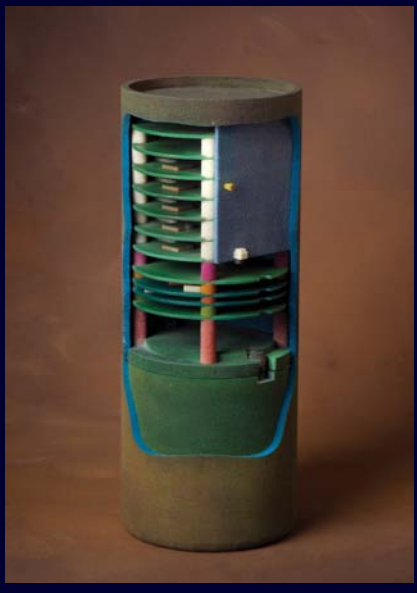
WolfPack

Unattended Ground Sensors in the RF Domain



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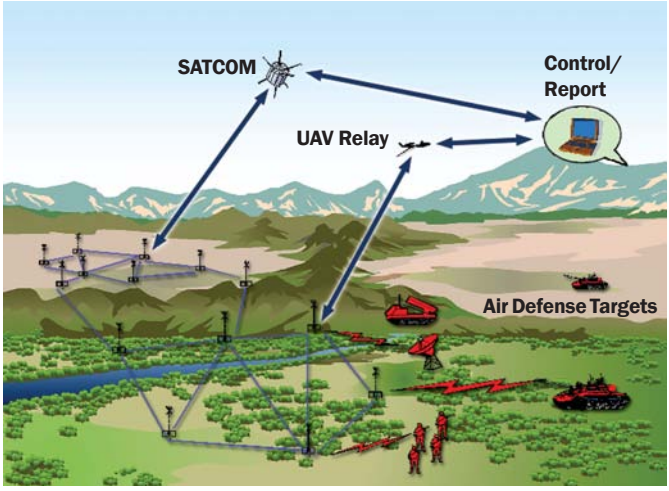
Mission Utility

The DARPA WolfPack program will provide the commander with round-the-clock all-weather RF situation awareness and precision targeting of high value time critical targets.

WolfPack is a complete end-to-end system consisting of remote sensors, advanced detection, tracking and jamming algorithms, and controller workstation, capable of integration into a larger C4I system.



Air Deployed or Ground Emplaced

Fully Autonomous once Deployed

Self-Organizing and Self-Locating

System Configuration

The WolfPack consists of six to ten Wolves, with each ground sensor independently collecting COMINT/ELINT information and intelligently sharing this information to create a battle picture. Close location to threat emitters permits detection of very low power signals.

The Wolf

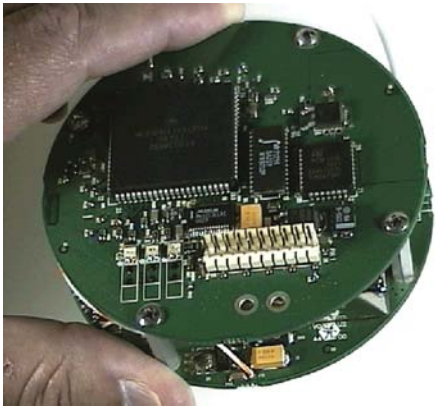
- Homogeneous design; all wolves can perform complete mission
- Intelligent scan patterns to provide efficient gathering of RF information
- Sharing of data within the Pack permits accurate geolocation of stationary and moving emitters
- Capable of versatile adaptation to new signals

The Network

- EOB exfiltration provides commander with real-time situation awareness
- Two-way interface permits commander to update the Wolfpack mission objectives

Controller Workstation

- Pre-deployment planning tool uses maps and terrain data for mission planning
- Modeling and simulation tool provides optimal WolfPack location for threats/terrain
- Message and report generation tool for situation and targeting information relay



Advanced Application of Commercially Available Components for Low Cost and High Performance

System Operation

WolfPack has been designed for mission versatility. Mission lifetime, target detection and tracking parameters, and deployment scenarios are all designed to support current doctrine and fielded system capabilities.

Operational Parameters

- 60-day mission lifetime
- Programmable sleep cycles
- Covers 30 MHz to 20 GHz in RF spectrum, providing both communication and radar signals processing
- Target location ~10m CEP

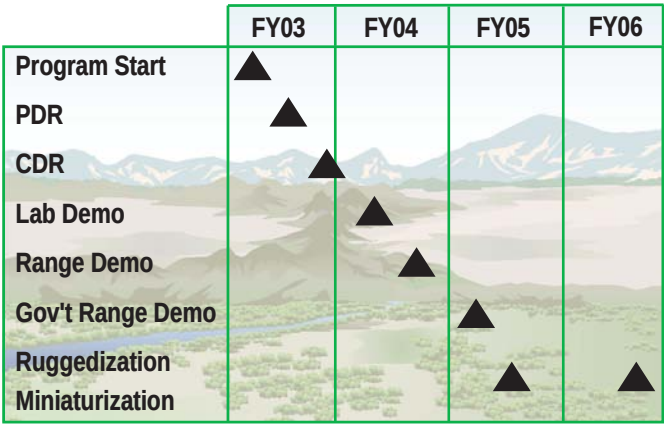
WolfPack Provides Precision Geolocation, Tracking, and Identification of Time Critical Targets

Benefit to the Warfighter

Rapid success on the battlefield in future military operations will be dependent on timely robust surveillance and precision targeting capabilities.

Unattended Ground Sensors (UGS) can provide affordable high quality information to enhance maneuver, targeting, and force protection. UGS also provide adjunct sensor capabilities for other battlefield sensor assets such as UAVs which may be limited by weather, terrain or on-station endurance.

Program Schedule



Future Plans

The modular scaleable design of WolfPack enables future growth to add capabilities while reducing size, weight, and cost.

- Enhanced frequency coverage
- Enhanced modern signals capability
- UAV and UGV deployment
- Cooperative sensing with non-WolfPack sensors
- Fuel Cell and Solar Power Technology

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