Army Robotics at the Tactical Edge

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Army Robotics Outlook

- FY20 is an exciting time to be in the business of Army Robotics
  - Approved Requirements for Robotic System Fielding
  - Increased Funding of Robotics Research and Acquisition
  - Significant Senior Leader Support of Robotics and Artificial Intelligence (AI)
- Robotic Requirements Mission - Manage Army Futures Command level activities to include requirements generation, force modernization, industry engagement, and concept development for robotics, autonomy, and AI
- Vision - Enable Army Formations to increase their lethality, endurance, persistence, protection, and depth

Robotic Capability Development

Ground Systems

- Small Multipurpose Equipment Transport – FUE 1QTR21
- Common Robotic System – Individual – FUE 4QTR20
- Robotic Combat Vehicle – Support to NGCV-CFT
- Exoskeleton, Family of Integrated Tactical Sensors (FITS) and SMET Modular Mission Payloads – Requirements

Air Systems

- Small Unmanned Aircraft System (SUAS) Strategy
- Soldier Borne Sensor (SBS) – Fielding now
- Short Range Recon (SRR) – FUE 4QTR20
- Medium Range Recon (MRR) (Raven) – In Sustainment
- Long Range Recon (LRR) – RDTE Funded

Overarching Systems

- C-SUAS – Requirement 3QTR20
- Universal Robotic Controller – Analysis of Alternatives
- AI for Small Unit Maneuver – Requirement 2QTR21

Robotics Strategy

Near-term / Fielded Force (2020-2024):

- Execute 10x Robotic and AI Infantry Platoon Tech Demo
- Insert Soldier Operated Robotics: SBS; SMET; CRS(I); SRR
- Mature capabilities for LRR; URC; C-SUAS; Exoskeleton; FITS
- Support NGCV CFT's Robotic Combat Vehicle (RCV)
- Support Soldier Lethality CFT with Robotics and AI
- Drive RDTE for Network; Autonomy; AI; Power and Energy

Mid-term / JADO Capable Force (2024-2028):

- More effective maneuver formations (>1x)
- Field integrated interim robotic capabilities supported by AI
- Develop and field small, light, inexpensive, expendable, highly lethal and non-lethal Robotic systems to enhance maneuver formations
- Field RCV Light

Far-term / JADO Ready Force (2028-2035):

- Significantly more effective maneuver formations (>10x)
- Field integrated persistent air and ground robotic capabilities operated by an open architecture AI cloud commanded by Soldiers
- Field RCV Medium/Heavy

10x Robotic and AI Dismounted Infantry Platoon Tech Demo

- Demonstration of a robotically equipped dismounted Infantry Platoon that is measurably more effective with a goal of 10 times more effective. Infantry Platoons will integrate - through Manned-Unmanned Teaming (MUMT) – prototype robotic ground, air, water, and virtual systems that increase the Infantry Platoon's lethality, mobility, protection, situational awareness, endurance, persistence, and depth.

- Demonstration of prototype Artificial Intelligence (AI) tools that show a path to enabling Platoon leaders and Soldiers to observe, orient, decide, and act (OODA loop) faster than their current capability with a goal of 10 times faster. AI tools will take disparate streams of information from organic robotic and Soldier worn sensors with higher echelon mission command, intelligence, and sensors. AI tools will then weave those streams of information into a coherent picture and provide that picture to Soldiers. Soldiers will then use AI tools to command effectors on robotic systems.