeland Security and Emergency Management. Academic institutions and industry representatives also attended to provide subject matter expertise.

The 2016 First Responder Electronic Jamming Exercise After Action Report outlines results of the exercise, lessons learned, training recommendations, and mitigation strategies for first responders. The report is available to first responders and federal agencies on request to the [DHS website](#).

