

Research for the 2012 Training Modeling & Simulation Strategic Plan

Presentation for M&S Working Group
WJTSC 11-2

September 26, 2011

Outline

- **Training M&S Business Plans**
- **Training Research Areas**
 - **Defense Training Environment**
 - **Personal Learning Assistant**
 - **Agile Training Business Models**
- **Recommendations**
- **Questions & Discussion**

Training M&S Business Plans

- **2007 TMSBP published Apr 08**
 - Extended training capabilities baseline and training requirements as documented in the Training Capabilities AoA
 - Provided list of candidate M&S Investment Strategies
- **2008 TMSBP coordination draft completed Apr 09**
 - Interim or “off year” report
 - Provided progress on closing M&S gaps
 - Updated with stakeholder comments received by 31 July 2009
 - Final public release version published Dec 09
- **Draft 2009 TMSBP coordination draft completed Apr 10**
 - Final Report published and approved for public release
- **2010-11 Research for 2012 Publication**
 - New M&S strategic process and name changed to Training M&S Strategic Plan
 - Include current TRS research areas in 2012 edition

Research Areas for TMSSP

- **Defense Training Environment (DTE)**
 - The Concept
 - Full Spectrum Training
 - Human Cognitive Training
 - Military Training in Transition
- **Personal Learning Assistant (PLA)**
 - The Concept
 - Artificial Intelligence (AI) in Training
- **Agile Training Business Models**
 - Training and the DoD acquisition background
 - The Apple business model
 - The IBM business model
 - Public-Private business collaboration
 - Training in an Era of Fiscal Austerity

Defense Training Environment

Defense Training Environment (DTE)

- Next generation training
- **DTE concept taking shape**
 - Connects seamlessly to live training ranges
 - Described as augmented reality training, enabled by immersive, live, virtual, and constructive venues
 - Must train for full spectrum operations
 - Training imperative – not just nice to have
- **Virtual Worlds**
 - Mixed or augmented reality
- **Full Spectrum Training**
- **Human Cognitive Training**
 - Goes beyond traditional warfare operations
- **Military Training in Transition**
 - Redeployment, reconstitution, and modernization

Personal Learning Assistant

- **Personal Learning Assistant (PLA)**
 - Intelligent tutoring system + much more
- **Concept and characteristics**
 - Personal augmented reality device
 - Individual profile of learner
 - Protect individual privacy
 - Tracks host's training, education and experiences
 - Lifelong personal training assistant
 - Learns as you learn
- **Potential underlying technologies**
 - Artificial Intelligence (AI)
 - Internet capable for knowledge content access
 - Controllers for machine learning and host learning
 - Data acquisition and fusion
 - GPS capable & speech recognition

Agile Business Models

Agile Training Business Models

- Implications for training and impact on DoD acquisition process
- **The Apple business model**
 - Transforming with multiple business models & expanding market
- **The IBM business model**
 - 100 years of transformation from calculating devices to cloud computing
- **Public-Private Partnerships**
 - Collaborative model with shared costs and risk
- **Training in an Era of Fiscal Austerity**

.... A close second [priority], however, was gaining control of a defense acquisition system that was too slow, too costly, and at times too careless with taxpayer's dollars.

Ashton B. Carter, USD (AT&L) *Testimony to the House Appropriations Subcommittee on Defense on DoD Acquisition in the Fiscal Year 2012 Budget*, April 13, 2011

Recommendations

- Continue in-dept research on DTE to seamlessly integrate live training
- Expand & expedite Virtual Worlds (mixed or augmented reality) DoD - wide
- Continue research in human cognition for IW
- Incorporate DARPA breakthroughs in AI research
- Provide an agile business model concept for prototype
- Consider DoD-wide efficiencies in training infrastructure and combining training venues
- Leverage DoD M&S enterprise efforts for training
- Final Draft TMSSP by September 2012

Questions & Discussion