



Aerial Canopy Sensor Delivery System (ACSDS)

Aerial Canopy Sensor Delivery System (ACSDS), is currently a Phase II Small Business Innovative Research (SBIR) prototype effort that will demonstrate the feasibility of applying a highly robust air deliverable sensor and communications package to the needs of today's warfighter while featuring interoperable networks and protocols that will ensure its seamless adaptation in future weapons systems. The ACSDS prototype will demonstrate: long duration power management, configurable payload, and a mechanical deployment package. Planned Phase II investigations will also evaluate concepts to expand the utility of the ACSDS approach to include other payloads (e.g. I/R , Mag, Env, radio relay) and deployment scenarios that will be important to use in non-canopy areas like grassland, desert, and urban environments (i.e. hand emplaced).

Benefits and Application

- **ACSDS** is a deployable remote monitoring system, deployed from a helicopter or by a Tactical Unmanned Aerial Vehicle (TUAV) that allows real-time Battlefield intelligence gathering, situational awareness, and precision targeting without risk of personnel loss.
- The **ACSDS** is designed to be interoperable with the Remote Battlefield Sensor System (REMBASS), Prophet (Block IV), and the Army's Future Combat System (FCS) using the Network Full Spectrum Sensors (NFSS) Specification.
- The work being conducted by Progeny Systems Corporation. investigates a cost effective, high performance approach to **ACSDS** by designing flexibility of signal processing capabilities, sensor packages, deployment options and RF communication links, into the early stages of the architecture.
- Anticipated real-world applications:
 - Prophet REMBASS II, PATHFINDER, SILENT WARRIOR, and FCS Missions
 - Special Operations (SPECOPS)/ Combat Search and Rescue (CSAR)/ Time Critical Strike
 - Counterterrorism/Border Patrol/ Counter Drug Operations
 - Early Warning/Area Denial/Anti-Terrorist/Force Protection
 - Sanction Monitoring/Facilities Protection



For more information about Progeny Systems or the Aerial Canopy Sensor Delivery System:

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ACSDS Mission

- The primary mission of the ACSDS is to provide the Special Operations Force (SOF) operator with a new capability that significantly improves the warfighters situational awareness and tactical understanding by:
 - performing deep deployment of small expendable packages, especially in multiple-canopy jungle and areas that are impossible to reach otherwise or present unacceptable risk to the human operator
 - providing time-critical information from a configurable network of deployed sensors that can be rapidly deployed
- The mission can be extended to other DoD and non-DoD applications including facility perimeter defense, air and land boarder monitoring, intelligence operations, etc..

