

Spider

INVESTMENT COMPONENT

Modernization

Recapitalization

Maintenance

MISSION

Provides the commander with a new capability to shape the battlefield, protect the force, and respond to changing battlefield environments in a graduated manner while minimizing risk to friendly troops and non-combatants.

DESCRIPTION

Anti-Personnel Landmine Alternatives (APL/A) Track I (Spider) is a hand-emplaced, remotely-controlled, Man-in-the-Loop (MITL), anti-personnel munition system. Spider provides munition field effectiveness, but does so without residual life-threatening risks after hostilities end. The fielding of this system with its sensors, communications, and munitions changes the way Soldiers operate in an otherwise unpredictable battlefield. Each munition is controlled by a remotely stationed Soldier who monitors its sensors, allowing for more precise (non-lethal to lethal) responses—a significant advancement and advantage. The Spider Networked Munitions System enables MITL to detect, track, classify, count, and destroy the enemy.

The Spider system contains three main components: the remote control unit, residing within a computer interface; the repeater, extending the remote control range; and a munition control unit for sending and receiving commands as well as activating the munitions. Spider can be used as a force-protection-reinforcing obstacle to delay, disrupt, and channel enemy forces as well as restrict their use of critical routes of terrain, thereby reducing civil casualties and the exposure of personnel to hostile fire. It can also be integrated into a base defense system, providing protection to soldiers in forward operating bases and combat outposts.

The system's design allows for safe, flexible, and rapid deployment, reinforcement, and recovery as well as safe passage of friendly forces. Spider eliminates the possibility of an unintended detonation through early warning and selective engagement of enemy forces, and has a self-destruct capability. Spider is designed for storage, transport, rough handling, and use in worldwide military environments.

SYSTEM INTERDEPENDENCIES

Other Major Interdependencies

Interface with Tactical Internet through Force XXI Battle Command Brigade-and-Below and obstacle positioning through Global Positioning System

PROGRAM STATUS

- **2QFY09:** Fielding of urgent materiel release hardware to Operation Enduring Freedom
- **1QFY10:** Award contract modification to procure up to an additional 70 systems

PROJECTED ACTIVITIES

- **1QFY11:** Materiel release/type classification standard
- **1QFY11:** Full-rate production decision
- **3QFY11:** Full-rate production contract award

ACQUISITION PHASE

Technology Development

Engineering & Manufacturing Development

Production & Deployment

Operations & Support

Spider

Remote Control Unit - RCU
Enables Man-in-the-Loop (MITL) command and control of all munitions in the field



Transceiver
RCU with transceiver (RCUT) makes up the Remote Control Station (RCS)

Standard antenna mast or SCE VHAM

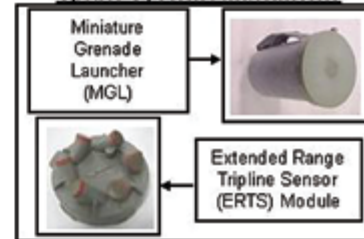
Munition Control Unit – MCU
Hand emplaced, remotely controlled munitions. Detects intrusions, controls lethal and non-lethal munitions



Repeater
Provides for extended Range and/or to Overcome difficult terrain



Spider System Attachments



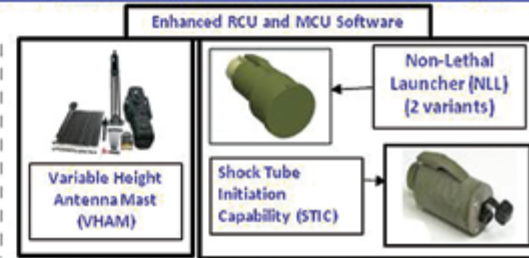
Additional Spider System Hardware



SCE Added Hardware/ Modified Software / Enhanced Capability

System Capabilities

- Self-Destruct & Self Deactivate
- Command Reset/Recycle Self-Destruct
- Transfer of Control
- Interface to ABCS via removable media
- Command Destruction
- ON-OFF-ON (safe passage/maint.)
- Multiple Effects (Lethal / NL / Demo)
- Intrusion Detection
- Anto-tamper/Self Protection
- Reuse



FOREIGN MILITARY SALES

None

CONTRACTORS

Prime:

Textron Defense Systems
(Wilmington, MA)

Alliant Techsystems (Plymouth, MN)

Subcontractors:

Alliant Techsystems (Rocket Center, WV)

BAE Systems/Holston (Kingsport, TN)

American Ordnance (Milan, TN)

