



Experiential Learning and Assessment Using DARWARS Ambush NK! (non-lethal engagement modules)



April 29, 2008

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Dr. Chatham's DARPA Vision

- DARWARS Ambush! created and used for training lethal operations
- Combine the authoring flexibility of DARWARS Ambush! with SANDIA Adaptive Training System methods used for US Army Special Forces JFKSWCS
- Modify DARWARS Ambush! in collaboration with BBN to introduce Sandia's new role for evaluating others, instructor interface, and person/team-to-person interactions
- Put non-lethal training in the hands of troops familiar with DARWARS Ambush! soon—delivered Sept 2007
- Transition to PEO-STRI—delivered October 2007





Why train non-lethal engagements?

- The Contemporary Operating Environment (COE) characterized by vague and ambiguous situations across a broad spectrum of activities resulting in numerous non-standard operational requirements, including non-lethal engagements.





What constitutes non-lethal engagement training?

- Leaders at all levels require specific non-lethal engagement competencies to succeed including
 - languages
 - regional and technical expertise
 - cross-cultural communications
 - interpersonal relation skills
 - intercultural team cohesion
 - adaptive thinking, or mental agility



Photo courtesy of JFKSWCS



- BG Cone's fundamental eight non-lethal tasks (core competencies)
 - Negotiation Skills
 - Cultural Understanding
 - Language Capability
 - Counter-IED
 - EOF and ROE
 - Detainee Operations and Evidence Collection
 - Tactical Questioning
 - Every Soldier a Sensor and Ambassador



DARWARS Ambush NK! Modules, cont.

- Social maps of towns and villages
- Description of key personalities
 - link diagrams
- Suspicious individuals identified
 - target folders
 - BOLO





Elements of DARWARS Ambush NK! Modules

- Roles for
 - Local Nationals
 - Soldiers
 - Marines
 - Interpreters
 - Evaluators
 - O/Cs
 - Language Instructors



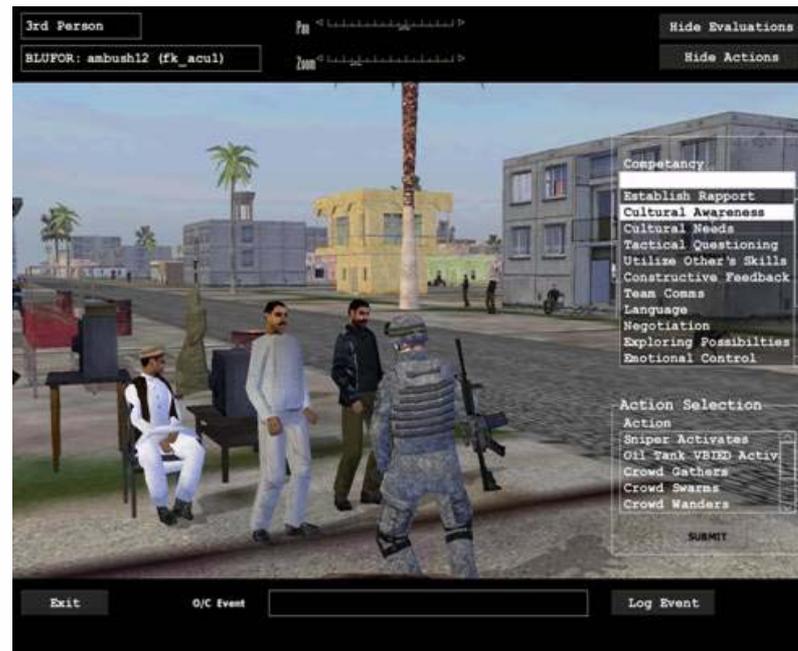


Modules leverage Sandia Adaptive Training Systems Approach

DARPA DARWARS

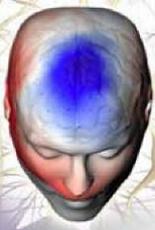
Ambush NK!

- Trainee evaluation role addresses training objectives and core competencies
- Instructor interface facilitates real-time curve balls
- Non-lethal socio-cultural overlay of Fawzi map
- 2 non-lethal engagement modules
 - Cordon and knock
 - Evidence collection and detainee operation
- Ft. Lewis subject matter expert contribution



DARWARS Ambush NK! Instructor Interface





Sandia real-time feedback and in-game assessment*



JFKSWCS Adaptive Thinking & Leadership



DARWARS Ambush NK! Evaluator



DARWARS Ambush NK! Modules

- Role for Evaluators
- Real-time role for observer controllers
- New instructor and trainee interfaces
- Real-time feedback & metacognitive training
- In-game assessment hooks to AAR
- Quantitatively display non-lethal training criteria

*Patent-pending, Free Government use with Gov Use Notice





Sandia Adaptive Training Systems Research Program

- Intercultural communication competence
 - Intercultural skills for individuals and teams
- Honing mental agility
 - Communication
 - Adaptive thinking
- Metacognitive training
 - Reflective observation/evaluation
- Accelerating learning
 - Applying neuroscience lessons learned
- Continuous learning
 - Life-long learner assessment
- Individualized training delivery
 - Game-based learning
 - Quantitative assessment of non-lethal competencies





Acknowledgements

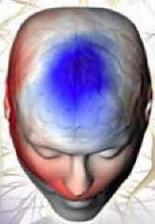
- Subject Matter Experts
 - JFK Special Warfare Center and School
 - Ft. Lewis Battle Command Simulation Center
 - USMC TECOM, I and II MEF
- Game development
 - America's Army Software Engineering Directorate, Redstone Arsenal
 - Virtual Heroes
 - BBN Technologies
 - Bohemia Interactive
- Sponsors & collaborators
 - DARPA
 - RDECOM
 - ICT
 - IDA
 - USMC
 - PEO-STRI
 - US Army SF JFKSWCS
 - Special Thanks to Dr. Ralph Chatham, formerly with DARPA DSO
 - Major General Tom Jones, USMC (ret)



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