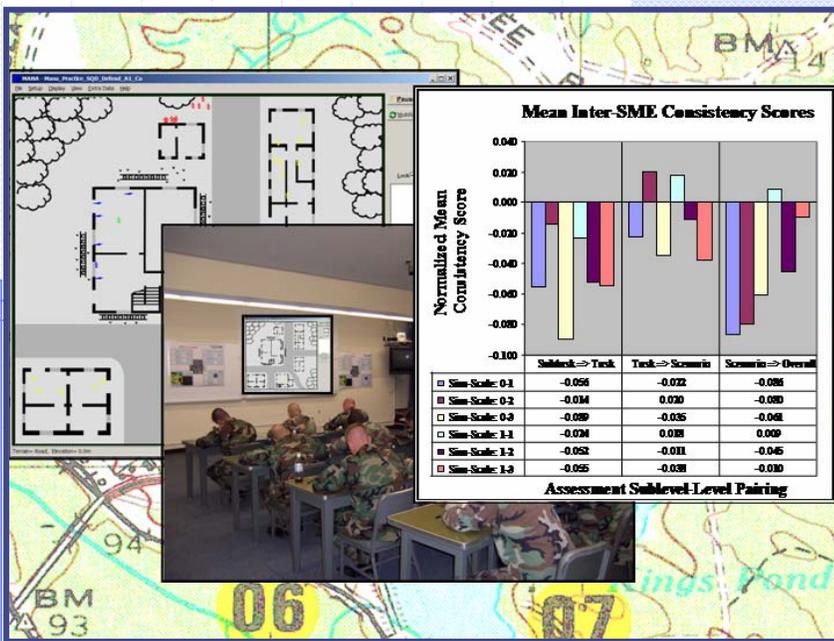


**Validating Computational Human Behavior Models:
 Consistency and Accuracy Issues**

Sponsor – Navy Modeling & Simulation Management Office
 (NAVMSMO) - N61M

PIs – Dr Rudy Darken, MAJ Simon R. Goerger

Goal – To develop a methodology for validating HBR model implementations for use in Department of Defense training and research models and simulations.



Deliverables

The primary scientific advancement of the research addressed how consistently and accurately subject matter experts (SMEs) validate real or simulated human performance. This work lays the foundation for a research agenda designed to improve the process of validating computational human behavior representation (HBR) models. Notable contributions are:

- Identifies means to increase the consistency and accuracy of ‘face validation’ procedures for HBR models;
- Formulates new techniques for identifying and measuring the presence and impact of SME consistency and accuracy;
- Identifies quantitative patterns of bias based on SME responses to assessment questions; and
- Proposes a research agenda for the future enhancement of human behavior representation model validation procedures.

Corporate/Academic Partners

- Infantry Captains Carrier Course (ICCC)
 - Study Participants; Subject Matter Experts (SMEs)
- Marine Corps Combat Development Command (MCCDC)
 - MANA agent based model
- Natick Soldier Center – Use of human performance data
- Defense Modeling and Simulation Office (DMSO)
 - Review of validation plan

Milestones

- Oct ‘02 – Foundation ‘02; Validation Workshop
- Jun ‘03 – MORSS presentation on Validation
- Jul ‘03 – SCSC ‘03 Validation Working Group presentation
- Sep-Oct ‘03 – Studies of SME bias of HBR validation
- Jun ‘04 – Dissertation Complete