

TMO

Targets Management Office

Mobile Ground Targets & Virtual Targets

**47th Annual Targets, UAVs and Range
Operations Symposium**

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PM-ITTS

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



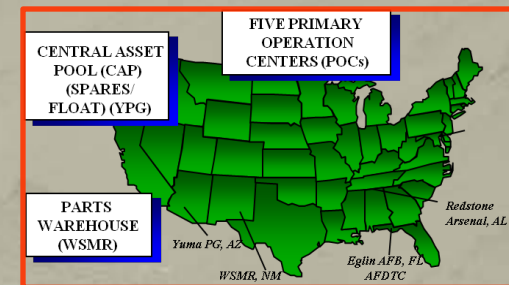
Fully Mission Capable
Systems for use in
Force-on Force Exercises

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



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

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

MBT - Main Battle Tank
 IFV - Infantry Fighting Vehicle
 APC - Armored Personnel Carrier

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

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

Mobile Ground Target Hardware (Surrogate Targets)

Reconfigurable Electro-optical and Magnetic Expendable Target (REMET)



A full-scale, validated, plastic surrogate target that replicates a T-80 Main Battle Tank in its magnetic and electro-optical signature

Low Cost Mover (LCM)



LCM consists of an unmanned host chassis integrated with a full-scale plastic target facade. 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)

Mobile Ground Target Hardware (Surrogate Targets)

**Metal Target Surrogate
Analysis and Validation
(MT-SAV)**



**Validation of Metal
Target and Evaluation of
Data Collection Processes**

**Threat Vehicle
Surrogate Target
(TVST)**



**A 2 1/2 dimensional plastic
targets that represent the
BMD-2, BMP-2, BTR-70
and BRDM-2 vehicles.**

**Realistic Low Cost
Target
(RLCT)**

Current Generation TVSTs



*Better
Cheaper
Simpler*

**Improve IR signature of
2-D and 2 1/2-D targets for
gunnery ranges**

Mobile Ground Target Hardware (Technical Vehicles)



STATUS:

Assets Available

- CUCV Truck (27)
- CUCV Blazer (4)
- HMMVV (6)
- Civilian Trucks (10)
 - Mitsubishi
 - Nissan
 - Toyota

Items Available

- 7.62mm
- 12.7 mm
- ZPU-1
- ZPU-2
- ZPU-4
- Netting

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

Mobile Ground Target Operations

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

FIVE PRIMARY OPERATION CENTERS (POCs)

PARTS WAREHOUSE (WSMR)

•Aberdeen
•Proving Ground, MD

•Redstone Arsenal, AL

•Yuma PG, AZ

•WSMR, NM

•Eglin AFB, FL

•AFDTTC

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

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

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

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Summary

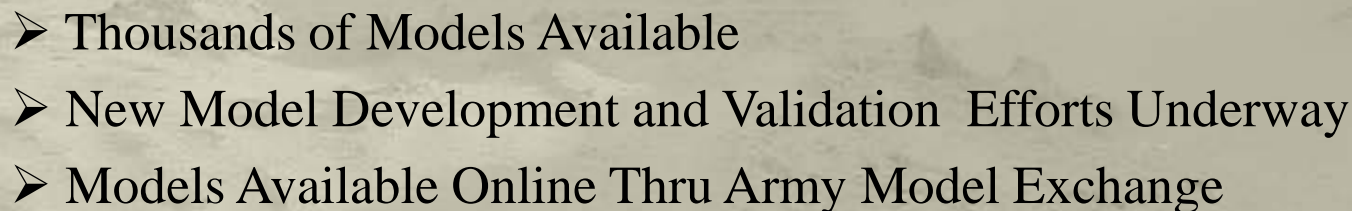
The first main bullet point is "Multiple Ground Targets", presented in a bold, black font. It is located on the left side of the slide, below the orange banner.

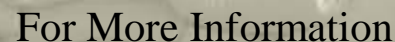
- **Multiple Ground Targets**

- 
- A list of three bullet points describing ground target capabilities, each preceded by a right-pointing arrowhead. The text is in a black, sans-serif font.
- Multiple Variants Currently Available
 - Surrogate Develop Capabilities Exist
 - Contract in Place for Foreign Military Procurements

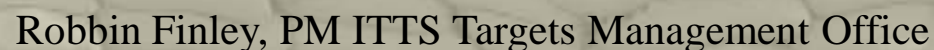
The second main bullet point is "Virtual Targets", presented in a bold, black font. It is located on the left side of the slide, below the first set of bullet points.

- **Virtual Targets**

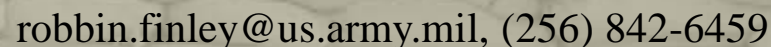
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- A list of three bullet points describing virtual target capabilities, each preceded by a right-pointing arrowhead. The text is in a black, sans-serif font.
- Thousands of Models Available
 - New Model Development and Validation Efforts Underway
 - Models Available Online Thru Army Model Exchange

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For More Information

The name and title of the contact person, "Robbin Finley, PM ITTS Targets Management Office", is centered on the slide in a black, sans-serif font.

Robbin Finley, PM ITTS Targets Management Office

The email address and phone number, "robbin.finley@us.army.mil, (256) 842-6459", is centered on the slide in a black, sans-serif font.

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