

FULL SPECTRUM OPERATIONS

INDUSTRY DAY



Welcome

CEO
STRI

FULL SPECTRUM OPERATIONS

INDUSTRY DAY



Mr. Robert Reyenga
DPEO STRI

6 April 2011

DPEO STRI

Agenda

1215 – 1315	TCM-Live, <i>LTC Lander</i>
1315 – 1345	Senior NCO Leader/Warfighter Insights, <i>SGM Ogden</i>
1345 – 1415	PM TRADE, <i>COL Flanagan</i>
1415 – 1430	Break
1430 – 1500	PM ITTS, <i>COL Zarbo</i>
1500 – 1530	PM ConSim, <i>Rick Copeland</i>
1530 – 1600	PM CATT, <i>Fran Fierko</i>
1600 – 1630	PM Field Ops, <i>Bob Voltz</i>
1630 – 1700	APEO Project Support/Closing, <i>Traci Jones</i>

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LTC Dave Lander
Deputy Director

TCM-Live

6 April 2011

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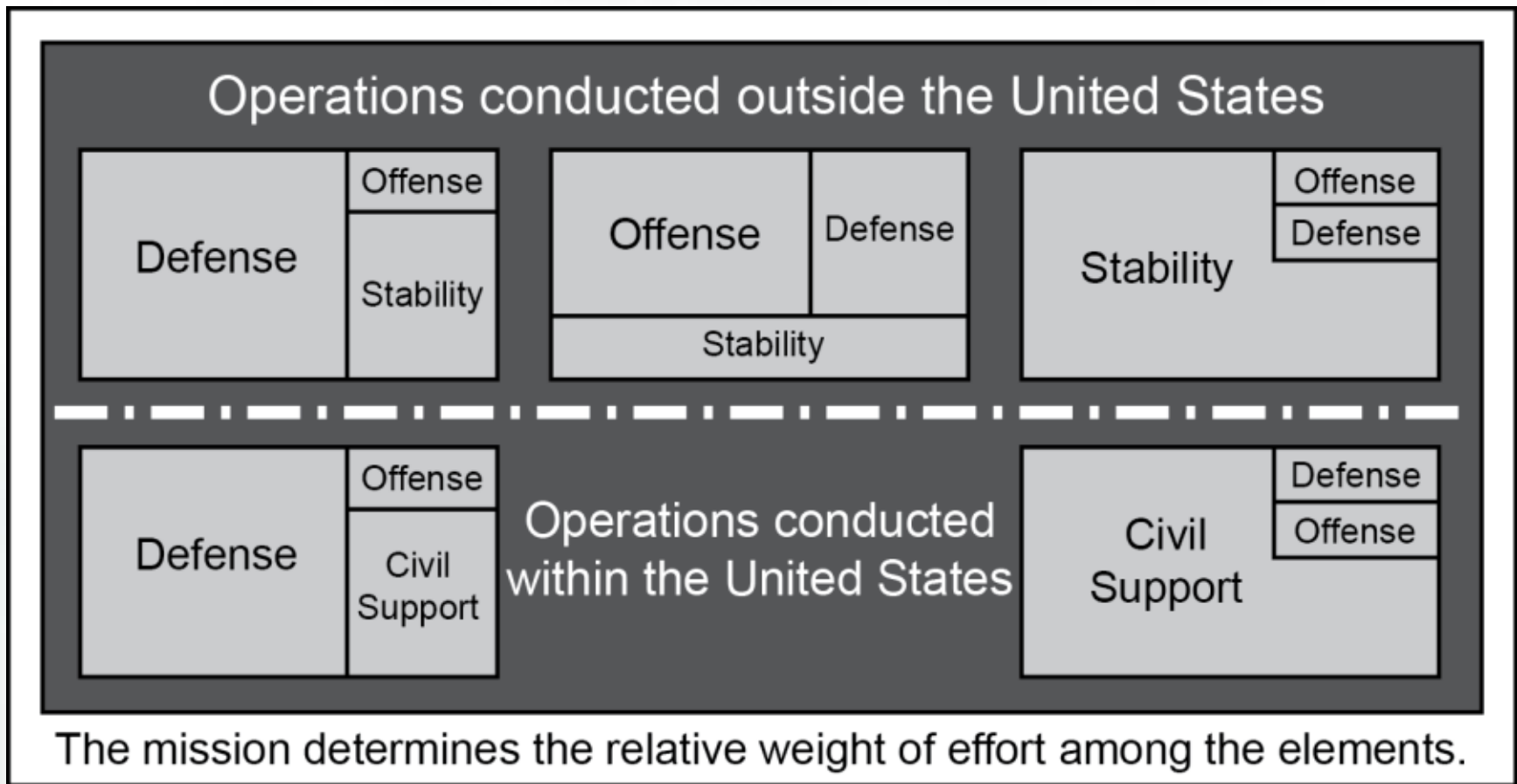
“Of the 48,000 Soldiers assigned to Fort Hood, TX ... 36,000 of them joined the Army after September 11, 2001.”

FSO Defined.....

Army forces combine **offensive**, **defensive**, and **stability** or civil support operations **simultaneously** as part of an interdependent joint force to seize, retain, and exploit the initiative, accepting prudent risk to create opportunities to achieve decisive results. They employ synchronized action – **lethal** and **nonlethal** – proportional to the mission, and informed by a thorough understanding of all variables of the operational environment.

FM 3-0 (Operations)

The Army's Operational Concept



Offensive Operations

Primary tasks:

- Movement to Contact
- Attack
- Exploitation
- Pursuit

Purposes:

- Dislocate, isolate, disrupt, and destroy enemy forces
- Seize key terrain
- Deprive the enemy of resources
- Develop intelligence
- Deceive and divert the enemy
- Create a secure environment for stability operations

Defensive Operations

Primary tasks:

- Mobile defense
- Area defense
- Exploitation
- Retrograde

Purposes:

- Deter or defeat enemy offensive operations
- Gain time
- Achieve economy of force
- Retain key terrain
- Protect the populace, critical assets, and infrastructure
- Develop intelligence

Stability Operations

Primary tasks:

- Civil security (including security force assistance)
- Civil control
- Restore essential services
- Support to governance
- Support to economic and infrastructure development

Purposes:

- Provide a secure environment
- Secure land areas
- Meet the critical needs of the populace
- Gain support for host-nation government
- Shape the environment for interagency and host nation success

Civil Support Operations

Primary tasks:

- Provide support for domestic disasters
- Provide support for NBC and high explosive incidents
- Provide support for domestic civilian law agencies
- Provide Other designated support

Purposes:

- Save lives
- Restore essential services
- maintain or restore law and order
- Protect infrastructure and property
- Maintain or restore local government
- Shape the environment for interagency success

Hybrid Threat

Regulated by International Law, Military Tradition and Custom
(REGULAR)

Hybrid

Threats

Unregulated by International Law, Military Tradition and Custom
(IRREGULAR)

CONVENTIONALLY
ARMED AND
ORGANIZED

UNIQUELY ARMED
AND ORGANIZED

- **Army training concept is transitioning – focus is Full Spectrum Operations**
- **FSO training is NOT new, but it is also not going “back to the day.”**
- **Counter-Insurgency (COIN) skills requirement does not go away**
- **Organizing for training same as organizing for combat – team effort**
- **Today’s Soldiers and Leaders are seasoned, the best we’ve ever had; they are capable of excelling at all challenges, to include FSO training**
- **(Past) JRTC Rotation 11-01 (Oct 2010) and (near Future) NTC Rotation 11-09 (Aug 2011) will provide experience and lessons learned to leverage for further refinement of FSO training tasks and training enablers**

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SGM Patrick M. Ogden
PEO STRI
Senior Enlisted Advisor

6 April 2011

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IMMERSIVE-INTENSE-ACCURATE-LINKED-TRAINING DEVICES

- Commanders must be able to give their NCO Corps a training environment that will immerse the Soldier in a virtual world that replicates the one he or she will fight in, both now and in the future.
- Soldiers of today are very adept to learning in a virtual environment. We as an Army partnered with Industry must capitalize on that to build the best systems possible.
- The systems must be user friendly, versatile, easy to operate, and captivating.
- Rote memorization is not the method to train now or in the future.....Soldiers are fighters first and foremost, but thinkers and problem solvers as well.
- We as partners must give them the best technology available. They are after all ours sons and daughters!

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COL Mike Flanagan *Project Manager*

Training Devices
(PM TRADE)

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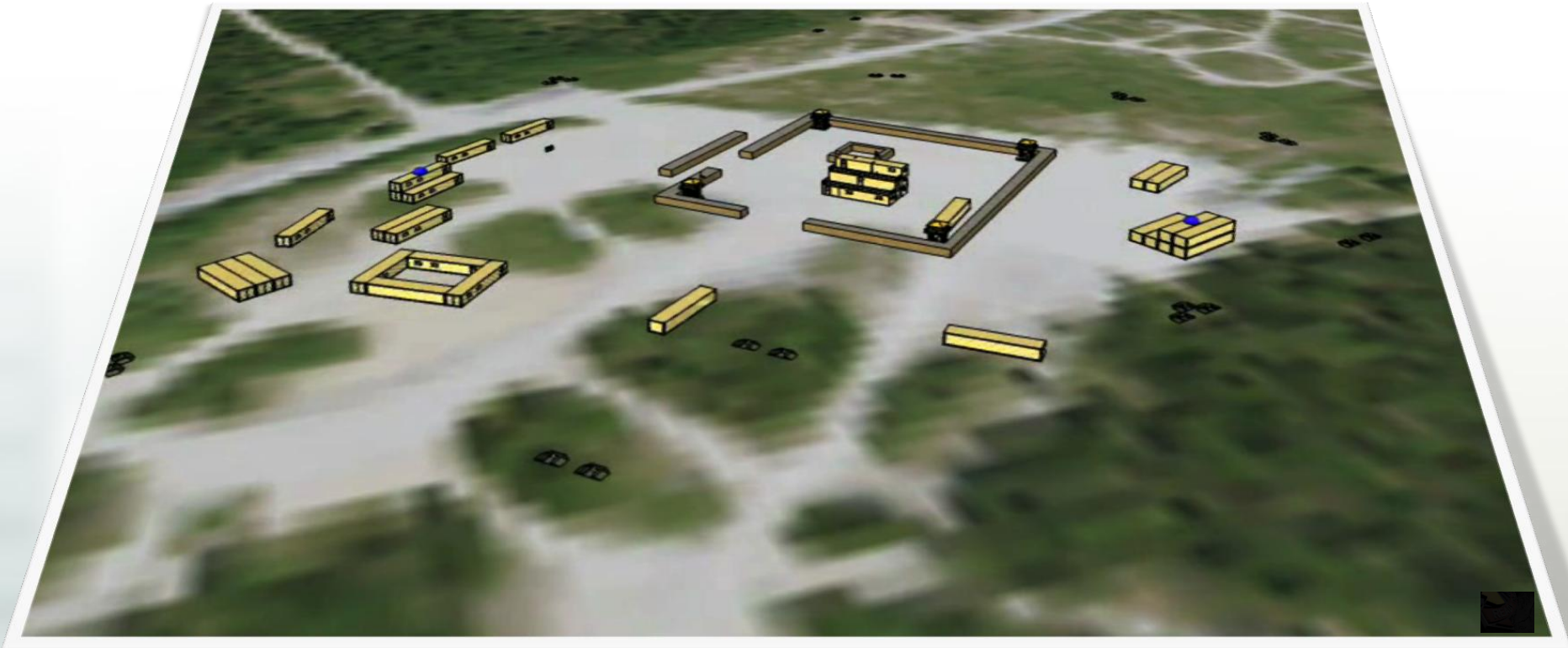
October 3, 2009 – COP Keating



The **Battle of Kamdesh** took place during the War in Afghanistan. It occurred on October 3, 2009, when a force of 300 Taliban assaulted the American Combat Outpost (COP) Keating near the town of Kamdesh of Nuristan province in eastern Afghanistan. The attack was the bloodiest battle for US forces since the Battle of Wanat in July 2008, which occurred 20 miles (32 km) away from Kamdesh. The attack on COP Keating resulted in **eight Americans killed and 22 wounded**.

Grafenwoehr Training Area 201 360° COP

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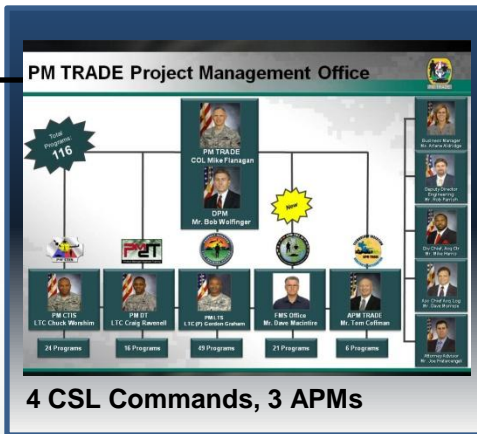


PM TRADE



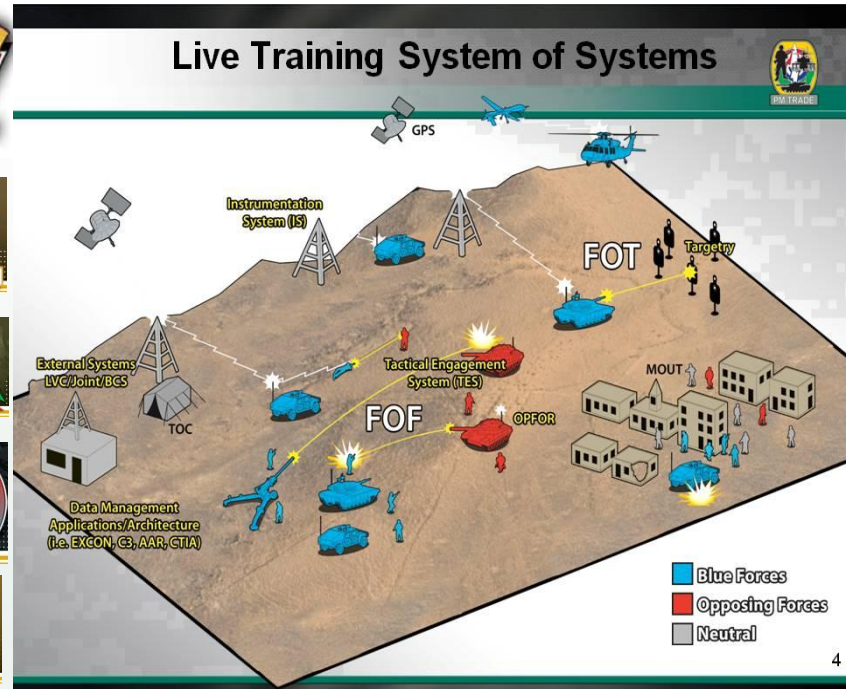
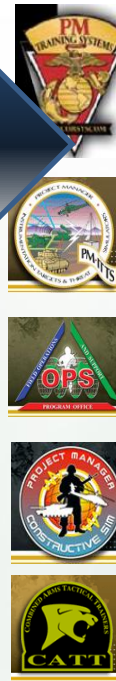
MISSION:

Provide Simulation, Training and Testing Capabilities for the Nation's Security.
800+ people, \$3B annually

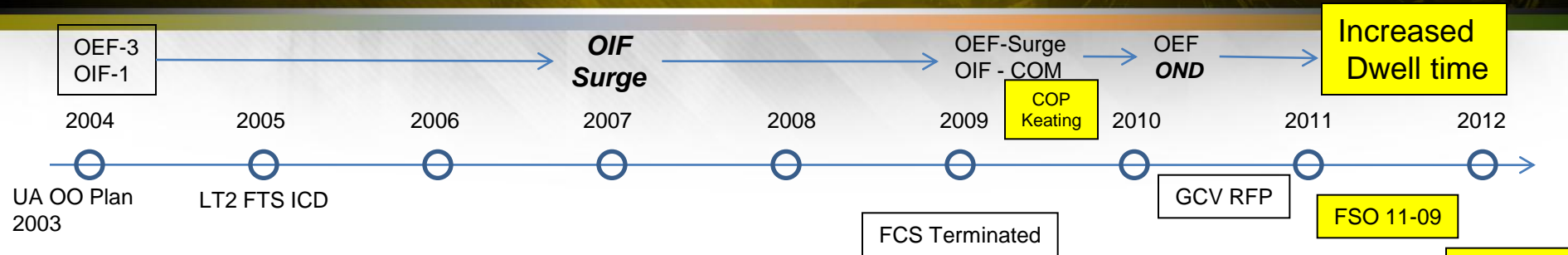


Mission: Lifecycle management of collective Live Training capabilities
207 people (9/146/52), \$300M (Base) annually. \$100M+ (FMS), \$300M+ (WCLS)

Products

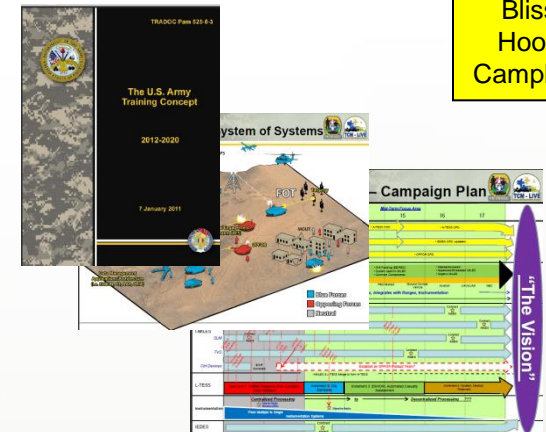
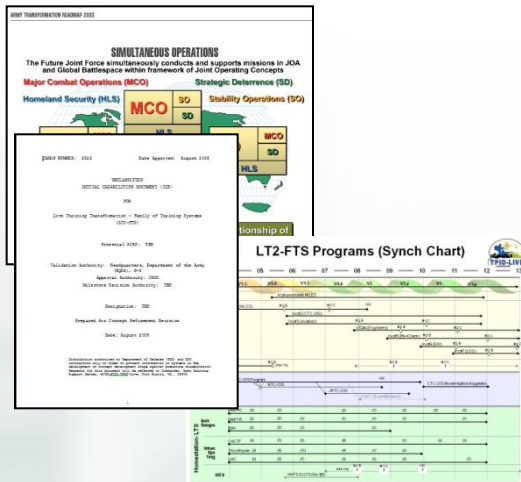


FSO - History Lesson



2004-2011 Common Themes

- Full Spectrum Operations
- Enable L-V-C Training Environment
- Deployed Training Capability
- Embedded Training...
- Common Architecture, Standards
- Training Network...



LVC
Bliss
Hood
Campbell

What has CHANGED?

- Over-reaching MDAPs failed (FCS, One TESS, OT-TES...)
- Budget bubble burst
- Dwell time at Home Station will Increase!!!
- Efficiency Imperative!!!

- LT Campaign Plan
- Life Cycle Mgmt
- Common Product Line
- Collaboration

What Senior Leaders are Saying



Gen. Martin E. Dempsey speaking at AUSA's 2010 Winter Symposium.

- *Home station training – The Next Revolution in Training*
 - *CTC-quality feedback to units wherever they train*
 - *Leverage the L-V-C Integrated Training Environment*

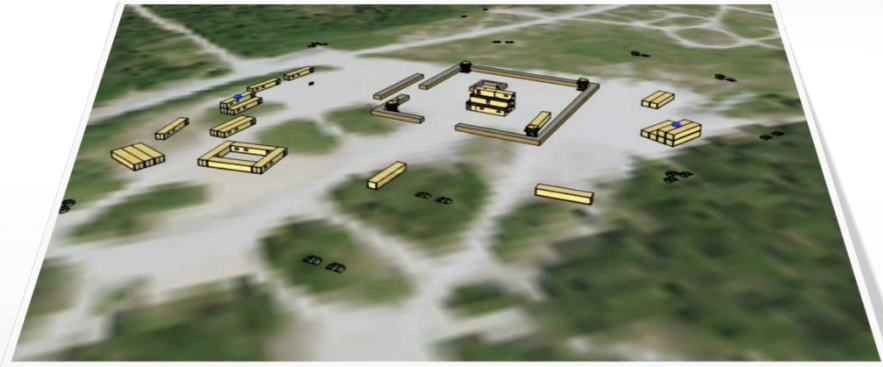


Dr. Malcolm O'Neill, ASAALT

...the question is what makes us different from the guy on the other side, hiding behind a rock?"

"the Soldier" needs to be the "decisive weapon" in combat

360 COP Example



Layout of 360 COP Live Fire, Grafenwoehr, Germany

Troop (Company) Enablers*:

- UAVs
- Attack Helicopters
- Fixed wing (B-1/F-15E)
- Intelligence, Surveillance, and Recon

**Prior to 2003 – Only available to Bn/TF Cdrs*

- V – Representation of COP and surrounding area
- V – Basic rifle marksmanship and fire discipline on EST 2000
- C – Intel reports, adjacent units, UAV feed, other enablers ...
- L – Soldiers instrumented and tracked through JMRC-IS
- L – Incoming RPGs and battlefield effects
- L – Soldiers using assigned weapons with live ammunition
- **CTC-quality feedback**

- Today's Soldier – Combat proven, adaptive, intelligent, high expectations for training (realism, feedback...)
 - No negative training
 - Intuitive
 - Instrumentable
- Standards, common architecture, configuration control, scalable – more important than ever, especially in LVC-ITE
- Training management – lost art. Training devices must be easy to employ, enable training, reduce overhead

- Live Training Portal – your source for references, developer software, standards, upcoming events
- Participate in Workshops:
 - **Next:** SOA, Cloud Computing, & Virtualization Architecture Workshop, 3-4 May
- Attend Industry Days & Communicate thru Draft RFP process
 - **Next:** Battlefield Effects Simulation (TBD)
- Look for Updated “Live Training Campaign Plan” on portal and provide input/ask questions



LIVE TRAINING COMMUNITY



[HOME](#) [WELCOME](#) [NEWS/EVENTS](#) [PRODUCTS](#) [STANDARDS](#) [REFERENCES](#) [DEVELOPERS](#) [PM TOOLS](#) [SUPPORT](#) [LOGIN](#) | [REGISTER](#)

LOGIN

USER NAME

PASSWORD

Login

Register

WELCOME



NEWS/EVENTS



PRODUCTS



STANDARDS



REFERENCES



DEVELOPERS



PM TOOLS



SUPPORT



FEEDBACK

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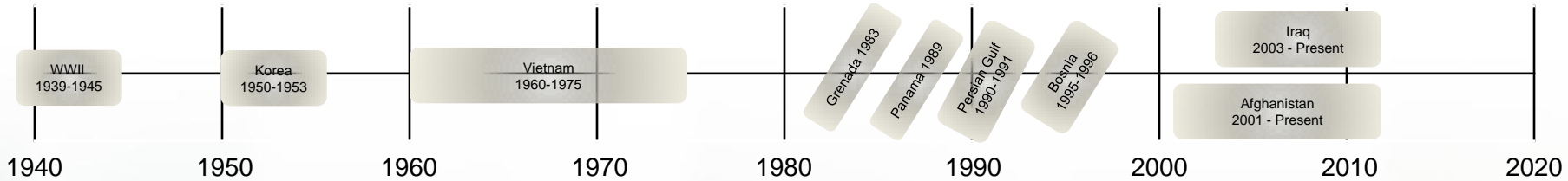
COL Mike Zarbo
Project Manager
**Instrumentation,
Targets and Threat
Simulators (PM ITTS)**

6 April 2011

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- Full Spectrum Operations (FSO) FM 3-0 Change 1
- PM ITTS Support to FSO
- Threat Validation
- PM ITTS Mission and Vision
- PM ITTS Organization
- PM ITTS Programs
- PM ITTS Customers
- Instrumentation Management Office (IMO) Products
- Targets Management Office (TMO) Products
- Threat Systems Management Office (TSMO) Products

PM ITTS Evolution to Full Spectrum Operations



1948
Aerial Target Function est. Raritan Arsenal, NJ



1958
Aerial Target Function transferred to Redstone Arsenal, AL



1974
Aerial Target Function renamed Targets Management Office



1985
Threat Simulator Program transferred to Army Intel Agency



1992
TSMO and TMO transferred to PM ITTS



1977
Threat Simulator Program est. by TRADOC Missile Intel Agency



1989
Sec Army decision to establish PM Instrumentation



1990
PM ITTS est. at Aberdeen Proving Ground, MD



Full Spectrum Operations - FM 3-0 Change 1

Environment:

- **Physical** environment, the state of governance, technology, local resources, **culture**
- Enemy, adversary, friendly, and neutral **systems**
- **Continually changing** coalitions, alliances, partnerships, and actors, Interagency and joint operations
- **Conditions**, circumstances, and influences

Threat:

- Nation-states, **organizations**, people, groups, or conditions that can damage or destroy life, vital resources, or institutions
- **Four major categories:** traditional, irregular, catastrophic, and disruptive
- **Hybrid threat** is the diverse and dynamic combination of regular forces, irregular forces, criminal elements, or a combination of these forces

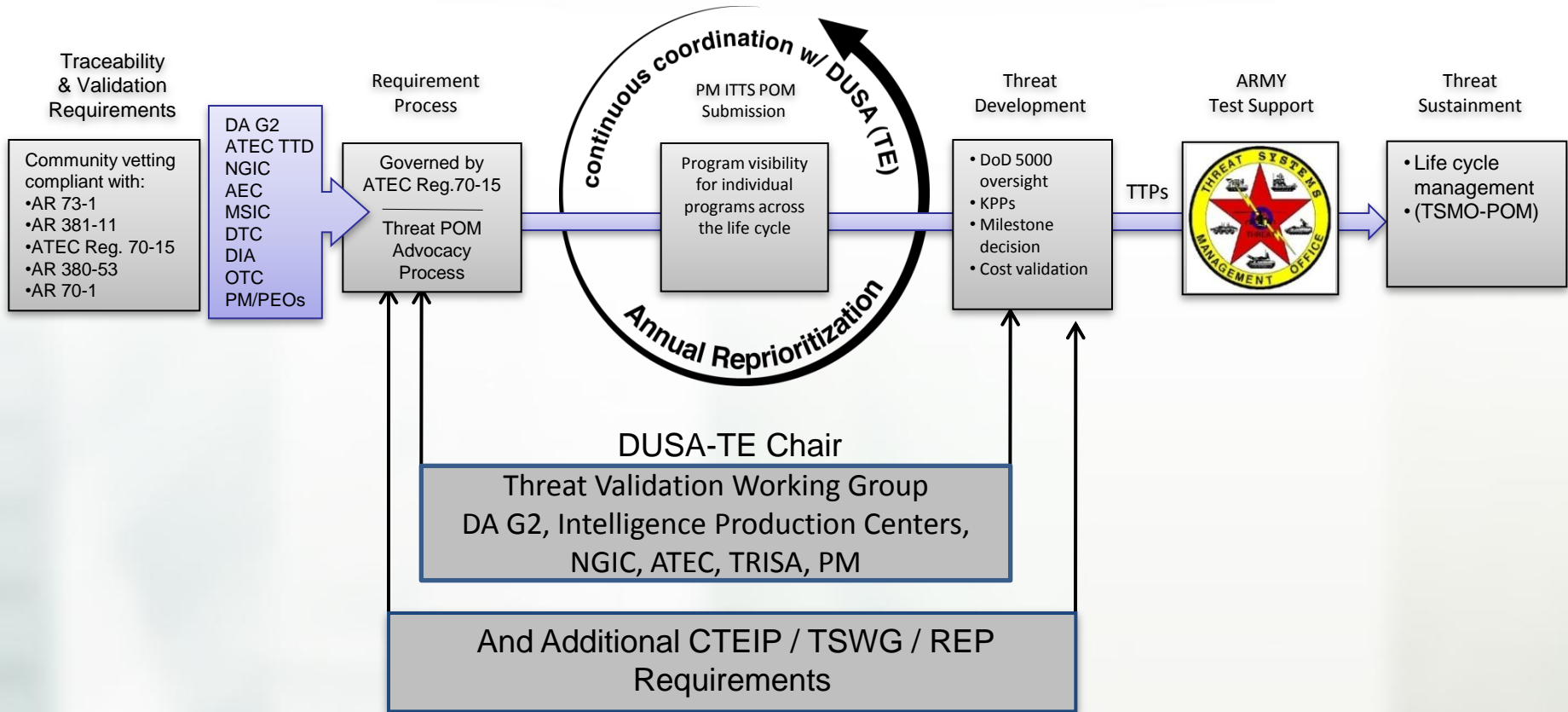
Challenges:

- **The Army** must be effective across the entire spectrum of conflict
- Must recognize and **implement changes** that once required years within unit deployment cycles.
- **Technology**, having vastly increased the lethality of the industrial age battlefield, assumes even more importance and requires greater and **more rapid innovation** in tomorrow's conflicts.
- **Leaders now field solutions across the force in weeks.**

- Joint Urban Test Capability (JUTC)
- Electromagnetic Environment Effects (E3)
- Threat Intelligence and Electronic Warfare Environment (TIEW ENV)
- Cyber Warfare
- Electronic Attack
- Cellular Network
- Integrated Threat Force (ITF)
- SIGINT/DF
- Unmanned Aerial Vehicles (UAV)
- Mobile Ground Targets (MGT)
- Aerial Targets

Army Threat Materiel Development

PM ITTS Charter & Funding



Preparing for Full Spectrum Operations

Testing

Developmental
Operational



Training

Live
Virtual
Constructive

Shape	
Stability	Offense
	Defense

Deter	
Defense	Offense
	Stability

Seize Initiative	
Offense	Defense
	Stability

Dominate	
Offense	Defense
	Stability

Stabilize	
Stability	Offense
	Defense

Enable Civil Authority	
Stability	Offense
	Defense

Environment -Threat-Challenges

Preparation

PM ITTS Support to Full Spectrum Operations to Hybrid Threats

PM ITTS:

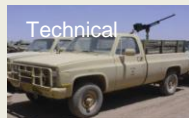
- supports FSO Hybrid threats with scalable and diverse support during Developmental and Operational Testing and training with robust and scalable threat capabilities.
- supplies threats, targets, and instrumentation across the live, virtual, and constructive domains.
- conducts initial research on SIPR and JWICS to determine the future threat capability to meet the TCRD threat requirements.



Cyber Warfare

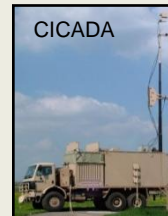
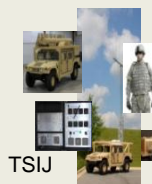
Criminal Elements

- Maneuver assets: Technical vehicles, MANPADS, ATGMs, small arms, etc.
- Information Operations: Computer hackers, etc.
- Communications: Cellular network, handheld radios, etc.



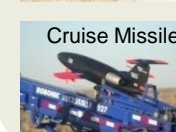
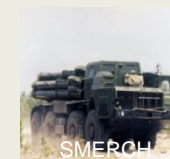
Irregular Force

- Maneuver assets: Technical vehicles, MANPADS, ATGMs, towed MRL, IED, UAVs, small arms, etc.
- Information Operations: Cyber Warfare, Electronic Attack, Decoys , etc.
- Communications: Cellular network, handheld radios, etc.



Regular Force

- Maneuver assets: Tanks and other armored vehicles, air defense systems, artillery, UAVs, cruise missiles, etc.
- Information Operations: Cyber Warfare, Electronic Attack, Electronic Support, Decoys , etc.
- Communications: Cellular network, scalable and mobile C3 vehicles, etc.



 Cyber Warfare supports all Hybrid Threats

PM ITTS Mission and Vision

Mission

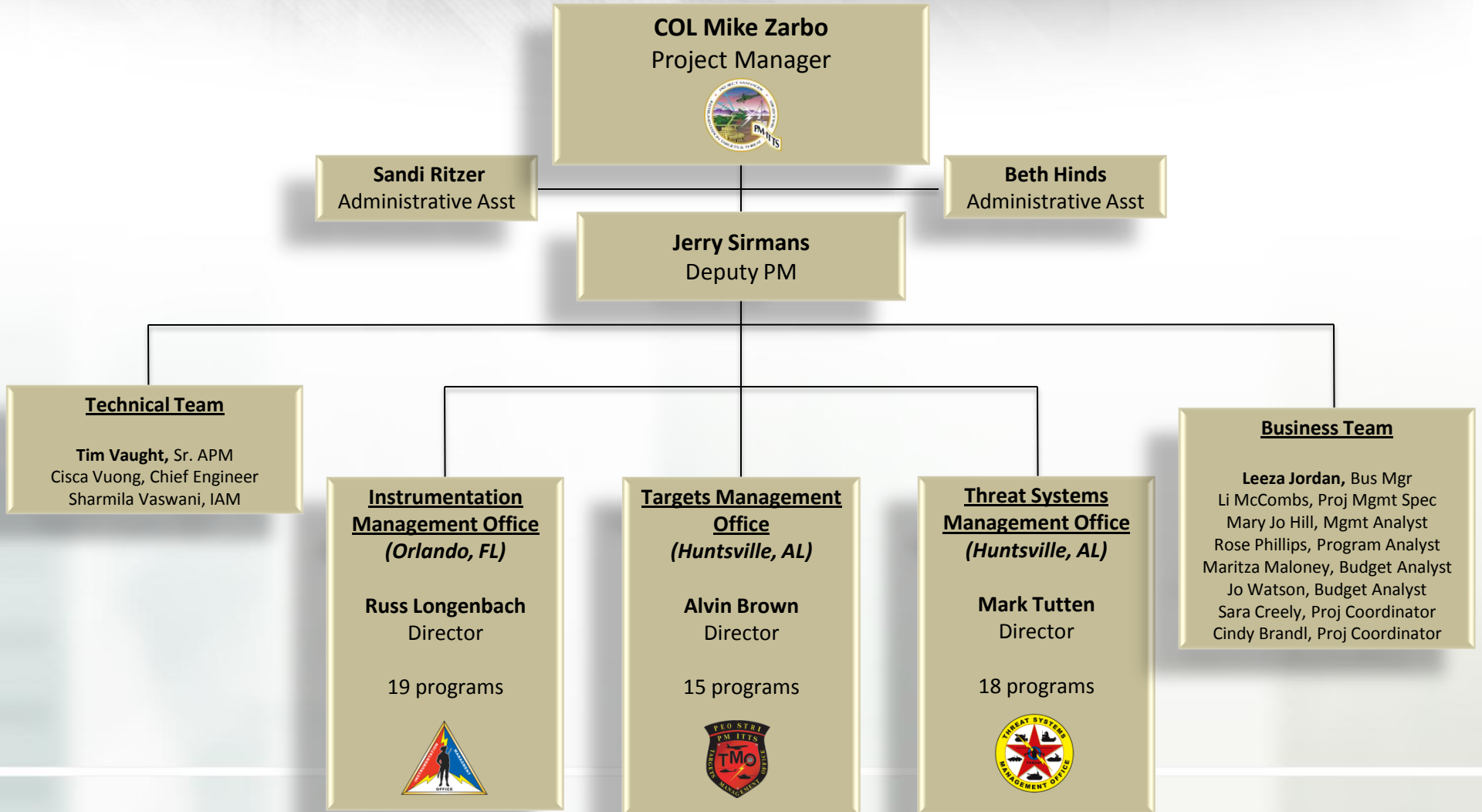
Manage the acquisition of optimized Instrumentation, Target, Threat & Foreign System products and services in support of U.S. Army, Department of Defense, Government, Industrial and International Customers and execute non-traditional missions as assigned or directed by the PEO.

Vision

To be recognized as the customer-preferred source for Instrumentation, Target, Threat and foreign System solutions.



PM ITTS Organization



PM ITTS at a Glance

➤ Geographically Dispersed Management Offices (MO)

- PM Headquarters and Instrumentation Management Office (IMO) located in Orlando, FL
- Targets and Threat Systems Management Offices (TMO and TSMO) at Redstone Arsenal, Huntsville, AL

➤ 67 Locations

- IMO: 13
- TMO: 44
- TSMO: 10

➤ 52 Active Programs

- IMO: 19
- TMO: 15
- TSMO: 18

➤ Sources of funding

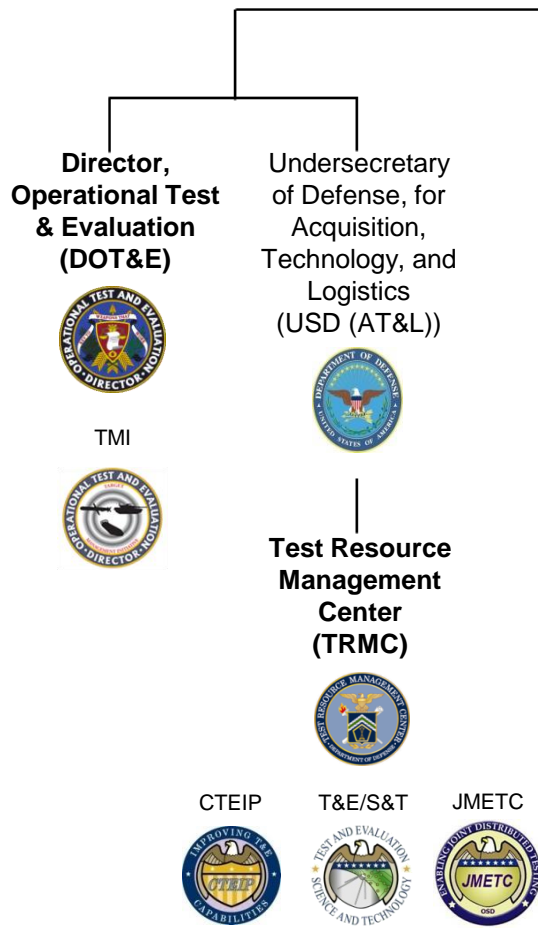
- DA Direct Mission Funding (9 POM lines - RDTE, OPA, MIPA, OMA)
- Execute Assigned OSD Programs Funded from CTEIP, REP, TSWG, T&E/S&T, TMI, and JMETC
- Over 50 Customers
- Foreign Military Sales



ITTS Primary Support The Test and Evaluation Community

Department of Defense

Office of the Secretary of Defense



Secretary of Defense
Deputy Secretary of Defense

Joint Chiefs of Staff
Chairman, Joint Chief of Staff

Chief of Staff, Army

Vice Chief of Staff, Army

Army Test and Evaluation Command (ATEC)



Army Evaluation Center (AEC)



Developmental Test Command (DTC)



Operational Test Command (OTC)



Department of the Army

Secretary of the Army

Deputy Under Secretary of the Army, Test & Evaluation (DUSA(TE))



Assistant Secretary of the Army for Acquisition, Logistics and Technology (ASA(ALT))



Program Executive Office for Simulation, Training, & Instrumentation (PEO STRI)



Program Manager for Instrumentation, Targets, and Threat Simulators (PM ITTS)



PM ITTS Support to Test Resource Management Center (TRMC)

Test Resource Management Center (TRMC)

Test & Evaluation/Science & Technology (T&E/S&T)



Service Modernization and Improvement Programs

Acquisition Programs and Advanced Concept Technology Demonstrations

- **Directed Energy (DET) ***
- **Electronic Warfare (EW)***
- Unmanned Autonomous Systems (UAST)
- Advanced Propulsion (APTT)
- Advanced Instrumentation Systems (AIST)
- Spectrum Efficiencies (SET)
- Netcentric Systems (NST)
- Multi Spectral (MST)

Central Test & Evaluation Investment Program (CTEIP)



T&E Multi-Service/Agency Capabilities

Threat Systems Simulator Development (TSSIM)

- Threat Communication Capability (TCC)

Joint Improvement & Modernization (JIM)

- Joint Urban Test Capability (JUTC)
- Objective Helicopter Icing Spray System (O-HISS)
- Directed Energy Test & Evaluation Capability (DETEC)
- Advanced Range Tracking and Imaging System (ARTIS) (FY12)
- Synthetic Battlefield Emitter System (FY12)
- Precision Targets

Resource Enhancement Project (REP)

- Multi-Spectral Sea and Land Target Simulator (MSALTS)
- Rotary Wing (Pending)

Joint Mission Environment Test Capability (JMETC)



DoD Corporate Distributed Test Capability

- Starship
- StarGen
- C3 Driver
- Assists with exercise control and exercise health by combining the ground truth from all of their participating test ranges to create a single, virtual test range that can be accessed from all test officers and authorized personnel.
- Performs continuous test analysis during exercise to rapidly detect anomalies.

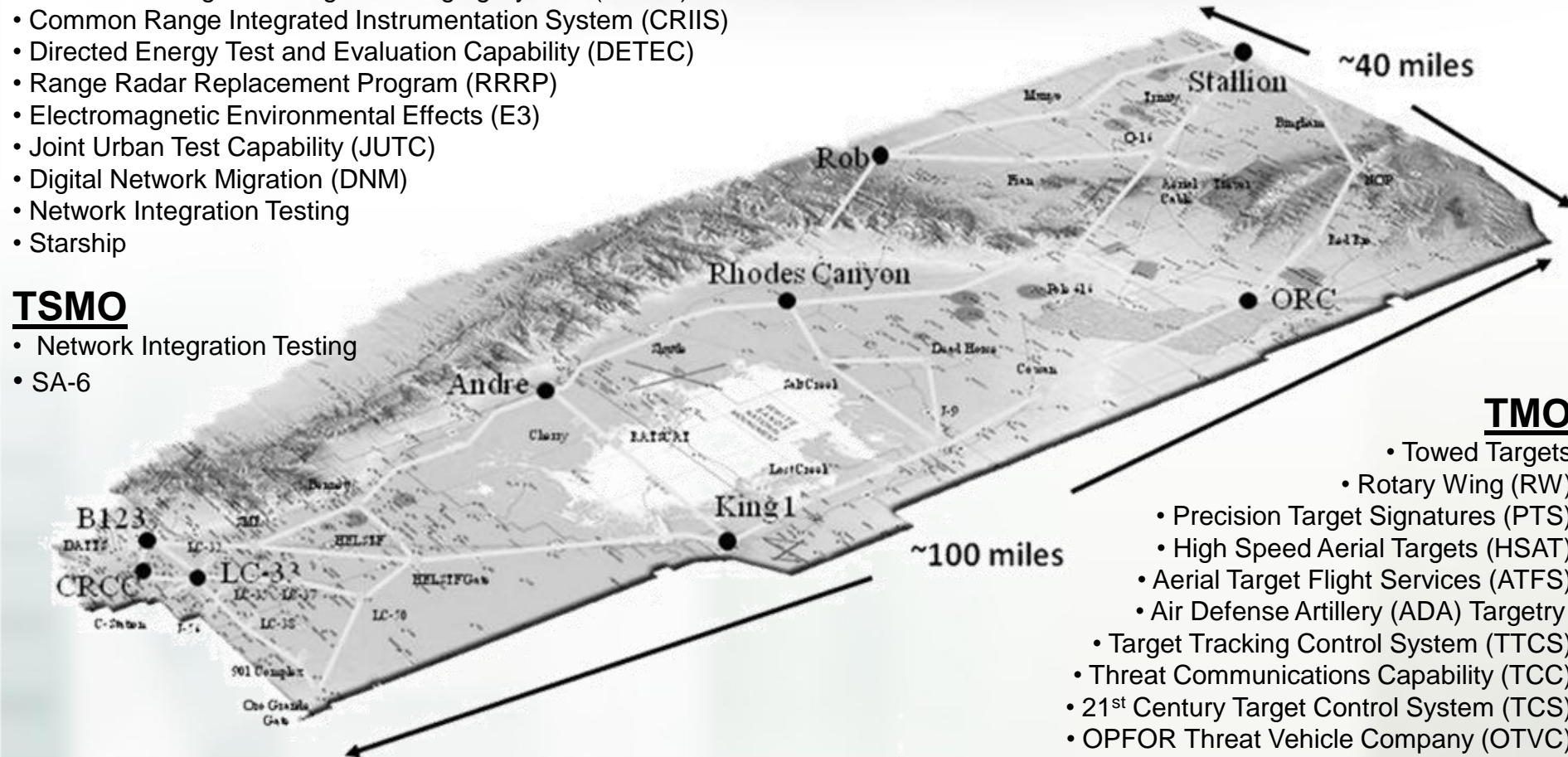
Support to White Sands Missile Range

IMO

- Advanced Range Tracking and Imaging System (ARTIS)
- Common Range Integrated Instrumentation System (CRIIS)
- Directed Energy Test and Evaluation Capability (DETEC)
- Range Radar Replacement Program (RRRP)
- Electromagnetic Environmental Effects (E3)
- Joint Urban Test Capability (JUTC)
- Digital Network Migration (DNM)
- Network Integration Testing
- Starship

TSMO

- Network Integration Testing
- SA-6



TMO

- Towed Targets
- Rotary Wing (RW)
- Precision Target Signatures (PTS)
- High Speed Aerial Targets (HSAT)
- Aerial Target Flight Services (ATFS)
- Air Defense Artillery (ADA) Targetry
- Target Tracking Control System (TTCS)
- Threat Communications Capability (TCC)
- 21st Century Target Control System (TCS)
- OPFOR Threat Vehicle Company (OTVC)
- Mobile Ground Targets Hardware (MGT-H)
- Mobile Ground Targets Operations (MGT-O)
- Unmanned Aircraft System – Target (UAS-T)

Mission: Develop devices that detect, measure, record, transmit and process data in support of Developmental Testing (DT) and Operational Testing (OT)



Joint Urban Test Capability (JUTC)

- Provide infrastructure and capabilities to test and evaluate technologies and systems used for FSO in a realistic urban environment.



Range Radar Replacement Program (RRRP)

- Modern radar designs with improved resolution, sensitivity, accuracy, and reliability for Test Centers at Aberdeen, Yuma, Redstone and White Sands Missile Range.



Electromagnetic Environmental Effects (E3)

- Upgrade equipment at the WSMR Electromagnetic Radiation Effects (EMRE) Facility, including support equipment, data acquisition suite, and support facilities.



Warfighter Injury Assessment Manikin (WIAMan)

- Developing anthropometrically correct instrumented manikins to be used in blast testing of vehicles to assess accelerative load injury risk to soldiers. This effort is led by DASA-RT as a S&T effort.

Mission: Develop, operate and support Aerial and Ground targets in support of Customer Testing, DT, OT, Live Training and FMS

Mobile Ground Targets (MGT)

➤ Fleet of over 350 foreign ground target assets and surrogates in support of DoD customers. Managed through five Primary Operating Centers (Redstone Test Center, Aberdeen Test Center, Yuma Test Center, USAF Air Armament Center and White Sands Missile Range).



Air Defense Artillery (ADA)

➤ Provide targets, ancillary devices and contractor support services for mandated live-fire crew gunnery weapon qualifications and missile engagement events. Steady and continual support to many weapons platforms PMs.

Virtual Targets (VT)

➤ The Virtual Targets project creates Computer Aided Design (CAD) geometry models. The Army Model Exchange provides a distribution point for simulation target models to support T&E modeling and simulation requirements.



Foreign Military Sales (FMS)

➤ Provide Aerial Target Flight Services (ATFS) to Japan for their HAWK/Chu-SAM and Patriot annual service practice (ASP) live fire exercises and for their Chu-SAM missile lot acceptance tests. Provide ATFS to Israel for their HAWK and Patriot ASP and to the German Air Force Air Defense School for Patriot Field Surveillance Program missions each year.

Mission: Develop, operate and support threat representative systems in support of DT, OT, Training and FMS

Integrated Threat Force (ITF)

➤ The ITF provides an integrated, scalable Threat command and control for all Army Threat representations to provide the T&E solution to satisfy the requirement of a 'Free Thinking' Threat force. Integrated realistic Army threat force under one live, virtual and constructive umbrella.

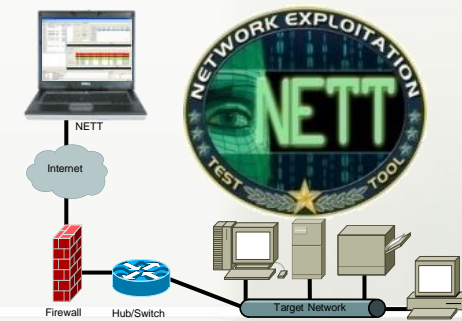


Threat CNO Teams (TCNOT)

➤ Provides a realistic representation of threat CNA and CNE capabilities employing threat doctrine, tactics, and techniques through the use of properly trained and certified professionals capable of executing threat computer operations. CNO Team can represent a broad range of national and trans-national threat CNO forces against a spectrum of U.S. operating systems, networks, protocols, computer components.

Network Exploitation Test Tool (NETT)

➤ Computer Network Operations (CNO) platform through which open-source exploits are executed and controlled on computer networks for representation of Threat CNO. Designed for use by Threat CNO Teams a wide variety of integrated exploits and tools that span the range of exploitation categories, resulting in the amplification of their existing expertise, significantly improving their efficiency.



PM ITTS Support to Theater



Mi-17 Procurement and Upgrade

- Four new Mi-17s and Spare Parts in support of Pakistan
- Two overhauled Mi-17s in support of Afghanistan
- Mi-17 Spare Parts in support of the Iraq
- 22 Mi-17s and Spare Parts in support of Iraq
- Upgrade 15 Mi-17 Helicopters
- **Transitioned to PM Non-Standard Rotary Wing (NSRW)**



D-30 Overhaul & Upgrade Program

- Completed delivery of D-30 Spare Parts & 82mm Mortar Spare Parts—Sep09
- **Transitioned to Joint Program Office (JPMO) Joint Lightweight 155 (JLW 155) Howitzer**



DZIK III Spare Parts and Special Tools



BREM Armored Vehicles, Spare Parts and Special Tools



REVA Spare Parts Procurement



BTR-80 Spare Parts Procurement

- Dynamic organization executing a unique mission.
- Only Army Project Manager aligned with the Test Community (ATEC/TRMC).
- Multiple programs spanning the boundaries of the acquisition lifecycle model.
- Supporting Theater and the Network Integration Events.
- Supporting Full-Spectrum Operations with Valid Threat Representation in Testing.

ITTS... FOR THE SOLDIERS

FULL SPECTRUM OPERATIONS

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Rick Copeland *Project Manager Acting* **Constructive Simulation** **(PM ConSim)**

6 April 2011

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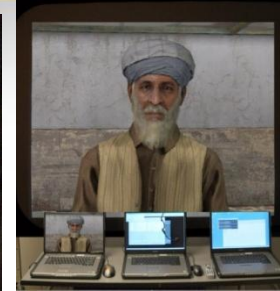
Agenda

- Mission
- Strategic Priorities
- FM 3-0 and ConSim
- Summary
- Q & A





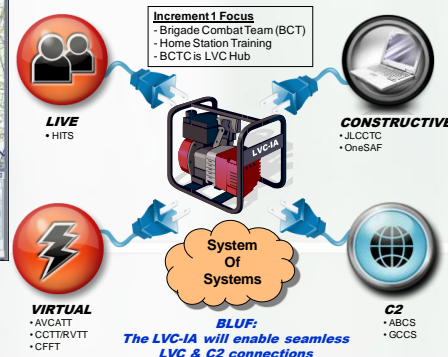
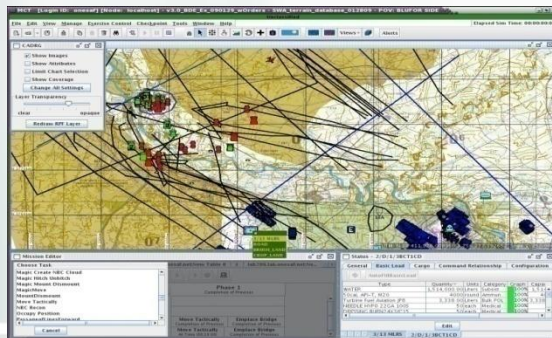
Vision:



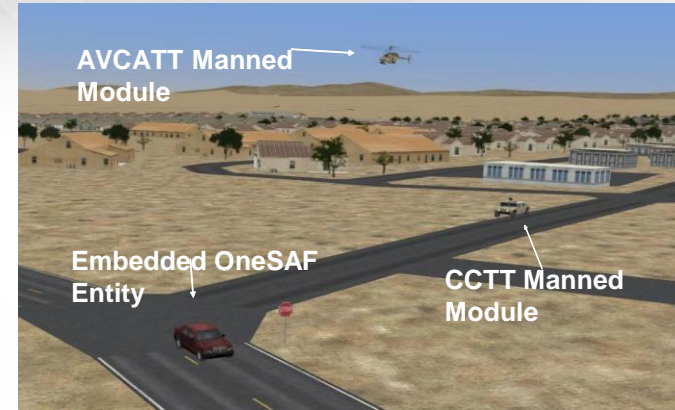
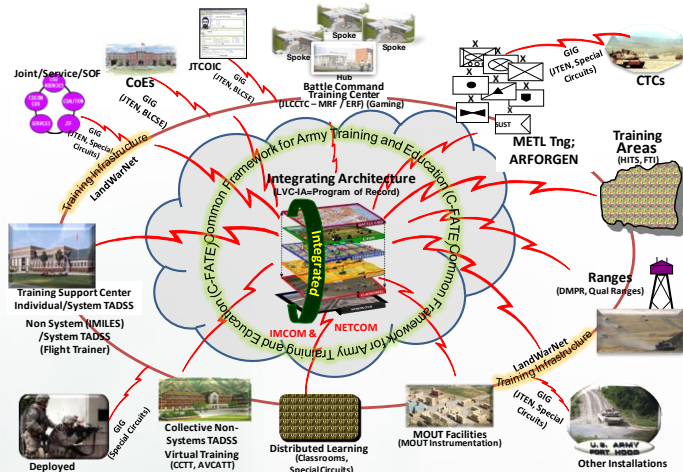
To be the Recognized Leader for Providing Constructive and Integrated Simulation Environments.

Mission:

To Provide Operationally Relevant Constructive and Integrated Simulation Environments for the Warfighter and the Nation.



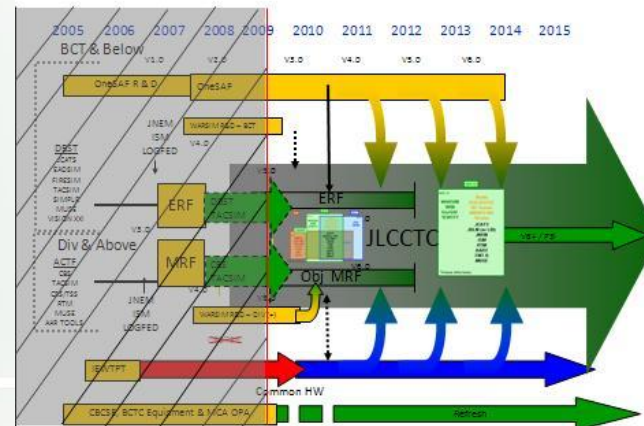
#1 Army Integrated Training Environment



#2 Virtual Systems SE CORE Integration



#3 Unified Constructive Architecture



“Supporting the Warfighter”

Offensive Operations

Primary tasks:

- Movement to Contact
- Attack
- Exploitation
- Pursuit

Purposes:

- Dislocate, isolate, disrupt, and destroy enemy forces
- Seize key terrain
- Deprive the enemy of resources
- Develop intelligence
- Deceive and divert the enemy
- Create a secure environment for stability operations

Defensive Operations

Primary tasks:

- Mobile defense
- Area defense
- Exploitation
- Retrograde

Purposes:

- Deter or defeat enemy offensive operations
- Gain time
- Achieve economy of force
- Retain key terrain
- Protect the populace, critical assets, and infrastructure
- Develop intelligence

Stability Operations

Primary tasks:

- Civil security (including security force assistance)
- Civil control
- Restore essential services
- Support to governance
- Support to economic and infrastructure development

Purposes:

- Provide a secure environment
- Secure land areas
- Meet the critical needs of the populace
- Gain support for host-nation government
- Shape the environment for interagency and host nation success

Civil Support Operations

Primary tasks:

- Provide support for domestic disasters
- Provide support for NBC and high explosive incidents
- Provide support for domestic civilian law agencies
- Provide Other designated support

Purposes:

- Save lives
- Restore essential services
- maintain or restore law and order
- Protect infrastructure and property
- Maintain or restore local government
- Shape the environment for interagency success

Full Spectrum Operations - FM 3-0 Change 1

Environment:

- **Physical** environment, the state of governance, technology, local resources, **culture**
- Enemy, adversary, friendly, and neutral **systems**
- **Continually changing** coalitions, alliances, partnerships, and actors, Interagency and joint operations
- **Conditions**, circumstances, and influences

Threat:

- Nation-states, **organizations**, people, groups, or conditions that can damage or destroy life, vital resources, or institutions
- **Four major categories:** traditional, irregular, catastrophic, and disruptive
- **Hybrid threat** is the diverse and dynamic combination of regular forces, irregular forces, criminal elements, or a combination of these forces

Challenges:

- **The Army** must be effective across the entire spectrum of conflict
- Must recognize and **implement changes** that once required years within unit deployment cycles.
- **Technology**, having vastly increased the lethality of the industrial age battlefield, assumes even more importance and requires greater and **more rapid innovation** in tomorrow's conflicts.
- **Leaders now field solutions across the force in weeks.**

Key Ongoing Efforts:

- Live Virtual Constructive – Integrated Architecture Increment 1
- Joint Land Component Constructive Training Capability
- One SemiAutomated Forces
- Intelligence and Electronic Warfare Tactical Proficiency Trainer Technical Control Cell and HUMINT Control Cell
- SE Core support to Virtual and Integrated environments
- Enabling programs
- Enabling Tools

Future Efforts:

- Low Overhead Simulation/Stimulation Capability
- Live Virtual Constructive – Integrated Architecture Increment 2
- Intelligence and Electronic Warfare Tactical Proficiency Trainer Technical Control Cell SIGINT enhancements

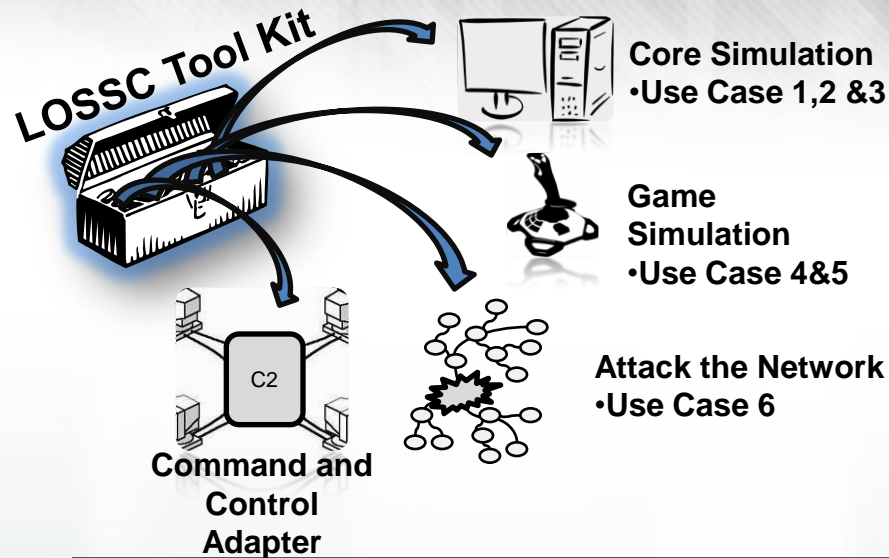
ConSim FSO Can Do

- Ability to replicate Offensive, Defensive, Stability, and/or Civil Support operations simultaneously. War fighters' Simulation (WARSIM) and the One Semi-Automated Force (OneSAF) simulation will provide generally good replication of FSO, but at least initially will be augmented with specialty modeling capabilities for logistics and non-kinetic/non-lethal activities and effects.



- LVC-IA focused on BCT at Home Station. Initial increment focused on Offensive and Defensive Operations. Constructive Models have some niche capability for Stability Operations and Civil Support Operations. Simultaneous operations capable.





Capabilities

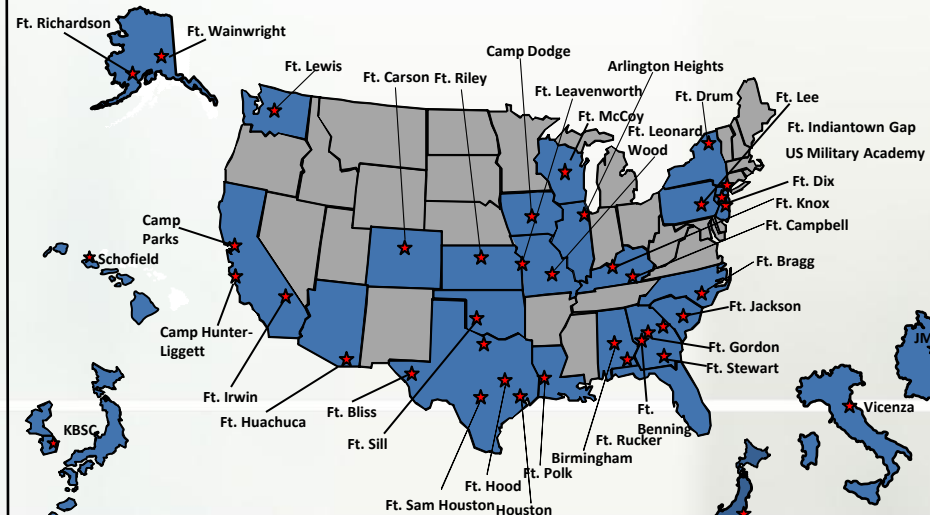
- Battle Staff Training Capability/Toolkit to support Institutional POI and Brigade Combat Team (BCT) staff and below training and exercises.
- Models Full Spectrum Operations
- Allows for MSEL injects
- AAR to support Training Audience self-assessment
- Direct ABCS C2 stimulation
- Minimal resource requirements
 - Less manpower - 1 to 2 personnel
 - Reduced footprint - 2 computers

TCM: CTE (Mr. Mike Black)

Current Activities

- Fielding: IOC fielding - 2nd QTR FY 12
- Funding:
 - JIEDDO RDTE
 - Army
 - POM 13-17
- Extensive Market Research to position the way forward.

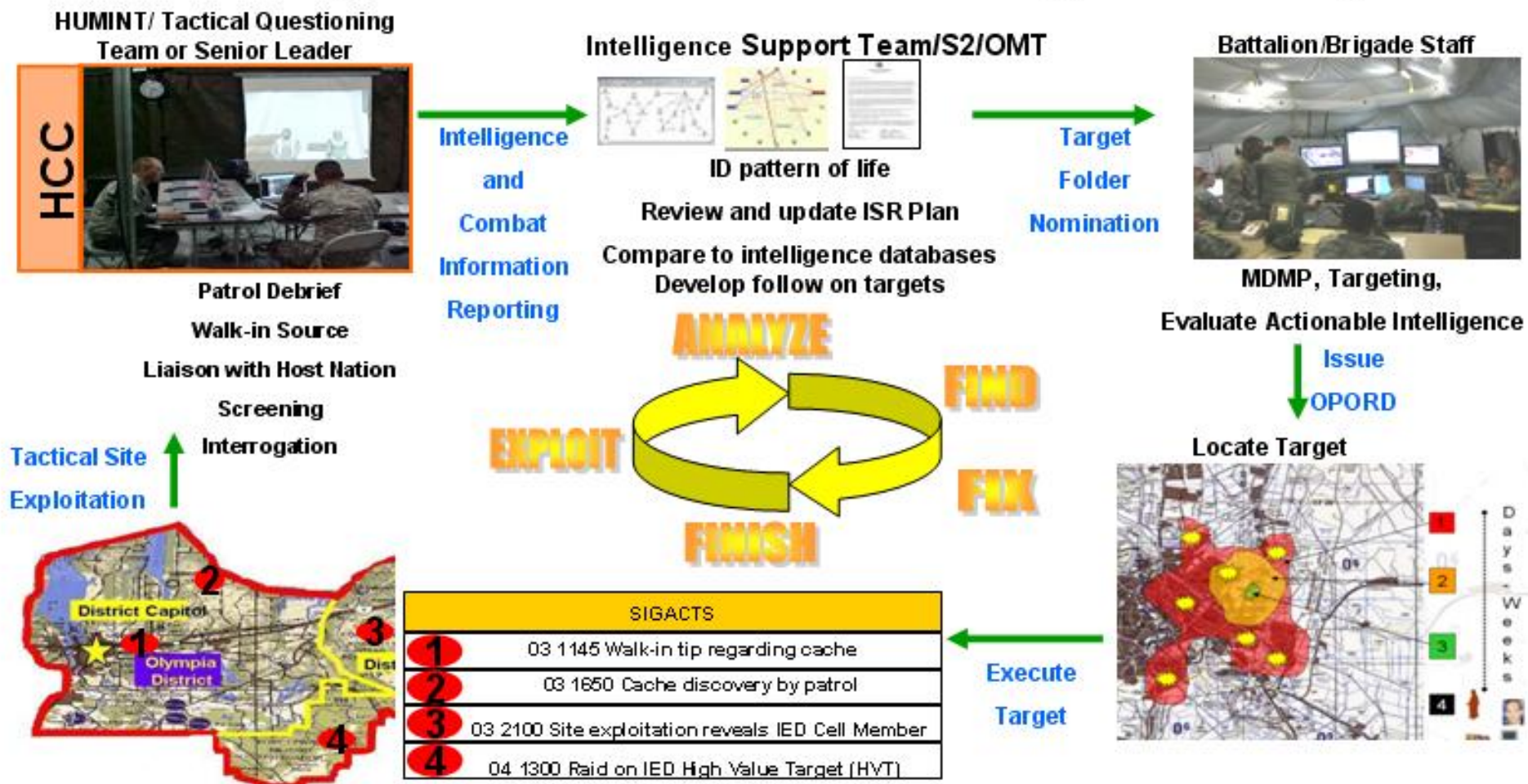
Fielding Plan



- Intelligence and Electronic Warfare Tactical Proficiency Trainer (IEWTPT) provides Intelligence MOS training allowing Warfighting Commanders at all echelons the ability to train the Intelligence Warfighting Function (IWF) based on accurately portraying the Full Spectrum Operations (FSO) environment. Trains intelligence Warfighters by stimulating MI warfighting equipment where system operators and analysts are able to synchronize their Intelligence, Surveillance, and Reconnaissance (ISR) assets to exploit exercise intelligence data and provide the commander with required, executable, intelligence information

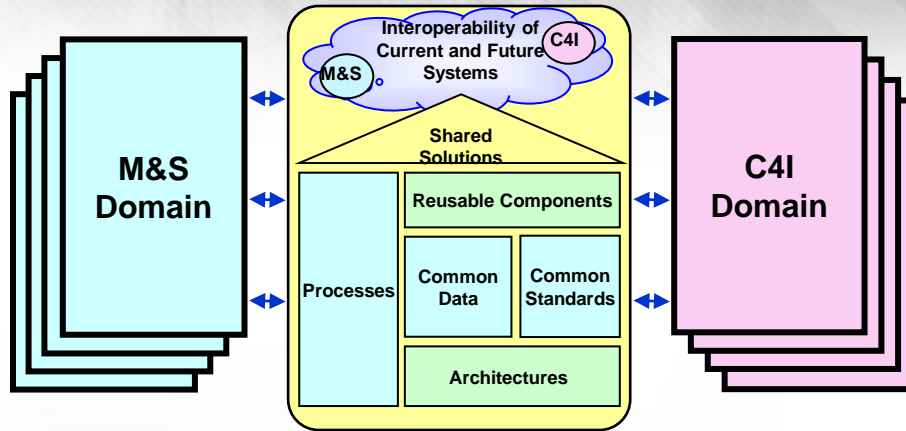


Integrated HCC Training Concept



- Stability and/or Civil Support modeling, though present in varying degrees, is less well-developed. WARSIM and OneSAF in conjunction with other modeling tools such as the Joint Deployment and Logistics Model (JDLM) and the Joint Non-kinetic Effects Model (JNEM) provides a broader (though still limited) ability to train such activities as Capacity Building, Consequence Management, Humanitarian Assistance, and other ‘indirect’ support and effect phenomena which become increasingly central as the training environment (‘conditions’) shifts from General War to Stable Peace and/or Stability or Civil Support operations become more important training objectives.

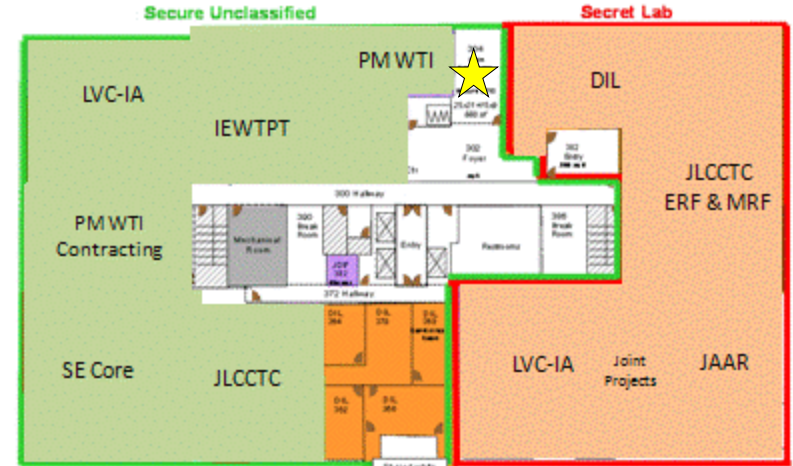
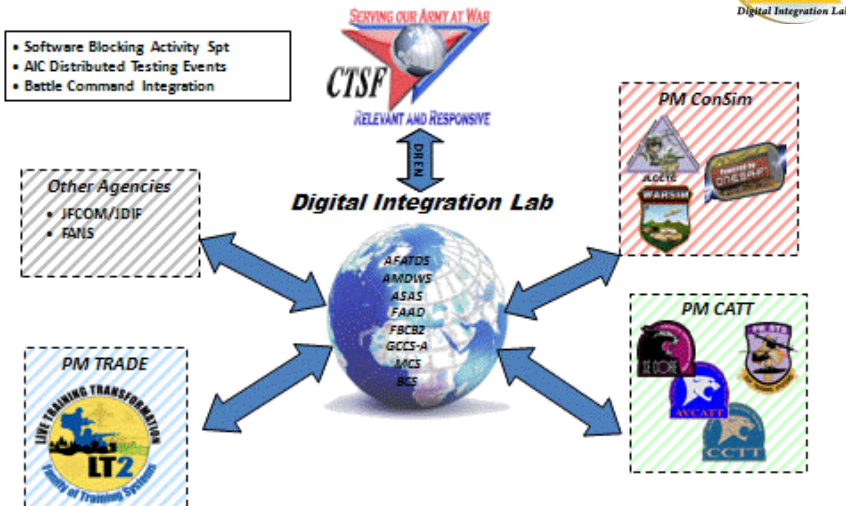
ConSim Enablers



Simulation to C4I Interoperability (SIMCI)



Digital Integration Lab



Joint Data Integration Facility

- Many of the Political-Military-Economic-Support-Information- and Infrastructure variables that serve to describe a given situation at any point along the Spectrum of Conflict are not directly modeled; depending upon the training objectives, some use of Master Scenario Events Lists and human-in-the-loop (HITL) augmentation of the simulation capabilities is required. Aggressive efforts are on-going to identify and implement training-effective, cost-efficient modeling of a broader range of non-kinetic/non-lethal phenomena.

Questions?

FULL SPECTRUM OPERATIONS

INDUSTRY DAY



Fran Fierko
Deputy Project Manager

**Combined Arms
Tactical Trainers
(PM CATT)**

6 April 2011

**PEO
STRI**

PM CATT (Virtual and Gaming)

**Mission: Provide
Life Cycle Management for 68
Virtual and Gaming programs / projects**

FY08 - 10 Total Funding: \$1.8B

**Project Manager
COL Francisco A. Espailat**

**Deputy Project Manager
Mr. Fran Fierko**

Combat Developers:

- TCM - Virtual
- TCM - Gaming
- MEDCOM
- USSOCOM

TCM = TRADOC Capabilities Managers



**Product Manager
Ground Combat
Tactical
Trainers
(PM GCTT)
LTC Charlie
Stein**

**Product Manager
Air and Command
Tactical
Trainers
(PM ACTT)
LTC(P) Mike
Newell**

**Product Manager
Special Operations
Forces Training
Systems
(PM STS)
LTC Richard
Haggerty**

**Assistant
Project Manager
Close Combat
Tactical Trainer
(APM CCTT)
Mr. John
Foster**

**Assistant
Project Manager
Medical
Simulation
(APM MedSim)
LTC Wilson
Ariza**

**Assistant
Project Manager
Reserve
Components
Training Systems
LTC Jay
Smith**

- Common Driver Trainer
- Engagement Skills Trainer 2000
- HMMWV & MRAP Egress Trainers
- Laser Marksmanship Training System
- Route Clearance Training System
- Advanced Gunnery Training System
- Maintenance Training Systems

- Aviation Combined Arms Tactical Trainer
- Games For Training
- Basic Electronics Maintenance Trainer
- Shadow Crew Trainer
- Joint High Speed Vessel
- Vessel Defense System

- Call for Fire Trainer
- MH47G & MH60L Combat Mission Simulators
- Special Operations Forces Air Ground Simulator
- Special Operations Forces Mixed-Reality Digitized Ranges
- Joint Fires Product Line
- Light Assault/Attack Reconfigurable Combat Mission Simulator

- CCTT/Reconfigurable Vehicle Tactical Trainers:
- | | |
|-------------------------|----------------|
| Ft. Campbell, KY. NC. | Ft. Bragg, |
| Ft. Benning, GA. WA. | Ft. Lewis, |
| Ft. Stewart, GA. | Ft. Hood, TX. |
| Ft. Carson, CO. | Ft. Bliss, TX. |
| Ft. McCoy, WI. | Ft. Riley, KS. |
| Ft. Drum, NY. | Ft. Dix, NJ. |
| Schofield Barracks, HI. | |
| Ft. Wainwright, AL. | |
| Camp Shelby, MS. | |
| Vilseck, GE. | |

- Medical Simulation Training Centers:
- | | |
|-------------------------|------------------|
| Ft. Campbell, KY. | Ft. Stewart, GA. |
| Ft. Benning, GA. | Ft. McCoy, WI. |
| Ft. Carson, CO. | Ft. Hood, TX. |
| Ft. Lewis, WA. | Ft. Bliss, TX. |
| Ft. Bragg, NC. | Ft. Riley, KS. |
| Ft. Drum, NY. | Ft. Dix, NJ. |
| Rodriguez Range, Korea | |
| Schofield Barracks, HI. | |
| Ft. Wainwright, AL. | |
| Camp Shelby, MS. | |
| Vilseck, GE. | |

DAC	122
Navy	12
Military	16
SETA	67
Intern	17
Total	234

In Theater Support to Overseas Contingency Operations

FULL SPECTRUM
OPERATIONS
INDUSTRY DAY



HMMWV Egress Trainer

MRAP Egress Trainer

AMBUSH (Games for Training)

Bradley Advanced Training System

M2/3A2 ODS Gunnery Trainer

Call For Fire Trainer

Engagement Skills Trainer 2000

Medical Simulation Training Centers

Reconfigurable Vehicle Tactical Trainer

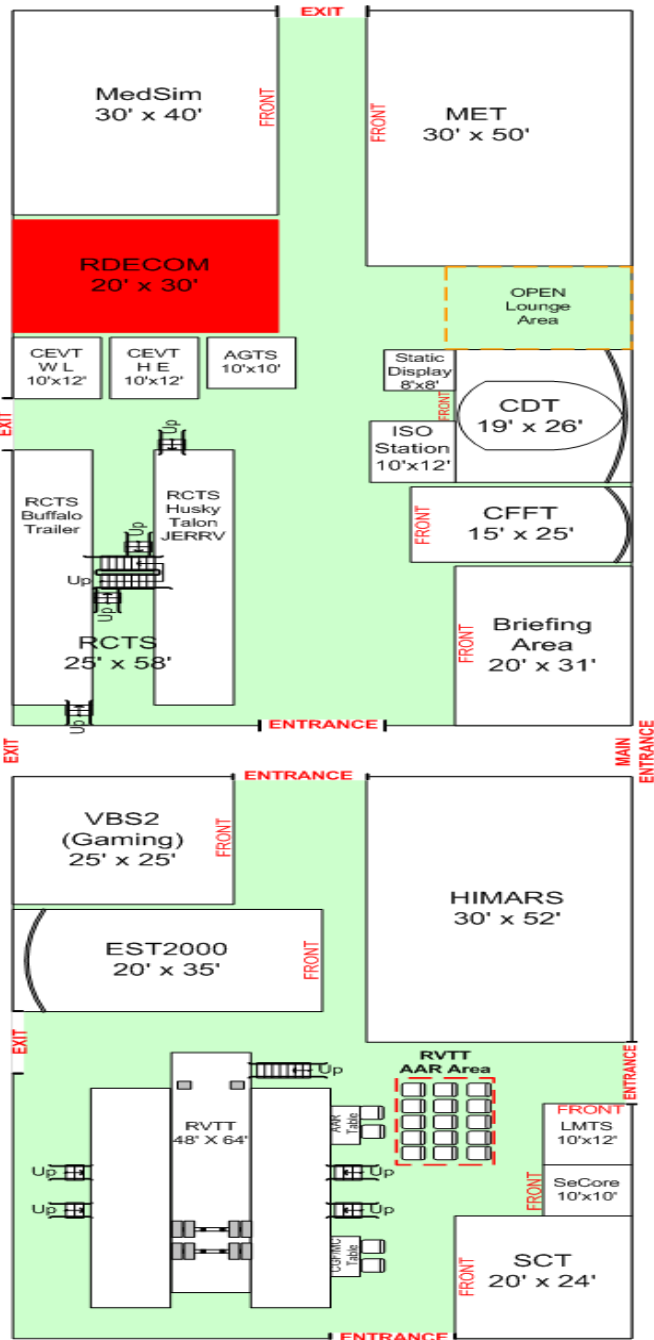
M1A2 Advanced Gunnery Training System

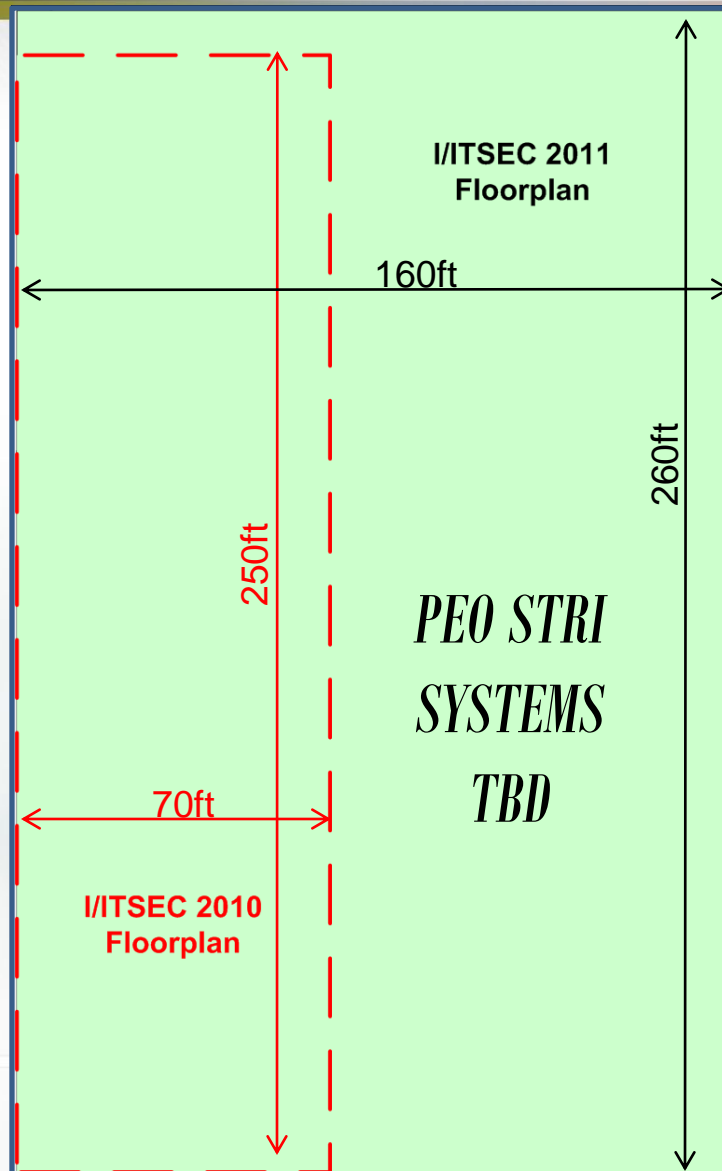


Over 363,355 deployed Soldiers were trained on the above simulators in Kuwait, Afghanistan and Iraq in FY10

PM CATT I/ITSEC 2010

29 November to 2 December Orlando, FL





Timeline:

- 22 July 11 – PM CATT System Participation Commitment
- 9 August 11 – PM CATT Initial Update Briefing
- 13 September 11 – Final Systems Space Allocation
- 13 October 11 – Orange County Convention Center Recon
- 24 November 11 – Move-in / Begin Set up
- 28 November – 1 December 11 – I/ITSEC 2011

Questions?

FULL SPECTRUM OPERATIONS

INDUSTRY DAY



Bob Voltz
*Business Operations
Officer*

**Field Operations
(PM Field Ops)**

6 April 2011

**PEO
STRI**

- Upcoming FSO Rotations at the MCTCs
- Will see an increased use of MILES supporting the rotation (Vehicle, BLUFOR, OPFOR & IPDDs)
- Increased support within the entire Training footprint

- Use of Instrumentation Systems (IS) that have not been used during MREs in a COIN training environment (Live Fire, OPFOR systems, battlefield effects)
- Rely on greater use of communication systems and infrastructure
- Training for:
 - OPFOR on use of MILES
 - Observer Controllers on MILES and other training enablers
 - Training Analysts on use of Instrumentation Systems available for FSO

- Training Gaps:
 - ASET IV – Air Defense, Training for OPFOR, BLUFOR and OCs
- FSO Priorities Include:
 - Range Communications & Capture Vehicle & Player IS data
 - MILES
 - Pairing of engagements and Tracking of personnel and vehicles
 - LVC Integration & Interaction
 - NUWC Optimization and Integration

- MILES Training (instrumented)
- Advanced Gunnery Training System (AGTS) – increase use of precision gunnery training
- Increased use of communication systems
- During MCTC Rotations less dependency on use of Forward Operating Bases (FOBs) in the maneuver area

- Continue working with PM TRADE Working Groups
- Continue with the NTC Range Communication Subsystem (RCS) System Life Cycle Extension Program (SLEP)
- Ensure that Instrumentation Systems are sustained at highest possible level

FULL SPECTRUM OPERATIONS

INDUSTRY DAY



Traci Jones

APEO Project Support

6 April 2011

APEO
STRI

17 – 20 April AAAA Nashville, TN

10 – 12 May ITEC Cologne, Germany

15 – 16 June TSIS Orlando, FL

27 – 29 Aug NGAUS Milwaukee, WI

10 – 12 Oct AUSA Washington, DC

28 Nov – 1 Dec I/ITSEC Orlando, FL