Mobile Ground Targets & Virtual Targets

47th Annual Targets, UAVs and Range Operations Symposium

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22 October 2009
AGENDA

• Mobile Ground Targets Components
  ➢ Operational Threat Vehicle Company
  ➢ Mobile Ground Target Hardware
    – Actual Hardware
    – Surrogate Hardware
    – Technical Vehicles
  ➢ Mobile Ground Target Operations

• Virtual Targets

• Summary
Mobile Ground Targets Components

**Operational Threat Company**
- Fully Mission Capable Systems for use in Force-on Force Exercises

**Mobile Ground Target Hardware**
- Fleet of Foreign Threat Systems With Multiple Operational and Mobility Capabilities

**Mobile Ground Target Operations**
- Maintains and Operates All Systems In The Mobile Ground Target Fleet
Operational Threat Vehicle Company

**DESCRIPTION:**

- Acquire and field fully mission capable Foreign Threat representative Mobile Ground Targets (MTB, IFV, and APC) to meet emerging requirements
- To provide realistic threat capable targets for use in force-on-force exercises to challenge Blue Forces to adapt to the changing battle dynamic as it unfolds to properly test Blue systems
- Targets to be certified following DA approved process

**STATUS:**

- Four T-72 MBTs delivered to WSMR; currently undergoing acceptance testing
- Three BMP-2 IFVs and Two BTR-80 APCs are on contract for delivery
- One BMP-2 and Two BTR-80s to be procured next year

**Key Features:**

- Operational Turrets
- Communications
- Operational Sights
- Smoke (VEESS, launchers)
- Ancillary Equip

**Abbreviations:**

- MBT - Main Battle Tank
- IFV – Infantry Fighting Vehicle
- APC – Armored Personnel Carrier
Mobile Ground Target Hardware

**STATUS:**

- **Recent Additions:**
  - ZPU-1
  - ZPU-2
  - KAMAZ 4310 Trucks
  - Technical Vehicles

- **Coming Soon:**
  - URAL 375
  - BMP-3
  - ZSU 23/4
  - SA-9

**DESCRIPTION:**

- Provide optimized mix of varying fidelity surrogate and/or actual targets to cost effectively meet the requirements of the objective force.
- The systems will be validated and/or certified following the U.S. Army Validation and/or Certification Process.
- Provide surrogates and/or actuals such as 5-Ton Truck Variants, BMP-3 Infantry Fighting Vehicle, D30 Towed Artillery, ZSU-23-4, SA-9, and Technical Vehicles with Gun Mounts.
Mobile Ground Target Hardware (Surrogate Targets)

BMP-3 Surrogate (BMP3-S)

The BMP3-S emulates the threat infrared (IR), millimeter wave (MMW) radar and visual signatures of the threat within a wide range of environmental conditions.

SMERCH Multiple Rocket Launcher

Actual SMERCH MRL MAZ-543 chassis with fabricated firing cab and rocket launcher
A full-scale, validated, plastic surrogate target that replicates a T-80 Main Battle Tank in its magnetic and electro-optical signature.

LCM consists of an unmanned host chassis integrated with a full-scale plastic target façade. The common support structure supports a variety of full-scale plastic surrogate targets.

Baseline Evaluation & Augmentation of MMGTS RCS (BEAMR)

Evaluation and Validation of Radar Signature Fidelity of Plastic Facades (ZSU 23/4 and 2S6)

Reconfigurable Electro-optical and Magnetic Expendable Target (REMET)
Mobile Ground Target Hardware (Surrogate Targets)

- Metal Target Surrogate Analysis and Validation (MT-SAV)
- Threat Vehicle Surrogate Target (TVST)
- Realistic Low Cost Target (RLCT)

Validation of Metal Target and Evaluation of Data Collection Processes

A 2 ½ dimensional plastic targets that represent the BMD-2, BMP-2, BTR-70 and BRDM-2 vehicles.

Improve IR signature of 2-D and 2 ½-D targets for gunnery ranges

Current Generation TVSTs

Better Cheaper Simpler
**DESCRIPTION:**

- Technical Vehicles are commercial vehicles modified to carry a wide array of weaponry or to be utilized as troop carriers
- These assets operate in a multitude of environments
- Variations are unlimited and can mount or transport almost any crew-served weapon

**STATUS:**

<table>
<thead>
<tr>
<th>Assets Available</th>
<th>Items Available</th>
</tr>
</thead>
<tbody>
<tr>
<td>• CUCV Truck (27)</td>
<td>• 7.62mm</td>
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<tr>
<td>• CUCV Blazer (4)</td>
<td>• 12.7 mm</td>
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<tr>
<td>• HMMVV (6)</td>
<td>• ZPU-1</td>
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<tr>
<td>• Civilian Trucks (10)</td>
<td>• ZPU-2</td>
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<tr>
<td>• Mitsubishi</td>
<td>• ZPU-4</td>
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<td>• Nissan</td>
<td>• Netting</td>
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<td>• Toyota</td>
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DESCRIPTION:
- TMO Allocates Assets Provides Targets From Nearest POC To Support Tests
- TMO Initiates Loan Agreement And Funding With User
- POCs Store And Maintain Assets; Maintain Accountability; Cm Control; Provide Daily Scheduling; And Operate Assets For User

STATUS:
- Supported 30 Customer Tests YTD
- Completed Residual Risk Acceptance Inspections at each POC
- Support Requirements Analysis
- Currently Supporting Multiple customers to Include:
  - Weapon System Developers
  - Test Ranges
  - Intelligence Centers

CENTRAL ASSET POOL (CAP) (SPARES/ FLOAT) (YPG)

FIVE PRIMARY OPERATION CENTERS (POCs)
- Yuma PG, AZ
- WSMR, NM
- Eglin AFB, FL
- AFDTC
- Aberdeen Proving Ground, MD
- Redstone Arsenal, AL

PARTS WAREHOUSE (WSMR)
Virtual Targets

**STATUS:**
- Delivered 3215 simulation models to 101 simulation developers during FY09
- Validated ZSU 23/4, T-90 Surrogate, BM-21, BTR-70 & T-72M1 radar models
- Validated T-72M1, 2S3, & BTR-70 IR analysis models

**DESCRIPTION:**
- The Virtual Targets project creates Computer Aided Design (CAD) geometry models
- The Targets Generation Laboratory supports transformation of CAD models, model from other sources, or field data into inputs for simulation
- The Targets Generation Laboratory also supports verification and validation of simulation models in accordance with AR 5-11 and DA PAM 73-1
- The Army Model Exchange provides a distribution point for simulation target models to support T&E modeling and simulation requirements
Summary

• Multiple Ground Targets
  - Multiple Variants Currently Available
  - Surrogate Develop Capabilities Exist
  - Contract in Place for Foreign Military Procurements

• Virtual Targets
  - Thousands of Models Available
  - New Model Development and Validation Efforts Underway
  - Models Available Online Thru Army Model Exchange

For More Information
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