UGVs in the Fight – Making a Difference

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Mission

Lead the development, systems engineering, integration, acquisition, testing, fielding, sustainment and improvement of unmanned systems for the Joint Warfighter to ensure safe, effective and supportable capabilities are provided while meeting cost, schedule and performance.

Vision

Continuous improvement of unmanned system capabilities to meet current and future Joint Warfighter objectives.
Evolution of Ground Robotics in Combat

- Sustainment, Modernization, Interoperability and Modularity

2004
162 systems
- No single vendor could produce 162
- 5 vendors, multiple configurations
- Joint effort, EOD focused

2005
1800 systems
- Robot’s proven ability to save lives
- Expansion beyond EOD mission (Countermine, Security)
- Agreements w/ AMC and REF

2006
4000 systems
- Engineers and Infantry
- Route clearance, Explosive detection & Weaponization development

2007
5000 systems
- Special Forces robot applications assessed
- Route clearance, Explosive detection & Weaponization on battlefield

2008
6000 systems
- Maneuver elements
- Range extension
- CBRNE detection
- Persistent surveillance
- RC HMMWV
- More capable payloads

2009-2010
7000 systems
- Military Police
- Smaller platforms
- Enhanced battery life
- Commonality
- Remote deploy
- More capable payloads

2011-
Future
- Interoperability
- ‘Plug & play’ capabilities
- Limited autonomy
- Weaponization
- Increased agility and dexterity

Almost one third of robots issued to units in 2009-2010 went to units other than EOD and Combat Engineers.
Robots Currently in Combat

- **Mini-EOD (SUGV-310)** (~400)
- **TALON Family** (~1000)
- **PackBot Family** (~1100)
- **MARCBot** (~350)
- **SUGV XM1216 w/Tether** (38)
- **M160** (45)
Joint Robotics Repair Detachment – Afghanistan

Program Executive Office Ground Combat Systems
PEO Mr. Scott Davis

Marine Corps Systems Command
BGen Frank L. Kelly
USMC

Robotic Systems Joint Project Office
PM LtCol David Thompson
USMC

Warren, MI
Quantico, VA

Warren, MI

Map of Afghanistan with cities highlighted:
- Bagram
- Mazar-e-Sharif
- Leatherneck
- Sharana
- Kandahar

Distribute
Repair
Train

October 2011
Unmanned Ground Systems Roadmap
July 2011

- RSJPO Organization
- Technology Needs/Enablers
- Modernization Strategy
- Systems/Programs Portfolio
- Technology Needs
UGV Emerging Requirements

- **Autonomous Mobility Appliqué System (AMAS)**
  - Add-on appliqué system to virtually any manned vehicle (Joint)
  - Requirement Document in staffing
  - Joint Capability Technology Demonstration approved

- **Squad Multi-Purpose Equipment Transport (SMET)**
  - Semi-autonomous utility/cargo platform (USA)
  - Requirement Document in staffing

- **Engineer Squad Robot (ESR)**
  - Man-portable, lightweight robot (USMC)
  - Requirement Document Approved

- ** Throwable/Ultra Light Recon Robot (ULRR)**
  - Under 10 lb robot (JIEDDO, USMC, REF)
  - Requirement Document Approved/Funded

- **Tactical Robot Controller (TRC)**
  - “Common Controller” (USMC)
  - Requirement Document in staffing
Way Ahead/Opportunities for Small Business

• Interoperability and Commonality goals
  ➢ Interoperability profiles – industry participation
  ➢ Promotes modularity
  ➢ Promotes competition
  ➢ Reduces logistics burden

• Partnering between Defense and Industry
  ➢ NDIA, AUVSI, Robotic Technology Consortium

• Next Major Contract Actions
  ➢ ESR, ULRR
Any Questions?