

Introducing CRG's MuST-3D (Multi-Sensory Detection, Deterrence, and De-escalation) System

MuST-3D is a non-lethal deterrence solution that discourages civilians and bystanders from interfering with operations of manned and unmanned platforms. MuST-3D's machine learning (ML) and artificial intelligence (AI) software translates sensor data into action through the following steps:

1. Human detection, tracking, localization, and path prediction
2. Threat estimation and deterrence decision
3. Non-lethal deterrent actuation

The detection sub-system uses LiDAR sensor(s) to detect and track pedestrians. The deterrence sub-system is comprised of non-lethal effects used to deter pedestrians and maintain a standoff distance when triggered. MuST-3D automatically senses the level of threat and responds with the appropriate level of non-lethal force. Bridging the gap between detection and deterrence is an AI-enabled decision-making algorithm.

The MuST-3D system prevents a local populace from interfering with ground vehicles with the following features:



Machine Learning

The pedestrian detection/tracking system is powered by a deep learning-based computer vision algorithm



Flexible Modular Design

Adaptable to different vehicles and use-cases and is capable of using various deterrence mechanisms



Future Integration Potential

Integrates into existing manned and unmanned systems and can use on-board sensors for detection/ tracking



Manual/Automatic Modes

Operator can choose between using the system in manual, semi-automatic, and automatic modes



Non-lethal Deterrence

The system estimates a threat level and actuates an appropriate level of non-lethal force to maintain standoff distance



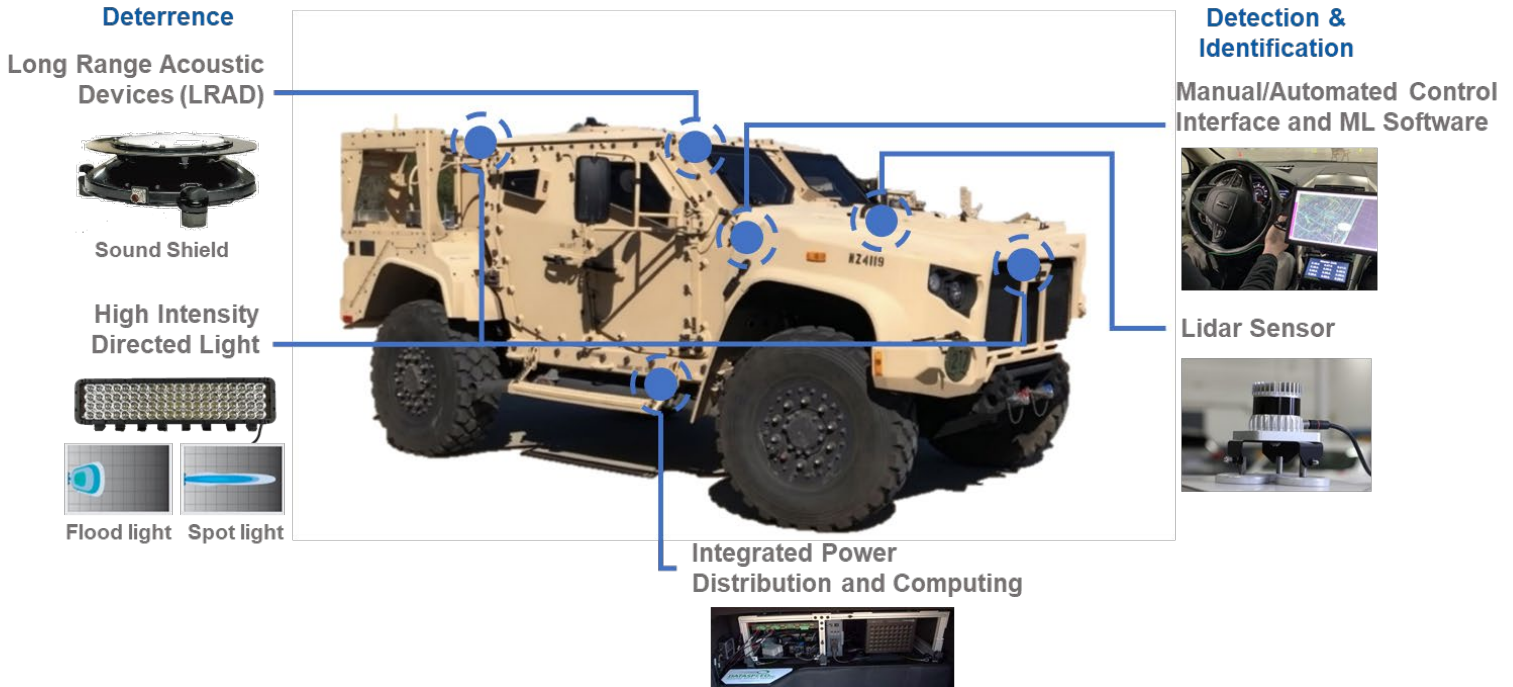
Low Cost & Complexity

Leveraging COTS components and existing technology will provide an economically friendly solution

PATENT PENDING

Detect, Identify, and Deter Bystander Interference

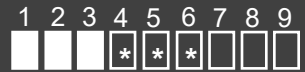
via sensors, Artificial Intelligence algorithms, and directed high intensity light or acoustic devices



Multi-Sensory Tactical Detection, Deterrence, and De-escalation System Status:



Technology Readiness Level:



Manufacturing Readiness Level:



*TRL/ MRL Phase II Goal

Interested in learning more about CRG's technology?
Contact us at sales@crgrp.com

