

# CENTCOM, JFCOM TEST GUNSHOT LOCATION SYSTEM USING UAV SENSORS

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The United States has been testing an acoustic location system that cues an unmanned aerial vehicle sensor to find lurking enemies when they fire weapons, a technology that has existed for about 10 years but which U.S. Joint Forces Command says has become “ready for prime time” only in the last five years.

The ShotSpotter System, developed by ShotSpotter Inc. of Santa Clara, CA, is a gunshot location and detection system offering troops three layers of protection for soldiers, vehicles and fixed installations.

“And this can all be networked together to provide accurate gun and mortar shot location detection in real time,” said Ted Ferrazano, JFCOM’s director of joint battlespace awareness and ISR integration capability. He works in the command’s intelligence, surveillance and reconnaissance division.

The system also provides blue-force tracking capability that increases the visibility of soldiers in a given battlespace, Ferrazano added.

“ShotSpotter sends vitally important information on gunshot location to command and control centers, enabling the military to observe or take out the threat,” according to a company overview of the system found on its Web site. “ShotSpotter thus provides a critical element that is sorely lacking in current command and control systems.”

Ferrazano said that ShotSpotter is being tested in U.S. Central Command’s area of operations and is also undergoing experimentation by JFCOM.

JFCOM networks “dissimilar capabilities” in the field to “see what type of information superiority can result from this and what enhancements we can provide to the war fighters on the battlespace,” he said.

Individual military services are also testing ShotSpotter technology.

The Air Force’s 820th Security Group will be deploying “two flights’ worth of sensors with associated support gear,” Ferrazano said, adding that he cannot mention specific numbers.

The Army's Armament Research, Development and Engineering Center, which is working on acoustic gun detection issues for the service, did not respond to a reporter's calls by press time (June 6).

Initial CENTCOM results detailing ShotSpotter's use are not authorized to be released yet, defense officials say.

Apart from the military domain, the system also has made its way into the civilian world. Local law enforcement agencies in more than a dozen cities in the continental United States rely on ShotSpotter, as does the FBI.

Military testing has shown that ShotSpotter provides "layers of acoustic detection coverage such that you get accurate geo-locations of the shooter, say, 90 percent of the time," continued Ferrazano.

Since sound waves do bend and refract, ShotSpotter does not have 100 percent accurate detection capabilities, but improvements have been made, he said. For example, enhanced filters can weed out "organic sounds on the battlespace" unrelated to gunfire, such as rain in a jungle environment, he explained.

He said JFCOM also aims to integrate into the technology the ability to detect other "signatures," such as a muzzle flash emanated from weapons, and is collaborating with other companies that have expertise in muzzle flash technology.

The ShotSpotter system consists of sensors (a soldier-mounted unit costing \$5,000, or a vehicle-mounted or fixed unit averaging \$8,000), as well as a laptop computer pegged at \$3,500. --  
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