“DoD Training – Impact of Gaming Technologies”

Comments by Dr. Robby Robson
Chair, IEEE Learning Technology Standards Committee
President, Eduworks Corporation
Consultant / Researcher, Institute for Defense Analyses
The Role of Serious Games

- It’s how we all learn
- It’s how young men and women learn best
- It’s what we do now
  - Advancement through testing
  - Rewards through achievement
  - Enjoyment as motivation
- “E-learning” focuses on individuals and knowledge transfer. Success depends on teams and knowledge acquisition.
Special Event “DoD Gaming Roadmap”

Time Scales (Not Scientific)

Group Learning
- Games (G)
- Simulations (S)
- MMOs (M)

Didactic Training
- AAR

Twitch Speed
- Real Time
- Coordinated Action
- Tactical Decisions
- Strategic Decisions
Specific Issues

- **Implementation** depends on distributed, real time technology
- **Functionality** depends on standards for
  - Competencies & Results
  - Personnel and Players
  - Scenarios and Contexts
  - Multi-player interactions
- **Acceptance** depends on measuring and demonstrating *real world* results and impact (which ties back to having standards for recording the results!)
- **Availability** depends on new business models
Where Standards are Going

- Significant uptick in standards development:
  - SCORM = basis for content *portability*
  - CORDRA = basis for content *discovery*
  - COMPETENCIES = basis for *measurement*
  - SCORM 2.0 = basis for *distributed systems*
  - SCORM 2.0 = basis for *interactivity*
  - SCORM 2.0 = basis for *customization*
  - SCORM 2.0 = basis for *real reusability*

- The standards community needs input from the Services!
Special Event “DoD Gaming Roadmap”

**Tools: Training Systems look like this**

- Complex
- Old models taken to extremes
- Big on functionality
- Weak on solutions
Special Event “DoD Gaming Roadmap”

When they *should* look like this …

- Lightweight
- Elegant
- Built for the network
- Fun to use
- Portable
- Focused on solutions

*Maintaining the Edge  Transforming the Force*
Business Models

- Leading edge technology is viewed as a “research problem.”
  - The knowledge is there. Applying it is the hard part!

- R&D business models are … so last century
  - SBIR programs take 3+ years and are underfunded.
  - Applying for $ takes more work than doing the research
  - “Government Rights” models don’t make sense for software
  - Payment is based on time, effort and quantities instead of value, quality and impact.
Summary

- Do away from proprietary formats
  - In distributed environments every component must speak the same language

- Build infrastructure for handling data and tools for performing tasks and providing solutions
  - Data: Content, Competencies, Context, Results
  - Tools: Authoring, Finding, Repurposing, Teaming, Reporting, Deploying …

- Evaluate games based on training *outcomes*

- Pay contractors based on *value*