

SBIR 06.2 PHASE I - AWARD DETAILS

ORGANIZATION	ARDEC
TOPIC NUMBER	A06-043
CONTRACT NUMBER	
YEAR OF AWARD	
AWARD START DATE	
AWARD COMPLETION DATE	
PROPOSAL NUMBER	A062-043-0644
TITLE	Automated Target Hand-Off for Sensor to Shooter (ATHOSS)
PROJECT MANAGER	Ken Graves (858) 618-1060 kgraves@chisystems.com
COMPANY	CHI Systems, Inc. 1035 Virginia Drive Suite 300 Fort Washington PA 19034-3107 Minority Owned: No Woman Owned: No Veteran Owned: No Number of Employees: 131
KEYWORDS	Target handoff, Weapon-target pairing, Object-oriented programming, Sensor to shooter, Software Reuse
ABSTRACT	<p>Unmanned Systems (UMS) will pervade the future force battlespace and work closely with humans in the joint targeting environment. The US Army ARDEC has developed the concept of a joint manned-unmanned system team (JMUST), for which target handoff between humans and UMS working together in a small team is of critical importance. Human to human, human to armed UMS, UMS to human, and UMS to UMS target handoff operations are all required in this concept. This is a ground-breaking program in terms of implementation of advanced concepts for human-UMS teaming in combat operations, but target handoff remains a manual operation. In order for JMUST to be successful, it must demonstrate fully automated, high speed target handoff between humans and UMS, and vice versa. CHI Systems will design, prototype, and demonstrate an ATHOSS prototype that can perform extremely fast automated target selection, weapon-target pairing, target handoff and sensor to shooter communications link selection. The goal is to perform target identification, target submission to a fires and effects network, weapon target pairing, shooter assignment, and establishment of the sensor to shooter communications link in less than 10 seconds. This component will be portable for use in multiple future force targeting software architectures.</p>

BENEFITS

Full implementation of ATHOSS will provide a highly leveragable and previously unavailable ability to perform automated target handoff. Both the Future Force Warrior (FFW) program and Special Operations Forces (SOF) need this capability; ATHOSS will be optimally placed for insertion into the FFW program and for early transition with SOF. The technology to be developed is a critical technology which has immediate commercial applications in the Homeland Security, Police, Border Patrol, Prisons, and Drug Interdiction domains, all of which have aspects of target handoff. The Border Patrol and California Department of Corrections provide the most lucrative near term transition opportunity, as we already have existing marketing relationships with these agencies. This market is estimated at \$200 million over the next 5 years.