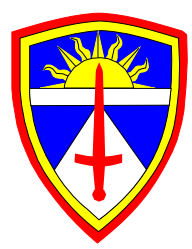# Extending Test and Evaluation Modeling and Simulation Capabilities with Gaming Technology

NDIA National Test & Evaluation Conference
2-5 March 2009

Agenda

- Purpose
- Current Efforts
- TTEC Integration Facility
- Gaming Technology
- Simulation and Gaming
- Cost Benefit
- Future Work
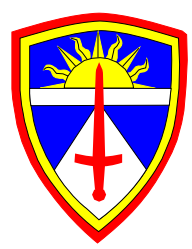- Summary

Operational Test Command

Purpose

To provide information on the collaborative efforts between OTC and TRADOC to integrate gaming technology into OTC's test technology enterprise to provide more capable simulation and visualization tools for use by the Testing and Evaluation community.

Operational Test Command

Current Efforts

- Technology Transformation Division (TTD) of the US Army Operational Test Command (USAOTC).
  - Federates models and simulations to form a tool kit of Enterprise Members (OASIS) for use by Test Officers and Operational Research/System Analysts
  - Integrates tools from various battlefield areas to provided an adjustable set that maximizes the strengths of each while minimizing any shortcomings of the individual simulations.

- TRADOC Capabilities Manager (TCM) Gaming.
  - Manages gaming technology fielded to units for use in training.
 - Provides terrain and entity data.

Operational Test Command

History

- OTC has over 20 years of experience collaborating with the training domain to share knowledge and costs to economiccally federate simulations

Operational Test Command

OASIS

OV-1: OTC's Advanced Simulation and Instrumentation Systems (OASIS) Technology Enterprise in Support of the Test Officer

Operational Test Command
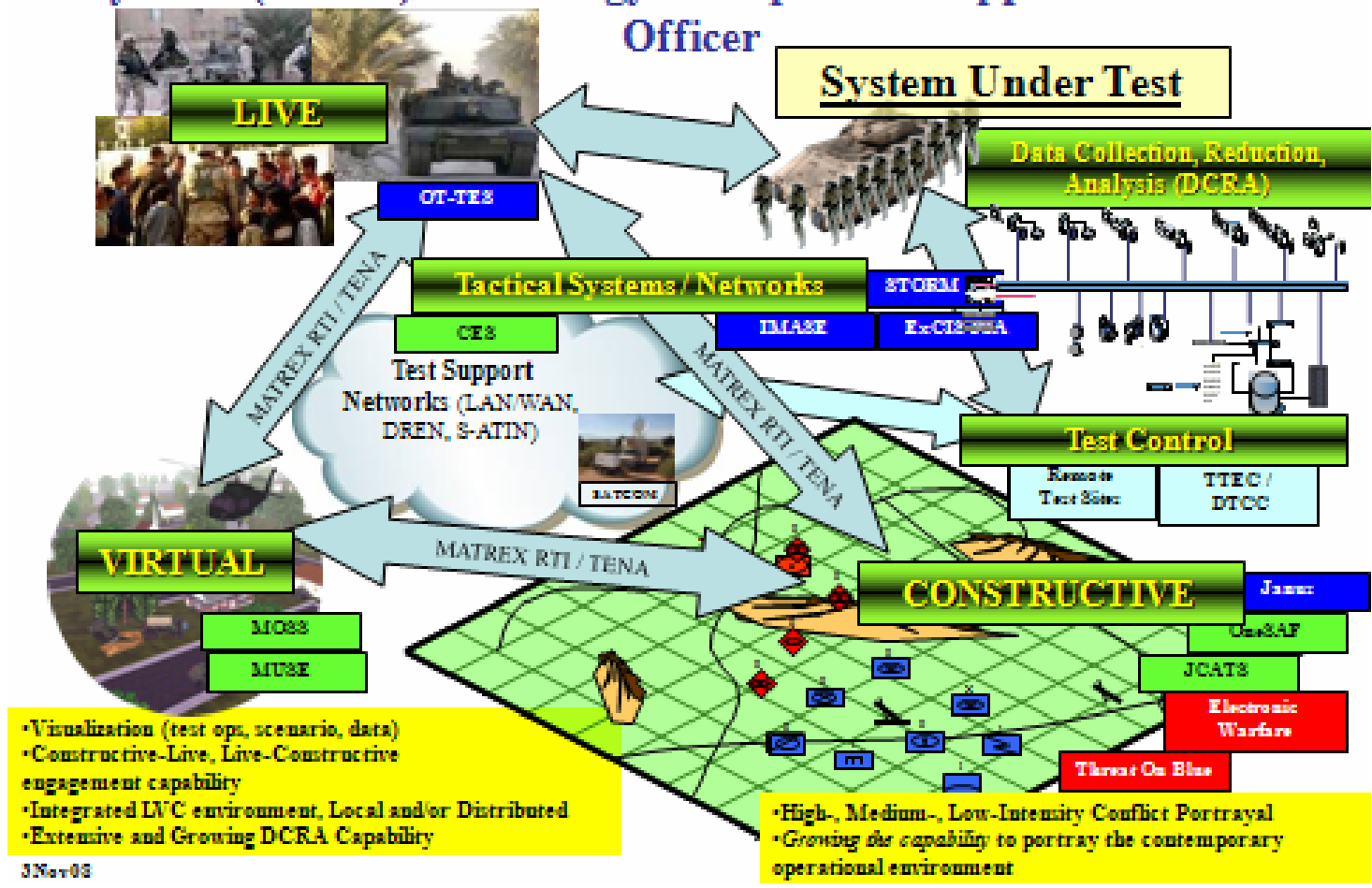
Gaming Technology

- Off the shelf simulation developed by industry .
- Ability for individual and small unit leaders to act in a first person fashion under battlefield conditions and refine their Tactics, Techniques and Procedures (TTP).
- Training tool with Test and Evaluation applications.
- Visualization tool for the unit under test and for the test officer.

Operational Test Command

Test Technology Execution Center Integration Facility

- Works to keep simulations updated and exchanging data.
- Brings simulations into common language; i.e. Distributed Interactive Simulation (DIS), High Level Architecture (HLA), MATREX.
- Links technology provided by TRADOC TCM Gaming to OTC tools.

Operational Test Command

Constructive View

Operational Test Command

Updated Constructive View

Operational Test Command
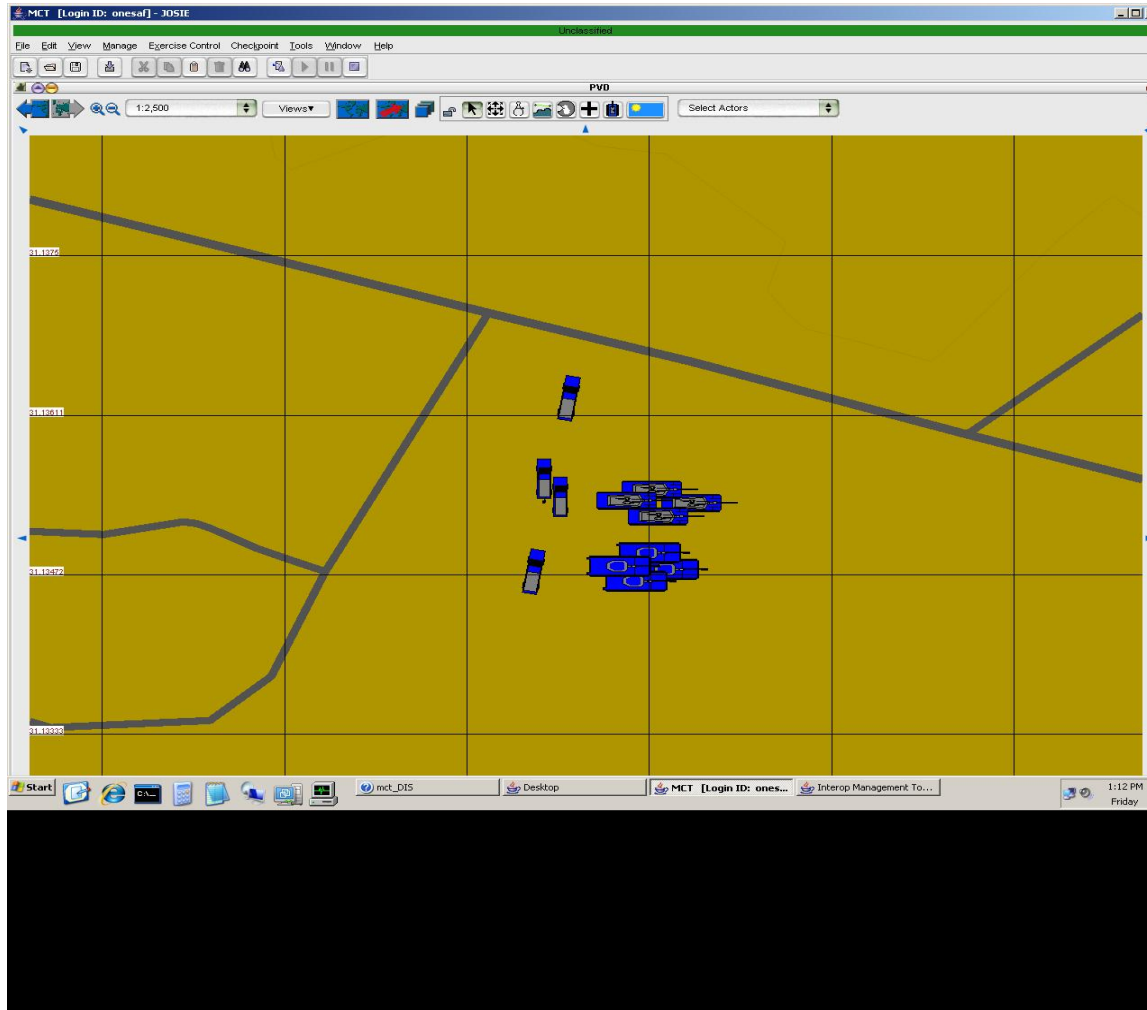
Gamer's View

Fuel

Health

1

Alt. 4145ft
Set 9843

Speed 50kts
Set 153

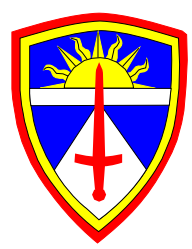Position
13684383

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Operational Test Command

Cost Benefit

- No development costs.
- Minimal integration cost.
- Test units already know the gaming simulation
- Much more credible set of observations than previously available to those watching the simulation.
- Augment simulation quantitative data with more valuable qualitative data for eventual use by the evaluation team.

Operational Test Command

Future Work

- **Utilize latest gaming from TRADOC TCM after next selection decision.**
- **Adapt to latest US Army simulations when fielded.**
- **Continue use of latest integration language.**

Operational Test Command
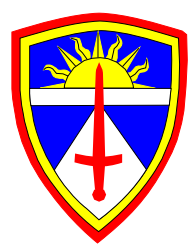
Summary

Gaming technology can provide a powerful solution to some gaps when federated with existing simulations and data collection systems used within the Test and Evaluation Community.

Operational Test Command