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## Objectives

- Extend the reach of the Warfighter unit (execute operations in hostile or inaccessible areas, provide long-term situational awareness without endangering Warfighters, project unmanned assets over long distances)
- Demonstrate the feasibility of integrating unmanned air and ground systems into an operational functional capability:
  - Highlight the extended range of utilizing unmanned platforms communicating over a wireless network
  - Initiate and remotely operate the integrated CBRN sensors on an autonomously navigated UGV
  - Send CBRN detection alarms to a remote UGV operator command center

## Schedule

- May 2015: Project start
- Jun-Sep 2015: Sensor integration, system test/function check, demonstration planning
- Oct 2015: Demonstration execution (Sikorsky Development Flight Center, West Palm Beach, FL)
- Nov-Dec 2015: Project reporting and closeout

## Stakeholders

- Defense Threat Reduction Agency Joint Science and Technology Office (DTRA JSTO): Project Sponsor
- U.S. Army Edgewood Chemical Biological Center (ECBC): Project Management, CBRN Sensor Integration
- U.S. Army Tank Automotive Research, Development and Engineering Center (TARDEC): UGV Mission Oversight
- U.S. Army Aviation and Missile Research, Development and Engineering Center (AMRDEC): UAV Mission Oversight
- National Robotics Engineering Center (NREC): UGV and Sensor Integration, Autonomous System Development
- Multiple Organizations in the User/Acquisition Community

## CBRN Sensor Package

**Joint Chemical Agent Detector (JCAD):** Chemical Warfare Agent (CWA) and Toxic Industrial Chemical (TIC) vapor detector



**Tactical Biological (TACBIO) Detector Gen II:** Biological aerosol detector



**AN/UDR-14:** Radiation dose detector (neutron, gamma)



**Sorbent Tube Sampling System:** Chemical sample collector

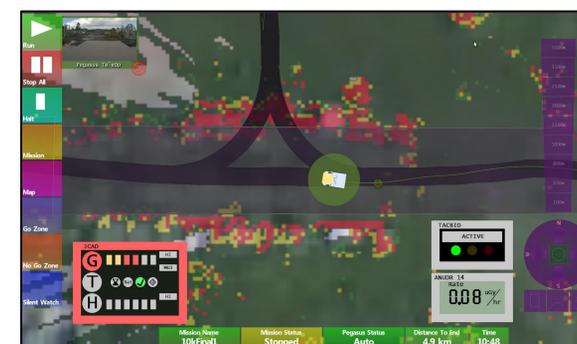


## recTamer UGV



Integrated Sensors

## Operator Display



## Unmanned Aerial Vehicle (UAV) Blackhawk Helicopter

