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## *News Release*

### **Defense Advanced Research Projects Agency**

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IMMEDIATE RELEASE

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#### **DARPA DEMONSTRATES AFFORDABLE MOVING SURFACE TARGET ENGAGEMENT USING JDAM WEAPON**

The Defense Advanced Research Projects Agency (DARPA) Affordable Moving Surface Target Engagement (AMSTE) program has for the first time demonstrated the ability to precisely engage moving surface targets with a modified Joint Direct Attack Munition (JDAM).

The JDAM precision-guided weapon has previously been used very effectively against fixed targets. AMSTE techniques and technologies will permit inventory weapons such as the JDAM to be employed in a new role to precisely engage moving surface threats.

On August 22, 2002, the AMSTE team successfully demonstrated the ability to track a moving target from long range and to use this tracking information to continuously redirect a JDAM weapon in flight to attack that target. This flight test was conducted at the Air Force test range at Eglin Air Force Base, Fla.. In the demonstration, real-time information on a moving target was developed from standoff radar sensors, and the resulting tracking data was relayed from a Joint STARS aircraft directly to a modified JDAM in flight. The modified JDAM consisted of a standard 2,000 pound inert bomb body with the standard JDAM tail kit modified to include a low-cost data link. The JDAM was released from an F-16 fighter at an altitude of 20,000 feet and was directed to a specific target moving in a column of traffic crossing the range at 18 miles per hour. The modified JDAM corrected its aim point continuously in flight and impacted well within the AMSTE-specified accuracy of 10 meters circular error probability (CEP).

“This flight test validates the AMSTE goal of modifying inventory unitary weapons, originally designed for the precision engagement of fixed targets, to provide a new capability for stand-off precision engagement of moving targets,” explains Stephen Welby, Deputy Director of the DARPA Information Exploitation Office. “An objective AMSTE system would allow multiple, networked weapons and sensors to precisely track, target and destroy high-value, moving, surface targets in real-time. This is a powerful transformational capability for U.S. warfighters. AMSTE provides the technology to permit the accurate delivery of low-cost, precision-guided munitions from long range with the potential to eliminate the sanctuary of movement for our enemies.”

Additional AMSTE weapon demonstrations will continue this September, when the AMSTE team will attempt more complex moving target engagement scenarios at the Naval Weapons Center, China Lake, Calif. These flight experiments intend to demonstrate multiple, simultaneous JDAM weapon deliveries and integrate AMSTE technologies with the Joint Stand-

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off Weapon (JSOW). Future tests will present more challenging target scenarios and will assess the ability of feature-aided tracking tools to support long-term track maintenance for high-value targets throughout the targeting cycle.

DARPA's AMSTE program is developing a network-centric targeting approach that will couple standoff airborne radar sensors and low-cost weapons in a real-time engagement network. Under the AMSTE approach, data from multiple airborne ground moving target indicator (GMTI) radar sensors are fused to provide weapons with real-time target position updates while in-flight. AMSTE will provide a new strike capability to engage moving surface threats from standoff ranges, in all weathers, using affordable, precision-guided munitions.

The AMSTE program is funded by DARPA and managed by DARPA and the Air Force Research Laboratory, Rome, N.Y. Development of the AMSTE demonstration system was led by Northrop Grumman Integrated Systems Sector, Melbourne Fla., with JDAM weapon subcontract support from Boeing Phantom Works, St Louis Mo., and data link subcontract support for Raytheon, Tucson, Ariz.

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