

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	A062-043-2342
TITLE	Intelligent Remotely Controlled Weapon Station with Automated Target Hand-off
PROJECT MANAGER	Ching-Fang Lin (805) 582-0582 cflin@americangnc.com
COMPANY	American GNC Corporation 888 Easy Street Simi Valley CA 93065 Minority Owned: Yes Woman Owned: No Veteran Owned: No Number of Employees: 25
KEYWORDS	Remotely Controlled Weapon Station, Gun Turret, Automated Target Hand-Off, Shooter Detection, Closed-loop Control, Inertial Stabilization, C3/C4 Systems, Evaluation and Demonstration
ABSTRACT	<p>The objective of this project is to demonstrate an innovative Intelligent Remotely Controlled Weapon Station with automated target hand-off. The purpose of the Remotely Controlled Weapon Station is to get the gunner out of the turret where he is exposed to enemy fire and fragments, and position him inside the vehicle for protection. A Shooter Detection System is used with the Weapon Station which can determine the position of the shooter and hand off the target to the fire control system by reporting the shooter's position to the local Intelligent Remotely Controlled Weapon Station. This is an automated hand-off situation for an individual unit of the Intelligent Remotely Controlled Weapon Station with a Shooter Detection System. Furthermore, multiple units of the Intelligent Remotely Controlled Weapon Station with a Shooter Detection System can be networked by an RF data link and they can also be linked to the CDAS and/or other C3/C4 systems centers for battlefield awareness enhancements, decision aiding and coordinated fire control. The target acquired by a unit can be handed off to other units or C3/C4 systems centers. In this way a powerful distributed fire control system is established.</p>
BENEFITS	Because of its small size, low cost, and light weight, the Intelligent Remotely Controlled system has wide applications in large telescope system control, pointing, and vibration isolation applications. Examples include: optical pointing stabilization control, telescope pointing for imaging and optical communication, airborne laser pointing control, and vehicle control and guidance.