

ARGUS Robotics: IED Detection and Removal



Current problem: As the techniques being used to place Improvised Explosive Devices (IEDs) are evolving, there is emerging a growing need for a system capable of remotely removing rubble, which might be covering/concealing these devices. The small Unmanned Ground Vehicles (SUGVs) currently being used are often not capable of removing the rubble due to the size and weight of the rubble material.

Current Solution: In order to meet the emerging threat the DOD awarded a contract to improve an existing commercial design. Using a Commercial-on-the-Shelf (COTS) vehicle and developing the necessary unmanned system control, a set of vehicles were made that exceeded all Key Point Parameters (KPP) criteria with 100% operational usage. In addition, the ease that other secondary sensor systems can be quickly mounted allows the design to quickly be adapted for a wide range of uses.

Benefit: The COTS vehicles are designed for attachment to a HMMWV without the need for a trailer, towed into position, quickly removed, sent into a potential site, remove debris and/or dig down to expose the IED, then return to the operators position to allow proper disposal of the IED. This can be done at a distance exceeding 500 meters, with time measured in minutes. In addition, such a design has a set of manual controls so that the vehicle can be used as a construction vehicle to assist Engineering Groups.

Group	Use	Availability	Cross Reference	Technical reference	Price
Military	Primary	120 days	A1, A3, A3a, A4, A5, A6, A7, A8	B1, B2, B3	\$75,000
Construction	Primary				
Industrial Mining	Secondary				
Homeland Security	Secondary				

U.S. Patent Nos. 7,267,354, 7,275,459, 7,565,941, and Patents Pending.

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