US ARMY RDECOM

U.S. Army Research, Development and Engineering Command

Mobile Counter-IED Interactive Trainer (MCIT)

TECHNOLOGY DRIVEN. WARFIGHTER FOCUSED.

Roy Wall

RDECOM Simulation & Training Technology Center (STTC)

Roy.Wall@us.army.mil

(407) 384-3568

Mobile Counter-IED Interactive Trainer (MCIT)

- **MCIT is a Joint Research and Development effort funded by JIEDDO JCOE with support from RDECOM STTC to create a mobile system for Counter-Improvised Explosive Device (C-IED) training**

- **The primary development of the system was done by the Institute for Creative Technologies, University of Southern California**

INSTITUTE FOR CREATIVE TECHNOLOGIES

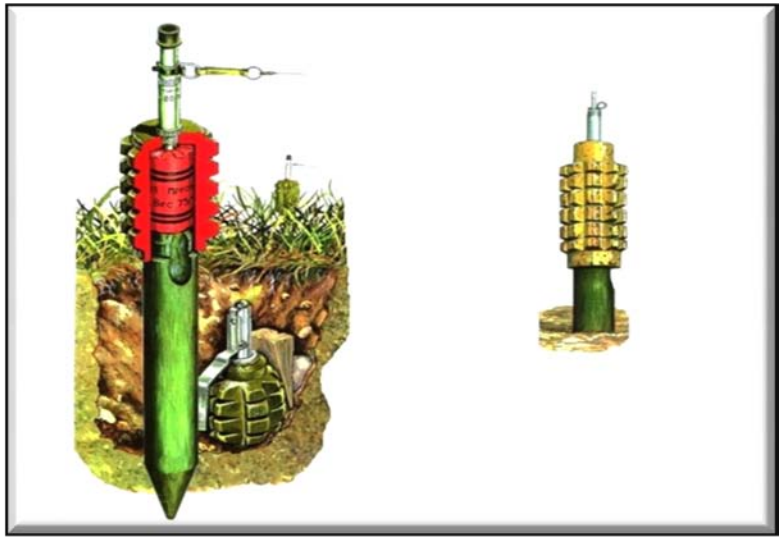
Agenda

- Why MCIT?
- What is MCIT?
- Accomplishments
- Video
- Questions

Agenda

- **Why MCIT?**
- **What is MCIT?**
- **Accomplishments**
- **Video**
- **Questions**

Unconventional Warfare – Not a New Concept



TECHNOLOGY DRIVEN. WARFIGHTER FOCUSED.

Unconventional Warfare – But the Details Change

Training Issues

Why? – **IEDs are the leading cause of enemy-inflicted casualties**

When? – **Need to train now, and prepare for tomorrow's threats**

Where? – **Today, Afghanistan. Tomorrow, Honduras? Indonesia?**

What? – **Counter-IED concepts and "6th sense"**

How? – **Mobile immersive/interactive experiences**

How To Train

supplement . augment

immersive

red TTPs

creative thinking

gaming

practice (safely)

Agenda

- Why MCIT?
- What is MCIT?
- Accomplishments
- Video
- Questions

MCIT Overview

- **Program Objective – to provide Warfighters with enhanced ability to recognize and defeat IEDs under a variety of complex attack scenarios**
- **Training includes understanding of –**
  - **Basic components and functions of an IED**
  - **Common initiating systems**
  - **Terrain/environmental features used to mask IED's and initiating systems**
  - **Proper implementation of the appropriate C-IED procedures**

MCIT Concept

- Modularized Mobile Trainer contained within four - 40’ Container Boxes (CB)
- CBs are transformed into an immersive, self-paced training environment that includes:
  - Static content displays; current content focused on Afghanistan
  - Hands-on, “Red vs. Blue,” game-based simulation
  - Mixed reality
  - Narrative storylines using video
- Target audience – junior officers (LTs/CPTs) and enlisted Soldiers (E1-E5s)
- Total estimated contact time – 90 minutes
  - 15 minutes/trailer for CBs 1 – 3
  - 45 minutes for CB4 (3 x 15 min sessions)

- What makes this unique – training is presented from insurgent’s viewpoint

Learning Objectives

- **Derived from CENTCOM, C-IED Training & Capabilities Guidance**
- **MCIT is a cognitive training experience…we are not teaching motor skills**

Individual	***MCIT***
• Identify visual indicators of an IED	✓
• React to a suspected IED or VBIED attack	✓
• React to an IED or VBIED attack	✓
• Perform a nine line UXO report	✓
• Familiarity with man-pack and vehicular mounted ECM	✓
• Prepare for IED threats	✓
• Plan for IED threats	✓

Collective C-IED Tasks	***MCIT***
• Prepare for ground emplaced IED defeat operations	✓
• Know the five “C”s	✓
• Know and practice nine principles of IED combat	✓
• Conduct IED reconnaissance	✓
• React to possible ground emplaced IED	✓
• Prepare for a suspected VBIED or suicide attack	✓
• Conduct mounted ops and Battle drills in an IED environment	✓

CB1 – Individual Tasks and Identification

"This is Nothing New - You Can Win"

Static displays

- History of IEDs
- IED categories
- Suicide devices
- IED components
- IED indicators

Narrative character

Omar (insurgent)

- Insurgent mindset
- Red TTPs
- Components
- Devices
- Emplacement

Narrative character

Owen (US Soldier)

- Personal experiences
- Blue TTPs
- Red TTPs
- Offensive mindset

CB1 – Individual Tasks and Identification

CB1 – Storyline Combined With Static Displays

CB1 – Individual Tasks and Identification

CB1 – Self-Paced Video Narrative Sequence

1 - Intro video setting the stage

2 – Omar explains his attack

3 – Owen relates his experiences

4 – Owen discusses blue TTPs

CB2 – The Insurgent's Lair

"know the enemy..."

Static displays

- HME elements
- IED components
- Hiding places
- Game maps
- "Trophy" photos

Narrative character

Omar (insurgent)

- Insurgent mindset
- Red TTPs
- HMEs
- Hiding components
- Emplacement

Game elements

- Route maps
- Potential targets
- Red TTPS

Specific to game terrain

US ARMY RDECOM

CB2 – “The Insurgent’s Lair”

CB3 – Collective Tasks and Preparation/Response

"know yourself and your team - here's how you win"

Static displays

- 9 principles
- 5 Cs
- CREW devices
- C-IED Special Teams
- Casevac/IED 9lines
- "Attack the Network"

Narrative characters

PFC Owen (Soldier)

CO/Narrator

- Point-of-view attack
- CREW reminders
- Intel brief
- Mission brief
- Game mission specifics

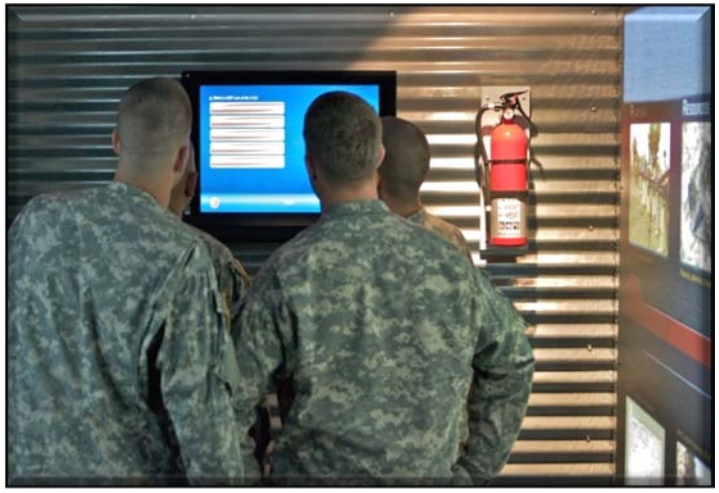
Game elements

- Mission brief
- Potential attack points
- Route/terrain

Specific to game terrain

CB3 – Collective Tasks and Preparation/Response

CB3 – Story and Game Prep with Displays



CB3 – Collective Tasks and Preparation/Response

CB3 – Self-Paced Video Narrative Sequence

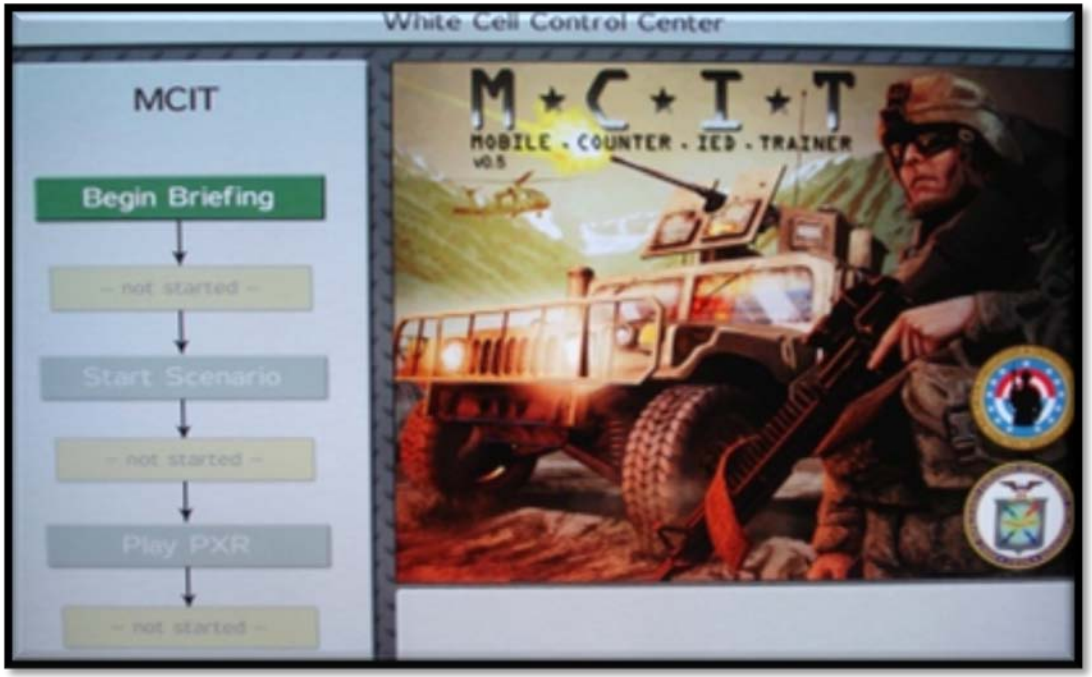
1 – Point-of-view attack and 9-line

2 – CREW device brief (6 types)

3 – Intel brief for game experience

4 – Mission brief for game experience

CB4 – “Insurgent Boot Camp”



TECHNOLOGY DRIVEN. WARFIGHTER FOCUSED.

CB4 – “Red vs Blue” Exercise

Participants

- 6 blue players (2 HMMWVs: Driver, TC, Gunner)
- 3 red players (Triggerman, Lookout, & Cameraman)
- 1 white cell operator

Experience

Unit contact time in trailer: approximately 45 min

(~15 min/session x 3 sessions)

CB4 – “Red vs Blue” Exercise

BLUFOR x2

OPFOR

TECHNOLOGY DRIVEN. WARFIGHTER FOCUSED.

CB4 – Post Exercise Review
What Constitutes Success?

- **Blue**
  - **UXO missed/detected and reported**
  - **9-line correctness and timeliness (IED/UXO; CASEVAC)**
  - **Civilian casualties**
  - **Enemy casualties**
  - **Patterns**
  - **Standoff distance maintained**
  - **Staying observant**
  - **CREW device activation**

- **Red**
  - **Ambush site selection**
  - **IED types selection**
  - **Enemy casualties**
  - **Video footage of attacks**

Agenda

- Why MCIT?
- What is MCIT?
- Accomplishments
- Video
- Questions

MCIT Accomplishments

- **Version 0.5 delivered to Ft. Bragg and Camp Pendleton for Operational Assessment**
- **Version 1.0 delivered to Camp Shelby where there are currently two BCT's scheduled for training prior to deployment**
- **Training on average of 50 – 80 Warfighters per site, per day**
- **Direct Quote**
  - "My name is Spc Wilson, a medic from 1/505th PIR 3rd BDE. I was injured during our last deployment, and during the time on Rear Detachment I was brought to help train new soldiers on the IED trainer. Having run multiple missions downrange as a medic with my line platoon, I recognize the amazing system you have put together for training. The program is realistic, informative, and very helpful for the new soldiers. I honestly wish I had been afforded the training involved before I had been sent downrange. The programmer is to be congratulated, and the mission as a whole of this entire operation is a stellar success. Thank you for your time, and please continue to do excellent work."

Agenda

- Why MCIT?
- What is MCIT?
- Accomplishments
- Video
- Questions

Agenda

- Why MCIT?
- What is MCIT?
- Accomplishments
- Video
- Questions

YOU CAN WIN!
IF YOU THINK LIKE AN INSURGENT