Simulation 2.0

Revolutionary Changes in Military Training and Beyond
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Simulation 2.0:
Revolutionary Changes in Military Training and Beyond

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Approved for Public Release.
Security and OPSEC Review Completed: No Issues.
Training Modes

LIVE

VIRTUAL

CONSTRUCTIVE

GAMING
One Million Soldiers

Regular Army: 507,082
Army Natl Guard: 333,177
Army Reserve: 189,005
Total: 1,029,264

*Numbers as of: Regular Army, 2007; ARNG & USAR, 2005*
Training One Million Soldiers

1,000 soldiers/event $\times$ 1,000 events/year
or
100 soldiers/event $\times$ 10,000 events/year
or
10 soldiers/event $\times$ 100,000 events/year

To provide a single training event in a year
Millions Served

- McDonald's: 47 million/day
- Google: 130 million/day
- World of Warcraft: 635,000/day
Collaborative Environments

Game Interface

Service Infrastructure

High Performance Computing
Training is an event that is supported by technology

The technology needs to become an accessible and extensible service

Simulation systems and tools need to be accessible when the customer needs them, not when the provider can fit the customer in
Military Serious Games

DARWARS Iraqi Lang Trainer

IEWTPT Tactical Questioning

AMBUS!

Americas Army

Full Spectrum Warrior
Desktop Interface Options

Browser

Plugin

Driver

Full Game
High Performance Computing

- **Large Cluster Machines**
  - Support multiple exercises and experiments simultaneously
  - Scale events to represent entire country populations

- **Hardware-independent Simulation**
  - Instant hot-swap when an error occurs or when load needs to be balanced

- **Hardware available to all customers, not just local sim center schedule**
Service-based Sim Center

One-to-One Training Stack
- Event
- Training Audience
- OPFOR
- Support Staff
- Software
- Hardware
- Facility

One-to-Many Training Stack
- Event
- Trg Aud
- OPFOR
- Support Staff
- SW
- Hardware
- Facility
“But even here 80% of soldiers have access to a laptop computer and network”
- SFC Richard Colon, US SOCOM, Iraqi Desert
Challenges

- **Military IT Infrastructure**
  - Security configurations vary by organization and by day
  - Apps cannot be guaranteed to work from any node in the IT network

- **Ownership of Training Applications**
  - Military apps have typically fallen into 3 major camps: Business, Mission, Training
  - Each have their own separate networks
  - Running a Training app across the Business infrastructure raises a number of supportability and contracting questions
Reduced equipment ownership costs and obsolescence
On-demand user access to the best applications
Commercial IT architectures
Centralized control of server applications
Currency of client applications
Questions