

Negating Explosive Hazards through the use of Explosive Ordnance Disposal (EOD) Guns, Ammunition, Rockets and Missiles (GARM) Unconventional and Emerging Armament Systems (UEA)

Future Force Capabilities Conference
20 September 2022

COL Russell Hoff

Project Manager, Close Combat Systems

(973) 724-7041

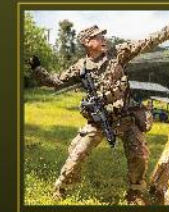
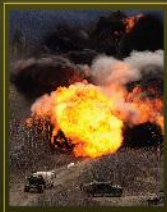
russell.v.hoff.mil@army.mil

Michael Burke (Actg)

Product Director, Demolitions and Countermeasures

(973) 724-5241

michael.j.burke134.civ@army.mil



(U) Team PM CCS



ON **EVERY**
MISSION

- **Manage 44% of the Army's conventional munition lethality**
- **384 products: 316 Class V, 59 Class VII & 9 RDT&E**
- **Average 60 Contracting Actions/Year**
- **Oldest PMO in the US Army, 1961 "PM-Selected Ammunition"**



Mission

Provide dominant and innovative lethal and protective capabilities for the Joint Warfighter through acquisition excellence

Vision

Skilled innovative team, empowered to deliver dominating close combat capabilities

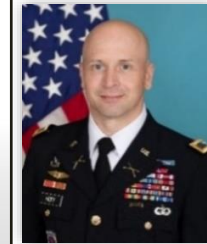
(U) Team PM CCS



ON EVERY MISSION

Provide dominant and innovative lethal and protective capabilities for the Joint Warfighter through acquisition excellence

ON EVERY MISSION



Project Manager
COL Russell Hoff



Deputy PM
Joe Pelino



Business Division Manager
Anita Polesky



Chief, Product Support
Fred Willecke



Director, Program Integration & International Division
Michael O'Grady (Actg)



Manager, Technology Management Division
Rob Dressel (Actg)

**Product Manager
Terrain Shaping Obstacles**



Product Manager
LTC Isaac Cuthbertson



Deputy PdM
Frank Altamura

Asst Product Manager(s)
MAJ Manuel Macias

Branch Chiefs
XM343 SAVO: Sean Stevens
TAC2: Eli Vainchenker

**Product Director
Combat Armaments & Protection Systems**



Product Director
David Millette



Deputy PD
Don Palathinkal

Asst Product Manager
MAJ John Pfromm
G&PS Branch Chief
Tinesha Nicholas

Team Leads
Shoulder Launched: Aza Villar (Actg)
Grenades: Hugh MacMillan
Protection Systems: Derek DeReiter

**Product Director
Demolitions & Countermeasures**



Product Director
Michael Burke (Actg)



Deputy PD
Stephen McFarlane (Actg)

Asst Product Manager
MAJ Thomas Fite

Branch Chiefs
Pyrotechnics: Harvard Yuen
Demolitions: Phillip Lawson



Sustainment

0-5 Years FUE

5+ Years FUE

Current Products



MICLIC



M67 Grenade



APOBS



RF RAMS



Acoustic Hailing Device



Simulators



VOLCANO



AT4-TW



Countermeasure Flares



AN/PSS-14C

Product Concepts

• Program Manager Top S&T Priorities

- ✓ Breaching
- ✓ Robotic Payloads
- ✓ Denial Technologies



Explosive Breacher



CTSO



Improved EOD Robotic Payloads



Solid State Active Denial Technologies

New Products

- Individual Assault Munitions
- Close Terrain Shaping Obstacles
- Explosive Detection



XM919 - IAM



M111 - Offensive Hand Grenade



XM343 Standoff Activated Volcano Obstacle



XM20/XM215

EOD Tool and Equipment Kit (EOTEK)



X-Ray Imager, COTS



X-Ray Generator, COTS



Dismounted Operations Protection, GOTS



Trace Detection, COTS



Low Light Visual Augmentation System, COTS



Buried IED Detection, COTS



Render Safe Initiation, COTS



Gamma and Neutron Search and Detection, COTS



Power Management, COTS



Unmanned Aerial System (UAS), COTS



Localized Incident Site Protection, Development

XM204



Provide dominant and innovative lethal and protective capabilities for the Joint Warfighter through acquisition excellence

(U) PD D&CM Demolitions / Breaching Portfolio



ON EVERY MISSION

LANE BREACHING



MICLIC



APOBS

Explosive Breacher Concept

Neutralization Payload Delivery System



Detection System - UAS and Sensors



Neutralizer Warheads

DEMOLITION INITIATORS



MI RAMS XM27 Transmitter w/ Auxiliary Battery Pack

Type "B" Receiver



RF RAMS

Type "A" Receiver

Remote Activation System (RAMS)



M15 w/Shock Tube



M6 Electric Blasting Cap



Modernized Demo Initiators (MDI)



Time Delay-Sympathetic Detonator (TD-SYDET)



M700 Time Fuse

DEMOLITION DEVICES



SLAM



CLAYMORE



Cratering Charge



Shaped Charge



Detonation Cord



M303 BDK

PLASTIC EXPLOSIVES

COMP C-4



Sheet Explosive



(U) PD D&CM Explosive Ordnance Disposal Portfolio



ON EVERY MISSION

Small Caliber Dearermer (SCD) MK 38 MOD 0



Stand-Off Disrupter– Unexploded Ordnance Tool (SD-U XO) MK 40 MOD 0



Hook and Line Kit



Render Safe – Enhanced Robotic Payloads



Medium Directional Energy Tool (MDET)



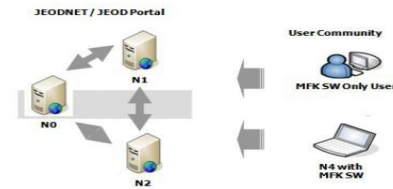
Transmitter, Countermeasure (TCM): AN/PLT- 4



Smart Ray Vision (SRV)



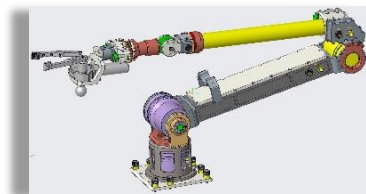
Decision Support System (DSS)



Highly Dexterous Manipulation System



Multi-shot Disrupor



EOD Response Kit



Transmitter, Countermeasure (TCM): AN/PLT- 5



Stand-Off Disrupter IED Tool – PAN Disrupter



Precision Aim Module

Render Safe – Sets, Kits and Outfits



X-Ray Imager, COTS



Buried IED Detection, COTS



X-Ray Generator, COTS



Render Safe Initiation, COTS



Gamma and Neutron Search and Detection, COTS



Dismounted Operations Protection, GOTS



Power Management, COTS



Trace Detection, COTS



Low Light Visual Augmentation System, COTS



Localized Incident Site Protection, Development



Unmanned Aerial System (UAS), COTS



ON **EVERY**
MISSION

Negating Explosive Hazards

through the use of

**Explosive Ordnance Disposal (EOD)
Guns, Ammunition, Rockets and Missiles (GARM)
Unconventional and Emerging Armament Systems
(UEA)**

(U) Explosive Ordnance Disposal (EOD)



ON EVERY MISSION

Seek

Smart Ray Vision (SRV)



Low Light Visual Augmentation System



Unmanned Aerial System (UAS)



Buried IED Detection,



X-Ray Generator,



X-Ray Imager,



Trace Detection



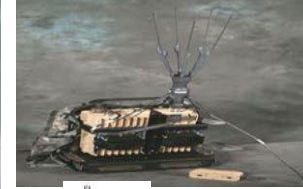
Gamma and Neutron Search and Detection

Enablers

Transmitter, Countermeasure (TCM): AN/PLT- 4



Transmitter, Countermeasure (TCM): AN/PLT- 5

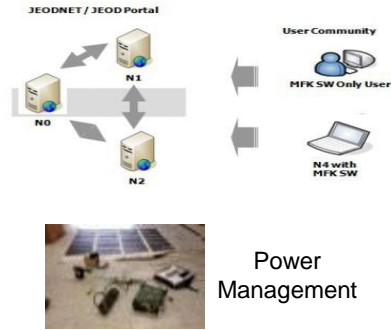


Localized Incident Site Protection



Dismounted Operations Protection

Decision Support System (DSS)



MOS 89D Army Explosive Ordnance Disposal (EOD) Specialist

Negate

Small Caliber Dearermer (SCD) MK 38 MOD 0



Stand-Off Disrupter– Unexploded Ordnance Tool (SD-UOX) MK 40 MOD 0



Hook and Line Kit



Render Safe – Enhanced Robotic Payloads



Medium Directional Energy Tool (MDET)



EOD Response Kit



Stand-Off Disrupter IED Tool – PAN Disrupter

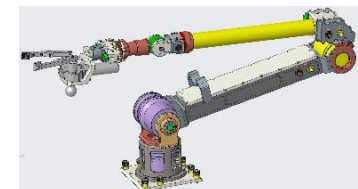


Highly Dexterous Manipulation System



Render Safe Initiation

Multi-shot Disruptor



Precision Aim Module

(U) Next Generation Breaching Technologies

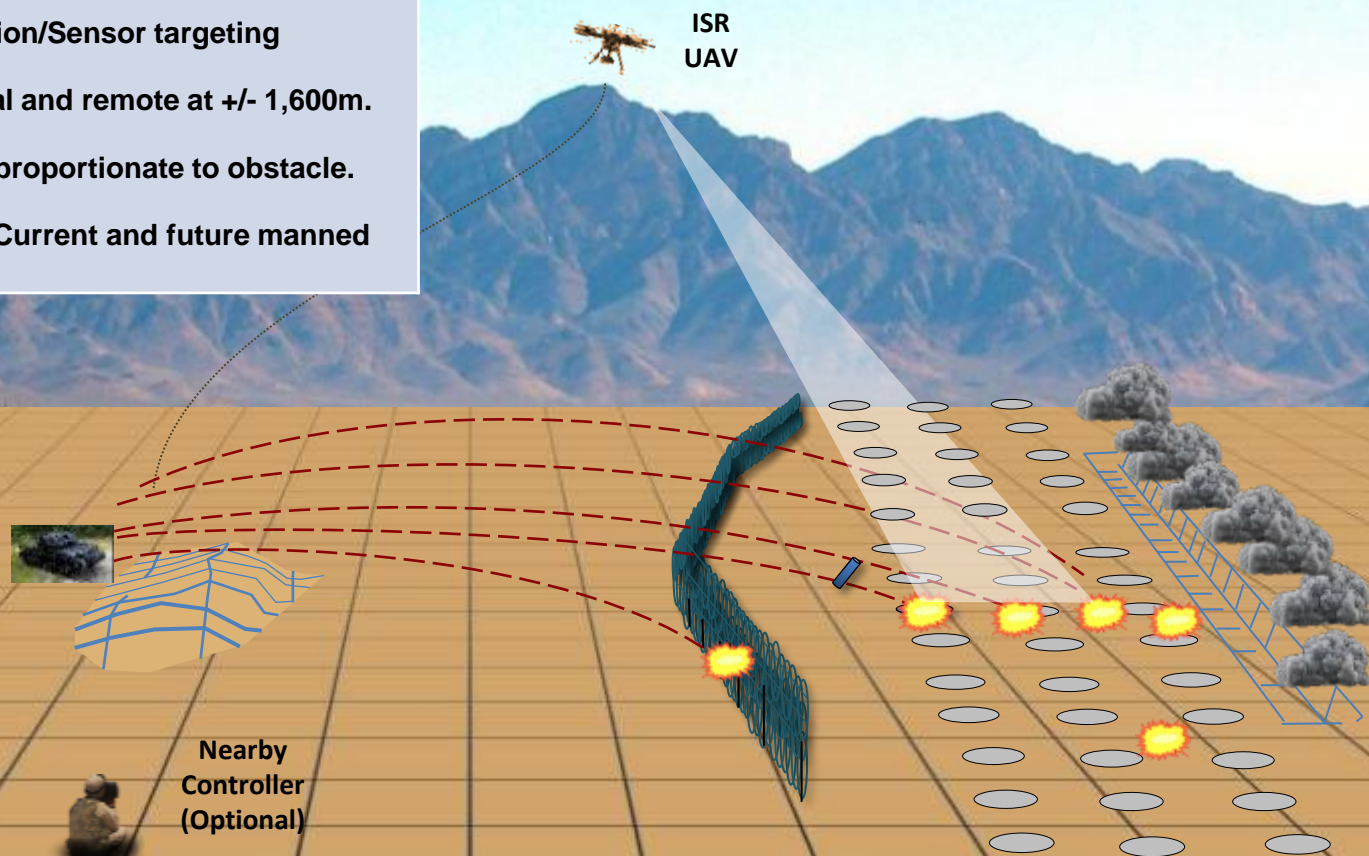


ON **EVERY**
MISSION

Desired Characteristics

- DC #1 - System Standoff – +/- 1,000m forward edge of the obstacle
- DC #2 - Neutralize Explosive Hazards – Current and future EH, up to 150m lane depth in a single combat load.
- DC #3 - Detection/Sensors – Detection/Sensor targeting
- DC#4 - Fire Control Station – Manual and remote at +/- 1,600m.
- DC #5 - Scalability – Neutralization proportionate to obstacle.
- DC #6 - Modular Mission Payload - Current and future manned or unmanned prime movers.

Not to scale



Removes Soldiers from the breach. Increases survivability, force protection, and overall mobility.

(U) TMRR Concept Demonstration Hardware



ON **EVERY**
MISSION

Detection



- Developed by DEVCOM C5ISR & Ft. Belvoir
- Supporting multiple customers including NGCV CFT (Project Convergence)
- FLIR SkyRaider R80D UAS
- Purpose-built electro-optical sensor with on-board processing, data storage, and optional laser designator / range-finder capabilities

Launcher



- Automated Direct/Indirect Mortar (ADIM) developed and demonstrated under S&T effort by DEVCOM AC in 2011-2014
- Fires 81mm Mortar munitions
- Modular (currently integrated onto a HMMWV)
- Recoil mitigation, on-board fire control with weapon auto-laying, and 20-round autoloader



Neutralizer Array



- Explosive Penetrator developed by DEVCOM AC and transitioned to Explosive Breacher Program of Record
- Packaging of penetrator array into 81mm form factor will be completed during TMRR
- Designed for compliance with Cluster Munition Policy
- Will investigate potential need for guidance (i.e. laser, GPS) during TMRR

(U) Next Generation Breaching Technologies



ON **EVERY**
MISSION

Seek

- UAS
- Manual & Automated control
- Multi-Spectrum Sensor Technologies
- Signal Processing Algorithms
- Small, light & energy efficient electronics

Enablers

- Secure Communications
- Precision Navigation & Timing (PNT)

MOS 12B Army Combat Engineer

Negate

- Stand-off Armament System
- Accurate Delivered Munition
- Neutralizer Payloads
- Multi-Fuze Conditions
- Directed Energy

