Briefing on Networked Munitions

Mine Alternatives

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Networked Munition

Working Definition

- A munition employed in a tactical or protective obstacle to shape terrain, function as a force multiplier and enhance force protection, and controlled by a man-in-the-loop (MITL). Anti-personnel and anti-vehicle networked munitions have scalable (non-lethal to lethal) effects and can only be detonated by the operator.
Spider System Overview

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

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

Standard antenna mast

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

Repeater
Provides for extended range and/or to overcome difficult terrain

System Capabilities

- ON – OFF – ON (safe passage/maint.)
- Multiple Effects (Lethal / NL / Demo)
- Surveillance… tripwire sensors
- Reusable/Reloadable
- Control via Line-of-Sight radio signals

- Self Destruct & Self Deactivate
- Command Reset/Recycle Self Destruct
- Transfer of Control
- Interface to Battle Command System
- Command Destruction
Scorpion System Overview

System Capabilities

- Self-Destruct & Self-Deactivate
- ON-OFF-ON
- Transfer of Control
- Interface to battle command system
- Recoverable/Re-usable
- 30 day operational life
- Multiple Dispenser Modules create larger fields

CONCEPT

Control Station

Modular Components

Battery Module

Effects

Electronics Module

Sensors

Not currently in development

1500-3800 m

Effects

Modular Components

Control Station
Networked Munitions Challenges

- Detection of personnel and response times
- Multiple sensors cueing warheads
- Power requirements/management
- Secure and reliable communications
- On – Off – On reliability
- Reusable
- Affordability