

PEO STRI



Visit the Live Training
Community Portal at:
LT2Portal.org



COL Mike Flanagan

Project Manager Training Devices



Project Manager Training Devices

VISION: Providing our Soldiers REALISTIC training solutions to ensure they are the BEST TRAINED FORCE in the world.



Ft. Campbell



Ft. Drum



Camp Blanding, FL



Ft. Benning

MISSION: *PM TRADE is the Army's solution provider for collective, instrumented live training systems. PM TRADE's mission is to improve Soldier readiness, in peace and war, by leading the life-cycle management of collective live training capabilities that enhance the Integrated Training Environment at homestations, Combat Training Centers and deployed locations.*



Afghanistan



NTC



PM TRADE Project Management Office

Div Chief,
Acq Ctr

Attorney
Advisor

PM TRADE

DPM

Total
Programs:
116

Business
Manager

Deputy
Director
Engineering

Assoc.
Chief of
Acquisition
Logistics



PM CTIS

PM DT

PM LTS

APM FMS

APM TRADE

NIE

24 Programs

15 Programs

49 Programs

21 Programs

5 Programs

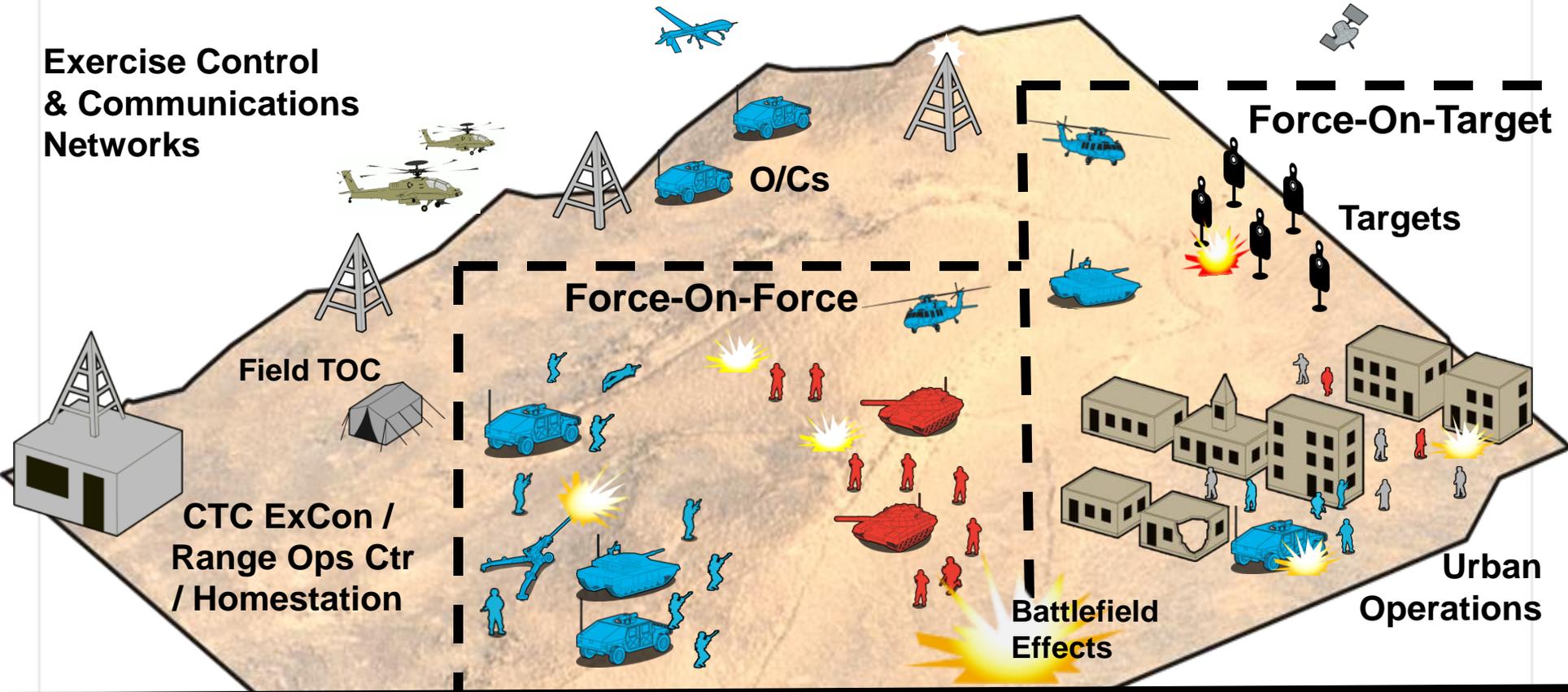
2 Programs



PM TRADE Mission Area Functional Domains

Communicating Across the Boundaries - One PM TRADE Portfolio

Exercise Control & Communications Networks



ExCon & Comms

ExCon, AAR, RF Comms. ABCS, & Network Data Management

PM CTIS **T-IS**

Simulated Fire

Combined Arms Engagement Pairing
BLUFOR & OPFOR

PM LTS **A-TESS**

Live Fire

Instrumented Urban Operations,
& Battlefield Effects

PM DT **FASIT**

Standards Management (CTIA, LT2, FASIT) - APM TRADE



Live Training Campaign Plan

Development

Production/Fielding

Sustainment

Live Training Transformation Family of Training Systems (LT2-FTS) ICD

A-TESS CDD

Product CPDs – ACAT II/III, and Supporting TADSS

T-IS CDD

LVC-IA CPD (Information Technology Box)

FASIT CPD

Consolidated Product Management (CPM, *CPM Next)

Procurement Contracts (i.e. I-MILES TVS, I-MILES IWS...)

Warfighter Focus

*Live Training Studies (8a)

*Live Training Lifecycle

JCIDS

Acquisition
Strategies &
Contracts



Army – USMC Partnership



U.S. Army

Col. Fred Mullins (left), PM TRADE project manager, and Brad Valdyl TRASYs assistant program manager for live training systems, sign agreement Nov. 28, 2009, to promote commonality among the Army and Marine Corps' live training programs.



U.S. Army Photo/Doug Sch

Marine Corps Col. David Smith (left) of Program Manager Trainin Systems (PM TRASYs) and Col. Mike Flanagan, project manag for PM TRADE, sign a memorandum of agreement establishing a partnership of technical support between PM TRADE's li training transformation product line and PM TRASYs' comm live training systems June 3.



Initial Capabilities Gap Analysis

MC-ITS



2007

2009

2010

2011

2012

2013

Program Level Agreement

Memorandum of Agreement

Joint LT2 Portal

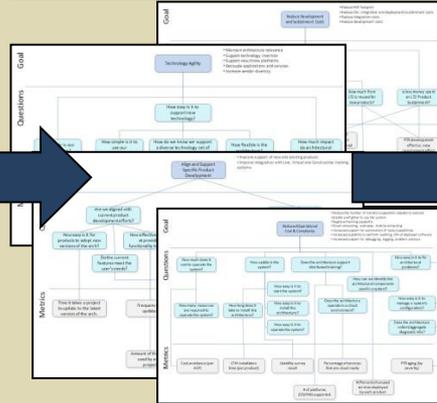


#3 Service Oriented Architecture (SOA)

PM TRADE Strategic Goals

- Reduce Operational Cost & Complexity
- Align & Support Product Development
- Enhance Soldier Training
- Reduce Sustainment & Development Costs
- Increase Technology Agility
- Leverage Other Army Systems
- Align to Army COE, Mobile Computing and Cloud Strategies

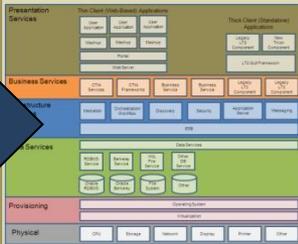
Goals/Questions/Metrics



SOA Design Principles

- Standardized Service Contracts
- Service Loose Coupling
- Service Abstraction
- Service Reusability
- Service Autonomy
- Service Statelessness
- Service Discoverability
- Service Composability

Objective Architecture





#8 Live Training Standards

1) Connector/USB:

IPT Lead Jim Grosse

2) PAN:

IPT Lead Jesse Campos

3) Common Message Format:

IPT Lead Paul Smith

4) Battery Configurations:

IPT Lead Valerie Deneen

PM TRADE Launches Initiative With Industry Partners

By Rob Wolf, PM TRADE Strategic Requirements Integrator



Chances are very high that anyone remotely supporting the live training community is familiar with the Multiple Integrated Laser Engagement System (MILES). The MILES laser code standard has been the foundation of Project Manager Training Devices' (PM TRADE) live force-on-force product line success since its adoption in the early 1980s. Since then, more than 250,000 MILES systems have been fielded worldwide, and are still in production today, to simulate the hit and kill effects of direct fire engagements from Soldiers and weapon

systems. The success of MILES was in recognizing that a governing interface standard had to be adopted to enable wide-scale growth and interoperability across industry and the military services.

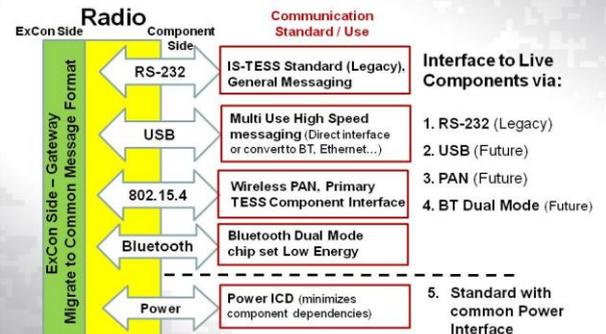
In addition to MILES, there are other standards that have helped PM TRADE realize cost savings and cost avoidance. In 2001, Common Training Instrumentation Architecture (CTIA) began to emerge as an architecture to manage data collection, display, and after action review software for the U.S. Army Combat Training Centers (CTCs). It has since evolved to a common repository of software components used across the CTCs, home stations, and live fire ranges. In 2006, Future Army System of Integrated Targets (FASIT) was established to standardize live fire target component interfaces, and today all new target components are acquired with FASIT standard interfaces.

But as good as these standards are, they do not address the entire live training mission area. "PM TRADE's vision for standards is to evolve the current Live Training Transformation (LT2) family of standards to encompass the entire PM TRADE product line portfolio," said Colonel Mike Elmore, PM TRADE "Developing interfaces leads for the instrumentation radio, communications and (TESS) component architecture with interfa



Live Training Systems

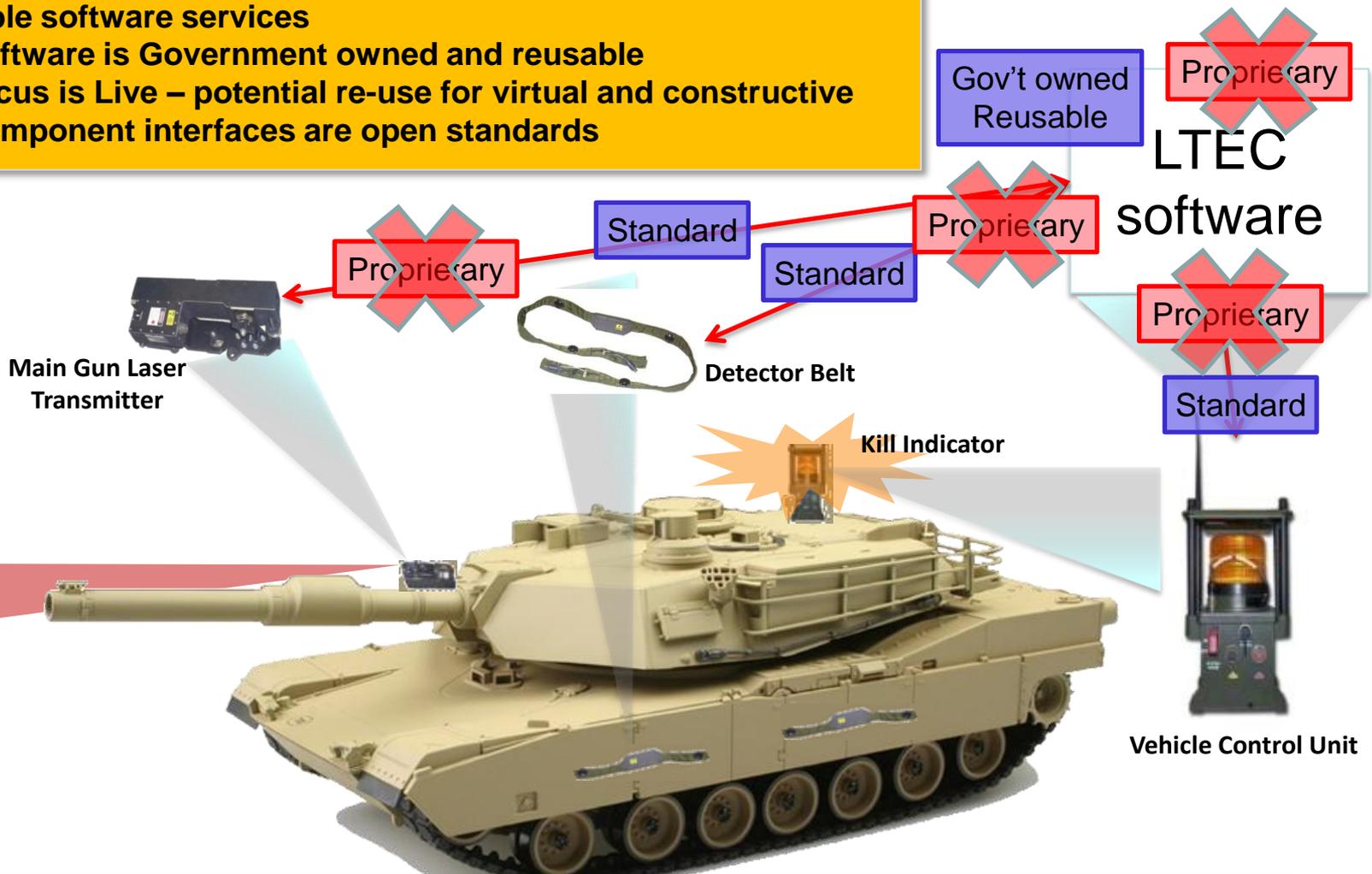
Radio / Component Interface Standards





#1 Live Training Engagement Composition (LTEC) *Government Owned Software & Open Interfaces*

- Composable software services
- System software is Government owned and reusable
- Current focus is Live – potential re-use for virtual and constructive
- System component interfaces are open standards



LTEC Supports Appended, Embedded or Hybrid Live Training Solutions



Business Opportunities

<u>Organization</u>	<u>Program</u>	<u>RFP Release*</u>	<u>Award Date*</u>
PM CTIS	HITS (AMITS)	Jul 2013	Mar 2014
PM CTIS	LTL	TBD	TBD
PM CTIS	SMECS	Jul 2013	Feb 2014
PM LTS	OneTESS	Apr 2014	Oct 2014
PM LTS	EHARTS	Jul 2013	Sep 2013
PM LTS	C-IED FoS	Jul 2014	Jan 2016
PM LTS	TVS R	May 2014	Oct 2015

*All Dates are Tentative

AMITS – Army Mobile Instrumented Training System

C-IED FoS - Counter-IED Family of Systems

LTL – Live Training Lifecycle

EHARTS - Enhanced Hardened Rubberized Target Set

OneTESS – One Tactical Engagement Simulation System

SMECS - Spectrum Monitoring and Engineering Control System

TVS R – Target Vehicle System Recompete (I-MILES)



Business Opportunities

<u>Organization</u>	<u>Program</u>	<u>RFP Release*</u>	<u>Award Date*</u>
APM TRADE	CPM Next	Mar 2014	Sep 2014
APM TRADE	Target Mod	Jun 2013	Sep 2013

*All Dates are Tentative

CPM Next – Consolidated Product line Management Next **Target Mod** – Target Modernization



Army Mobile Instrumented Training System (AMITS)

Description/Summary of Program Requirements

PEO STRI Project Manager for Training Devices (PM TRADE) has a requirement to procure up to nineteen (19) Army Mobile Instrumented Training Systems (AMITS) at a fielding rate of one per quarter beginning in 1Q15 and ending in 4Q18. The AMITS, with existing TESS and future TESS, will provide the end-to-end Home Station Training Capability in a mobile configuration. AMITS consists of a mobile instrumentation control center with AAR capability, a bi directional communications network between the vehicles and soldiers equipped with future TESS, and has the capability for remote configuration management updates. Future indirect fire pairings will rely on AMITS to complete player RTCA pairings and not the MILES laser. OCONUS sites include Hawaii, Alaska, Germany, and Korea.

ACQUISITION STRATEGY	PERIOD OF PERFORMANCE	MILESTONES			
<ul style="list-style-type: none"> • Contract Vehicle: STOC II • Contract Type: TBD • Challenge is a system flexible enough to meet spectrum requirements for CONUS and OCONUS with reduced support / sustainment costs 	<ul style="list-style-type: none"> • FY13 – FY18 • 5year, 1 delivery+38 optional deliveries • First delivery 7 Months After Award 	Jun 12  RFI	Oct 12  Sources Sought	Jul 13  RFP	Mar 14  Contract Award
POINT OF CONTACT	FUNDING		CURRENT CONTRACT/ORIGINAL DEVELOPER/OEM (IF RECOMPETE)		
Organization: PM TRADE Phone: 407-384-5201 Email: TRADE@peostri.army.mil	<ul style="list-style-type: none"> • OPA : ~ \$200-300 Million ✓ Army and Customer funding • Base Award FY13 (1 Range) ✓ TBD 		<ul style="list-style-type: none"> • New procurement 		



PM TRADE

Army Mobile Instrumented Training Systems

Tactical Engagement Simulation System (TESS)

Force-on-Force
MILES Dismount

Force-on-Force
MILES Vehicle



MILES 2000 / IWS



Small
Arms
Transmitter

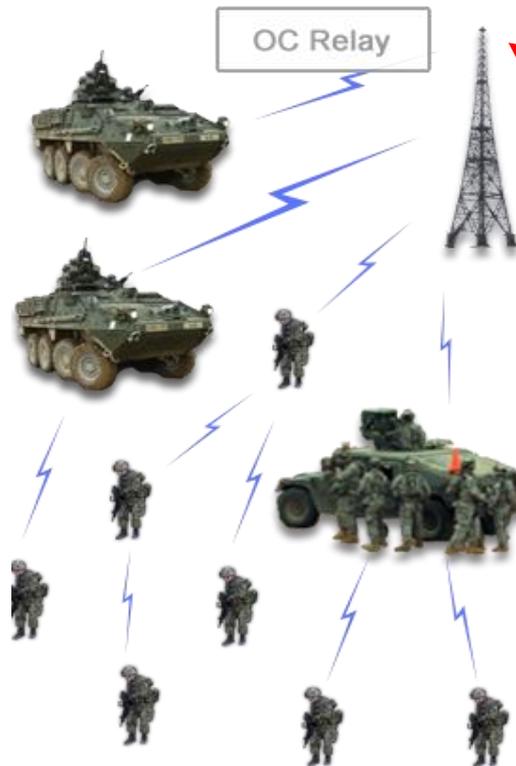


- Player ID
- Player Type
- Weapon Type
- Weapon Load
- Trigger Pull

MILES XXI / CVS



Range Communication Network



- Soldier Movement
- Weapon Firing and Real Time Casualty Assessment
- Observer / Controller Assessment

Training - HITS EXCON

Range Operations Center
(ROC)



- Exercise Scenario Development
- Data Base Management
 - Terrain
 - Players
- Indirect Fire
- 2D / 3D Display
 - Map
 - Player Location
 - Engagement
- Observation Creation
- Video
- Tactical Voice Monitoring
- After Action Review

Microwave

Fiber



Live Training Lifecycle (LTL)

Description/Summary of Program Requirements

It provides life cycle replacement for end-of-life instrumentation system components in the support of:

- The CTC-Instrumentation System (CTC-IS): A fixed-site instrumentation capability designed for the employment at maneuver CTC at the National Training Center at Ft Irwin, CA , Joint Readiness Training Center at Ft Polk, LA, and the Joint Multinational Readiness Center at Hohenfels, Germany.
- The DRTS Program comprised of the following range types: Digital Multi-Purpose Range Complex (DMPRC), Digital Multi-Purpose Training Ranges (DMPTR), Battle Area Complex (BAX), Digital Air/Ground Integration Range (DAGIR).
- Urban Operations Training System (UOTS) comprised of the following range types: Urban Assault Course (UAC), Shoot house, Combine Arms Collective Training Facility (CACFT); and
- Homestation Instrumentation comprised of the following range types: Exportable Training Capability – Instrumentation System (ECT-IS).

ACQUISITION STRATEGY	PERIOD OF PERFORMANCE	MILESTONES												
<ul style="list-style-type: none"> • Contract Vehicle: TBD • Contract Type: TBD 	<ul style="list-style-type: none"> • TBD 	<table border="0"> <tr> <td>APR13</td> <td>TBD</td> <td>TBD</td> <td>TBD</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>RFI</td> <td>Source Sought</td> <td>RFP</td> <td>Contract Award</td> </tr> </table>	APR13	TBD	TBD	TBD					RFI	Source Sought	RFP	Contract Award
APR13	TBD	TBD	TBD											
														
RFI	Source Sought	RFP	Contract Award											
POINT OF CONTACT	FUNDING	CURRENT CONTRACT/ORIGINAL DEVELOPER/OEM (IF RECOMPETE)												
<p>Organization: PM TRADE Phone: 407-384-5201 Email: TRADE@peostri.army.mil</p>	<ul style="list-style-type: none"> • Ceiling: TBD 													



Spectrum Monitoring and Engineering Control Subsystem (SMECS)

Description/Summary of Program Requirements

Life Cycle Replacement of the current Spectrum Monitoring and Engineering Control Subsystem (SMECS) located at the National Training Center (NTC), Fort Irwin, California. This includes the hardware and software components to provide continuous monitoring of the electromagnetic spectrum and direction finding of basic electromagnetic radiation parameters. The SMECS will consist of two fixed locations for frequency monitoring and direction finding, and one mobile system for direction finding only. The two fixed systems will be located remotely on Tiefert and Granite Mountains and will be controlled from the SMECS monitoring station to be located in the Spectrum Management Facility, Building 6252. The mobile portion of the SMECS will be installed in the NTC G6 HMMWV (V-30B) communications shelter.

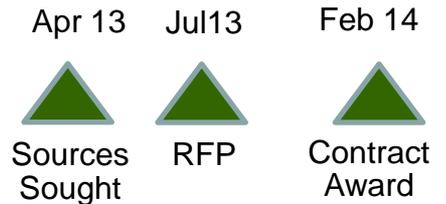
ACQUISITION STRATEGY

- Contract Vehicle: STOC II
- Contract Type: FFP

PERIOD OF PERFORMANCE

- FY14 – FY15
- Delivery 12 Months After Award

MILESTONES



POINT OF CONTACT

Organization: PM TRADE
Phone: 407-384-5201
Email: TRADE@peostri.army.mil

FUNDING

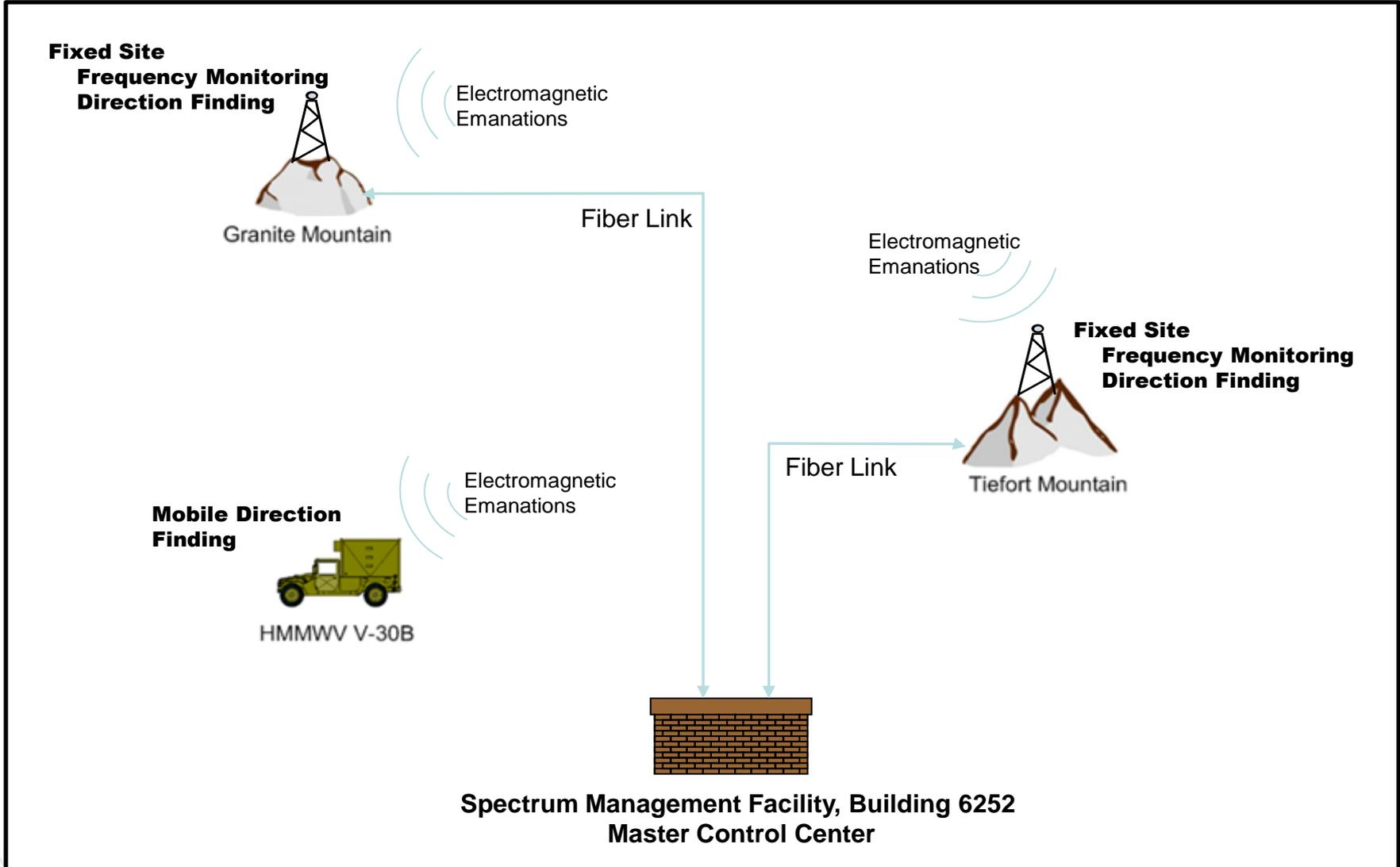
- OPA : ~ \$2 - \$2.5 Million
✓ Army and Customer funding

CURRENT CONTRACT/ORIGINAL DEVELOPER/OEM (IF RECOMPETE)

- Lifecycle Replacement



NTC IS Spectrum Monitoring & Engineering Control Subsystem (SMECS) Operational View





One Tactical Engagement Simulation System (OneTESS)

Description/Summary of Program Requirements

OneTESS Increment 1 provides a battalion and below exercise live Force-on-Force training capability for the IBCT (dismounted) mortars (60mm/81mm/120mm) and Forward Observer at Home Station, Combat Maneuver Training Centers, and deployed sites.

OneTESS provides the ability to integrate into training instrumentation systems such as the Homestation Instrumentation Training System (HITS), Combat Training Center-Instrumentation System (CTC-IS), and interoperable with I-MILES.



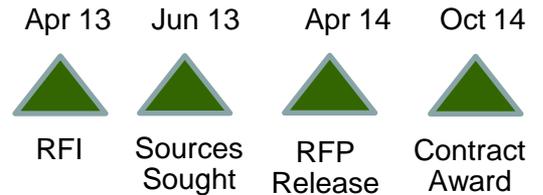
ACQUISITION STRATEGY

- Build-to-print with integration into LT2 Instrumentation Systems.

PERIOD OF PERFORMANCE

- Base year award with option years

MILESTONES



POINT OF CONTACT

Organization: PM TRADE
 Phone: 407-384-5201
 Email: TRADE@peostri.army.mil

FUNDING

- ~\$16M-20M OPA over FY15 – FY17

CURRENT CONTRACT/ORIGINAL DEVELOPER/OEM (IF RECOMPETE)

- New procurement



OneTESS Mortar Capability

Major Components/Interfaces

OneTESS Mortar Components

Mortar Kit (60mm, 81mm, 120mm)

1. Barrel adapter
2. Mortar simulator round
3. Sight Orientation Sensor (SOS)
4. OMNI (OneTESS MILES Network Interface)

Forward Observer (FO) Kit

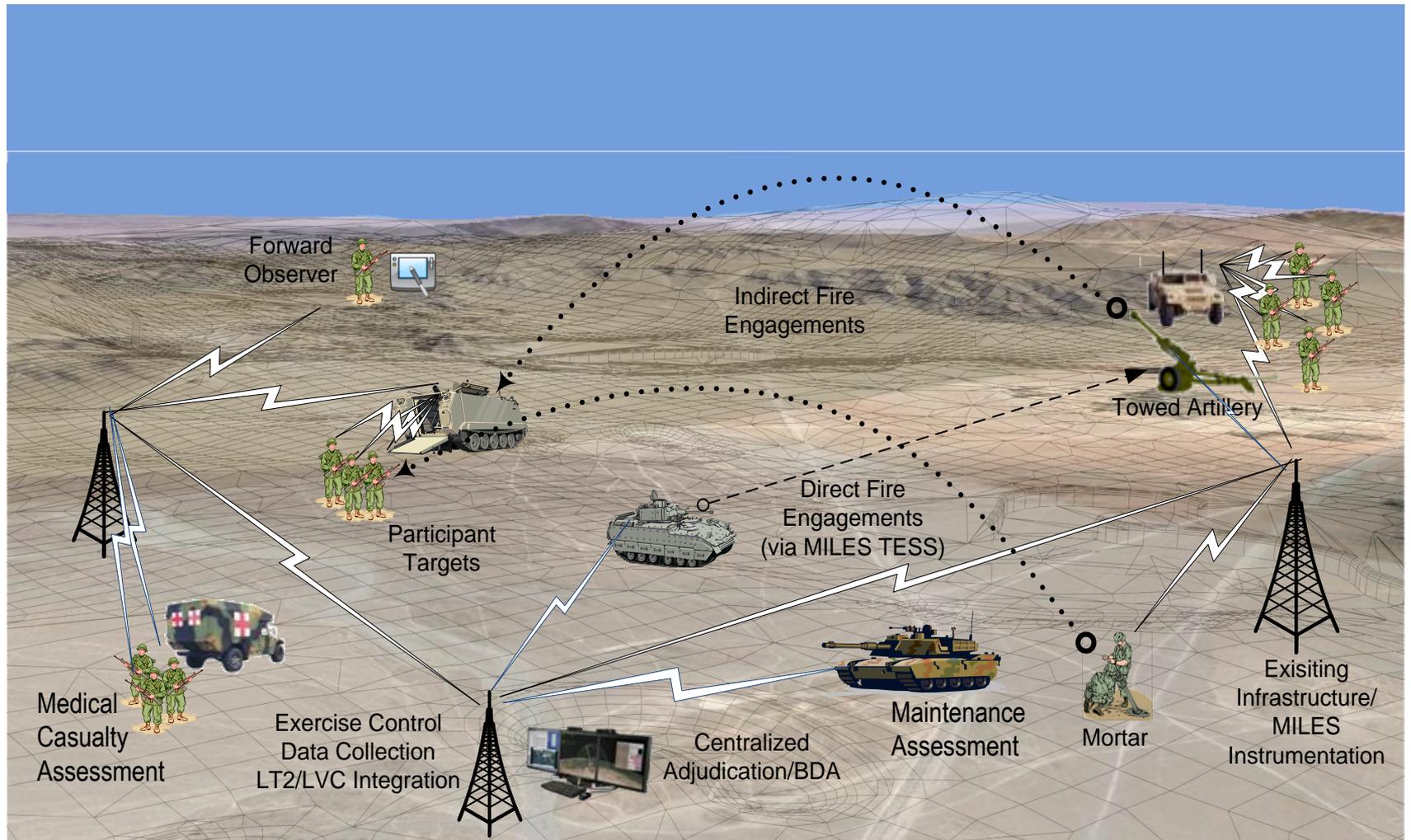
5. OMNI
6. FO Tablet



Interfaces to Homestation Instrumentation Training System (HITS) and Combat Training Centers (CTCs) via the Instrumentation Radio



OneTESS Operational Concept/OV-1





Tactical Vehicle System Re-compete (TVS R)

Description/Summary of Program Requirements

The I-MILES Tactical Vehicle System (TVS) Re-compete will provide real-time casualty effects necessary for tactical engagement training in direct fire Force on Force and instrumented training scenarios. TVS Re-compete will incorporate LTEC software and utilize the LT2 PAN Standard as requirements called out within the Performance Specification. This system will continue to simulate non-turreted military vehicles and stationary targets (e.g. tactical wheeled vehicles, M113s, MRAPs, bridges, and buildings.). The TVS Re-compete improves on the currently fielded wireless function of WITS and TVS, utilizing the LT2 Pan to enhance the “weapons link” between the system’s target detectors and the Small Arms Transmitter (SAT) used by personnel on board the tactical vehicle; adding the capability of killing both the vehicle and the on-board small arms weapon system.



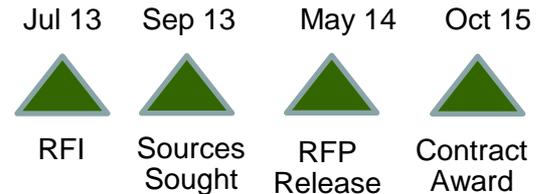
ACQUISITION STRATEGY

- Competitive STOC II Award
- Firm Fixed Price
- T & M CLINs
- Base Award w/ Option Lots

PERIOD OF PERFORMANCE

- Base period plus any 4 options (FY 15 – FY 19)

MILESTONES



POINT OF CONTACT

Organization: PM TRADE
 Phone: 407-384-5201
 Email: TRADE@peostri.army.mil

FUNDING

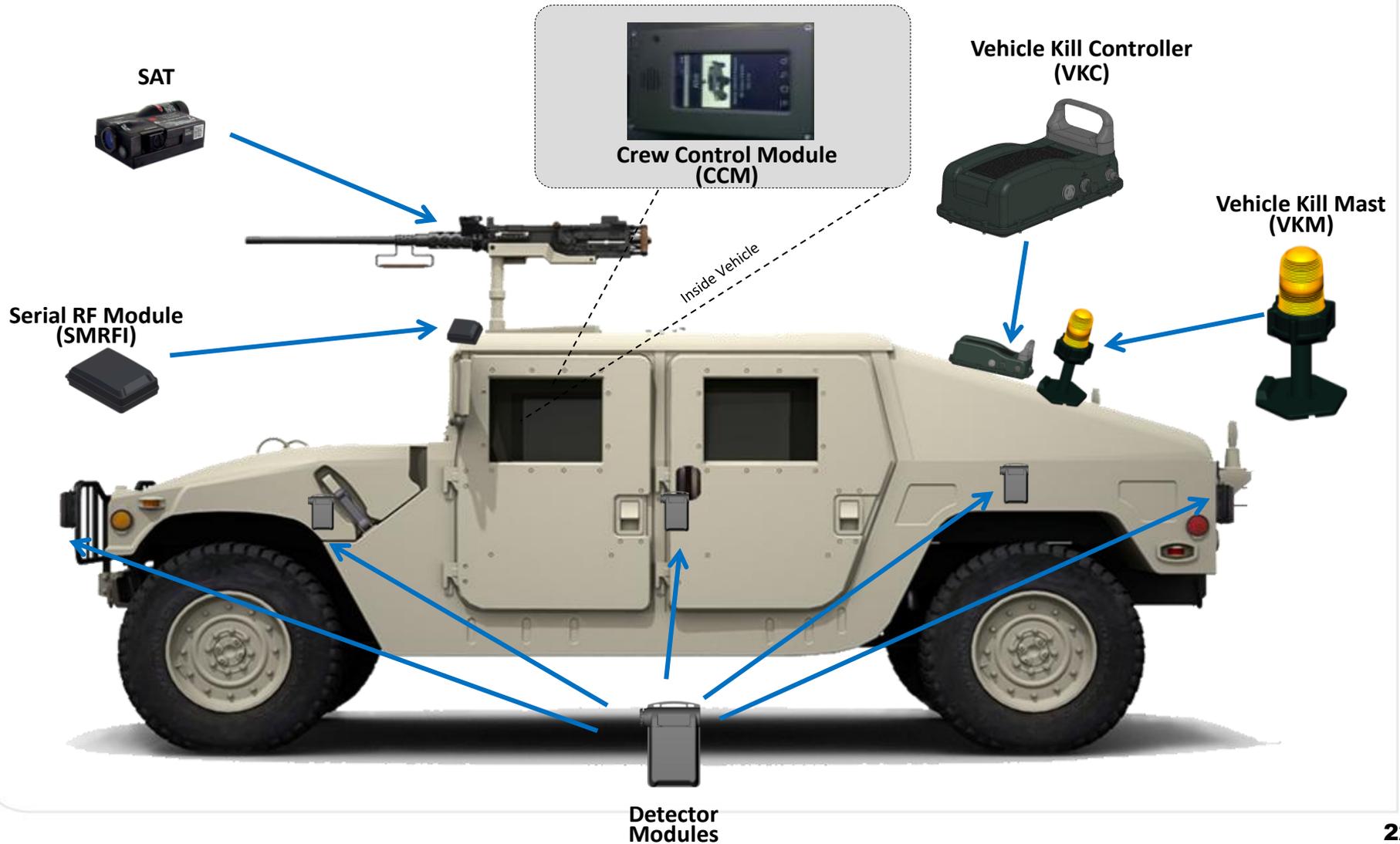
- ~ \$112 M OPA over FY15 – FY19

CURRENT CONTRACT/ORIGINAL DEVELOPER/OEM (IF RECOMPETE)

- Production and Fielding Phase.
- Prime Contractor: CUBIC.
- Contract Type: Firm Fixed Price.
- Production Award Date: July 2010 (1 base + 4 options).



Instrumentable - Multiple Integrated Laser Engagement System Tactical Vehicle System (Re-Compete)





Counter-IED Family of Systems (C-IED FoS)

Description/Summary of Program Requirements

Mission – C-IED FoS will provide a brigade and below exercise live Force-on-Force training capability for Husky Mounted Detection System Surrogate (HMDSS) and Enemy Area Denial Systems at Home Station, Combat Maneuver Training Centers, and deployed sites.

C-IED FoS will provide the ability to integrate into training instrumentation systems such as the Homestation Instrumentation Training System (HITS), Combat Training Center-Instrumentation System (CTC-IS), and be interoperable with I-MILES and Improvised Explosive Device Effects Simulator (IEDES).



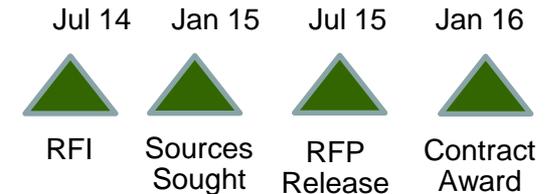
ACQUISITION STRATEGY

- TBD based on results of Market Research

PERIOD OF PERFORMANCE

- Base year award with option years

MILESTONES



POINT OF CONTACT

Organization: PM TRADE
 Phone: 407-384-5201
 Email: TRADE@peostri.army.mil

FUNDING

- ~ \$60M OPA over FY14 – FY18

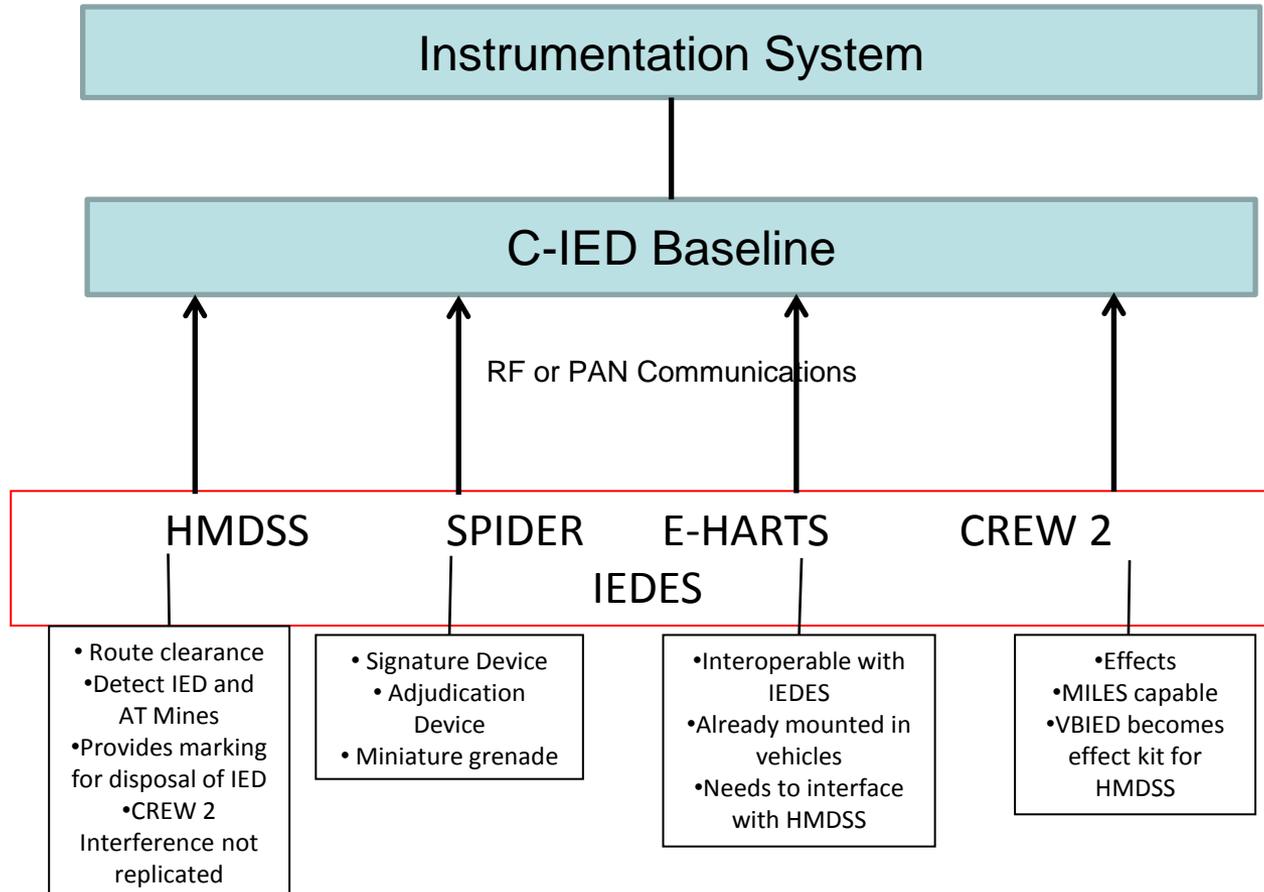
CURRENT CONTRACT/ORIGINAL DEVELOPER/OEM (IF RECOMPETE)

- New procurement



Counter-IED Family of Systems (C-IED FoS)

Major Components/Interfaces



- IEDES 315/433 MHz Communications become the baseline

- PAN can be used dependent on maturity of technology



Enhanced Hardened Rubberized Target Set (E-HARTS)

Description/Summary of Program Requirements

Mission – E-HARTS is threat and clutter training targets for detection and analysis of buried threats. These targets will replicate the actual devices in size, approximate weight and distinguishing characteristics, and be durable to withstand repeated burial and interrogation. The threat training targets will have RFID tags to be capable of sending a signal to the surface from a depth of 36 inches and contain metallic content to replicate the signature of the actual devices from Ground Penetrating Radar and metal detection.



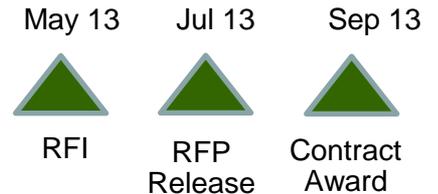
ACQUISITION STRATEGY

- Competition is planned under CARTS

PERIOD OF PERFORMANCE

- Base year award

MILESTONES



POINT OF CONTACT

Organization: PM TRADE
Phone: 407-384-5201
Email: TRADE@peostri.army.mil

FUNDING

- ~ \$500K RDT&E

CURRENT CONTRACT/ORIGINAL DEVELOPER/OEM (IF RECOMPETE)

- New procurement



Consolidated Product Line Management Next (CPM Next)

Description/Summary of Program Requirements

The CPM Next contract is to continue the managed evolution of the Live Training Transformation (LT2) product line (P/L) and provide total life-cycle support to product managers within the LT2 P/L. The CPM Next contract will continue to meet the requirement for a consolidated streamlined approach that protects and leverages the Army's LT2 P/L investment, continues to evolve the core assets, architectural frameworks, and the LT2 P/L construct while continuing to provide PM TRADE an efficient, effective and agile method for:

- Management, maintenance, and evolution of the LT2 P/L products, processes and core assets
- Total life-cycle system management P/L support of systems/products within the LT2 P/L family of training systems
- P/L support of systems/products that leverage LT2 P/L assets
- Support of external interoperability initiatives such as LVC-ITE, Joint and Foreign Military Sales
- Synchronization with the Warfighter FOCUS (WFF) contract

ACQUISITION STRATEGY

- Single Award IDIQ (Tentative)
- Competitive

PERIOD OF PERFORMANCE

5 – 8 years

MILESTONES

Feb 13	June 13	Mar 14(T)	Sep 14(T)
			
RFI	Sources Sought	RFP	Contract Award

POINT OF CONTACT

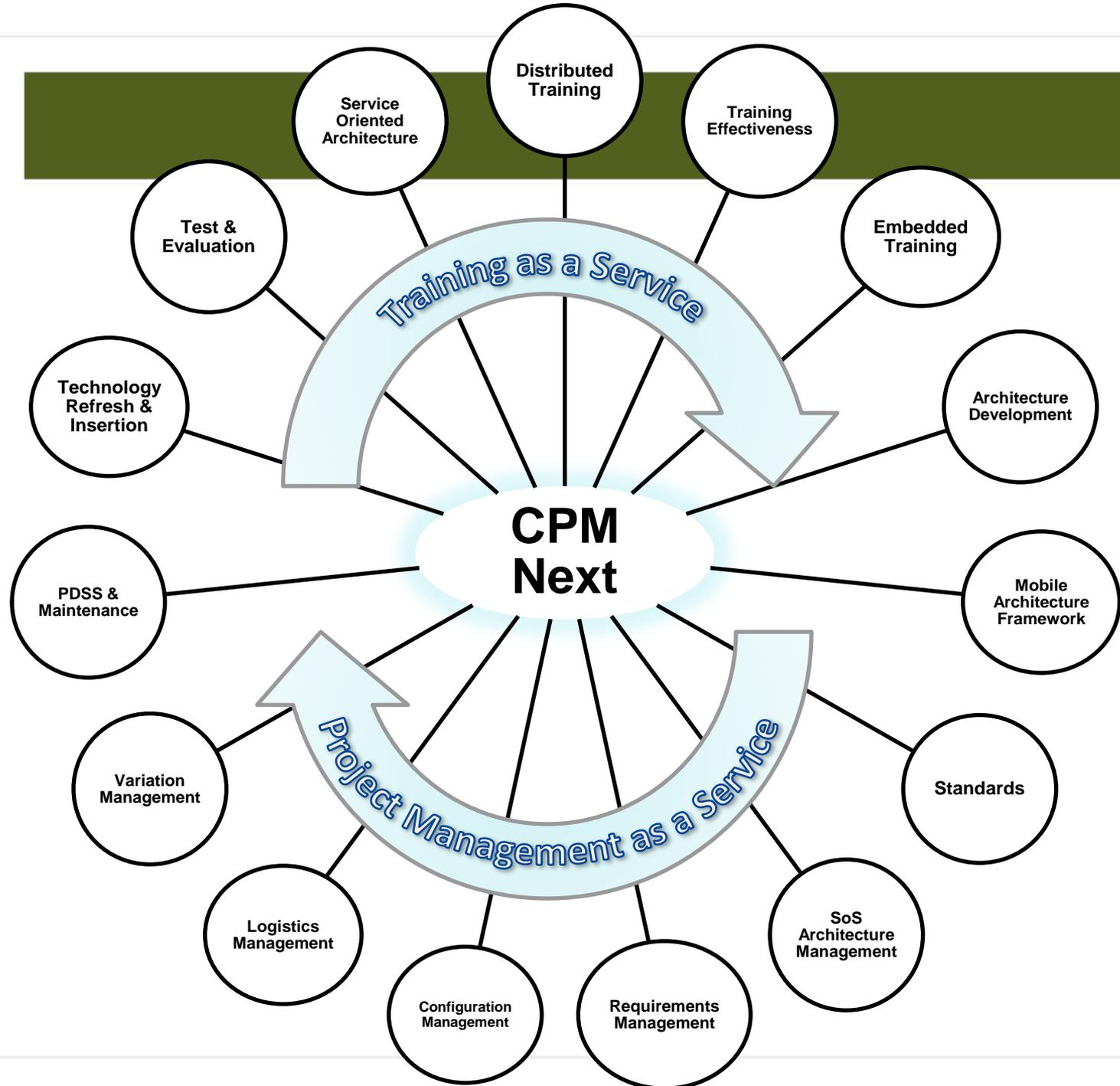
Organization: PM TRADE
 Phone: 407-384-5201
 Email: TRADE@peostri.army.mil

FUNDING

Ceiling: TBD

CURRENT CONTRACT/ORIGINAL DEVELOPER/OEM (IF RECOMPETE)

GDC4S is currently executing a 5 year PoP CPM





Target Modernization

Range 211 Upgrades and Fort Jackson LOMAH

Description/Summary of Program Requirements

Range 211 in Grafenwoehr, Germany is a legacy Enhanced Remote Equipment Target System (ERETS) live fire range consisting of 103 Stationary Infantry Targets (SIT), 19 Stationary Armor Targets (SAT), and three Moving Armor Targets (MAT). The Range 211 upgrade effort includes all those tasks required to fabricate and replace the existing ERETS targets with Future Army System of Integrated Targets (FASIT) compliant targets, via a Digital Subscriber Line (DSL) solution to provide an Ethernet network over the existing copper infrastructure.

Fort Jackson has a Modified Record Fire (MRF) range being constructed per the Corps of Engineers (COE) standards. The Fort Jackson LOMAH/MRF effort includes the fabrication and installation of 144 FASIT compliant SITs and applicable network connections. Effort includes the installation of LOMAH detection devices on all of the lanes (at 75m, 175m, and 300m), installation of shot sensors, and the installation of the Student Stations at each of the firing positions.

ACQUISITION STRATEGY	PERIOD OF PERFORMANCE	MILESTONES												
<ul style="list-style-type: none"> • CARTS IDIQ; LOT I • Competitive • Single Award • Phase I: Upgrade Range 211 in Germany • Phase II: Install FASIT/LOMAH at Fort Jackson 	<ul style="list-style-type: none"> • ~ 10 Months 	<table border="0"> <tr> <td>Dec 12</td> <td>Jan 13</td> <td>June 13</td> <td>Sept 13</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>RFI</td> <td>Sources Sought</td> <td>RFP</td> <td>Contract Award</td> </tr> </table>	Dec 12	Jan 13	June 13	Sept 13					RFI	Sources Sought	RFP	Contract Award
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<p>Organization: PM TRADE</p> <p>Phone: 407-384-5201</p> <p>Email: TRADE@peostri.army.mil</p>	<ul style="list-style-type: none"> • ~ \$2.0-\$2.4M OPA 	<ul style="list-style-type: none"> • N/A 												



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WELCOME

 
COL Michael P. Flanagan
Project Manager, TRADE

 
COL Stanley "Gene" Reedy
Director, TCM-Live

 
Col. Michael Coolican
Program Manager, TRASYS

 
Col. Anton H. Nerad
Director, TECD

Welcome to the Live Training Community portal, where we develop, support and communicate our Live Training initiatives for the Army and Marine Corps. Our intent is to facilitate communication with developers, users, and our industry partners to support standards and common solutions for Live Training. Our goal is to reduce total ownership costs while improving quality, interoperability, and reusability across Live, Virtual, Constructive, and Joint training/test domains for our Soldiers, Marines, our joint Services partners, and the Nation.

WELCOME

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PM TOOLS

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