

Terms of Reference

Immersive Simulation for Marine Corps Small Unit Training NRAC Summer Study 2009

Objective

Study concepts of immersive training simulation to assist Marines in developing complex and 'intuitive' decision skills while under the attendant conditions of physical and emotional stress. This study will examine how immersive simulations may have the potential to reduce the pre-deployment time required to train small unit leaders over that of other contemporary training approaches and methods. The study should expand on current concepts and provide insights on new Marine Corps training for the small unit.

Background

The complexity of the Contemporary Operational Environment and the enduring need for combat readiness across the full spectrum of conflict and environmental extremes place new demands on the decision-making skills of Marine Corps small unit leaders. Making the best tactical, legal and ethical decisions under conditions of emotional, psychological, and physical duress has stimulated great interest in new kinds of training and simulation to prepare these leaders for combat. With a goal of developing 'experienced' decision-making ability prior to actual deployment, new forms of immersive training simulation may assist Marines in developing these complex and 'intuitive' decision skills while under the attendant conditions of physical and emotional stress. Moreover, immersive simulations may have the potential to reduce the pre-deployment time required to train small unit leaders over that of other contemporary training approaches and methods. Simulating the most critical of combat conditions is both necessary and extremely challenging.

Specific Tasking

- Decompose this problem and identify the desired effects that must be produced by such training. With the problem deconstructed and fully defined, examine the attendant the metrics necessary to gauge solution (training) effectiveness.
- Review current and developing virtual training methods and technologies in the DOD, as well as other agencies and allies, both within and outside of the government.
- Identify and evaluate S&T initiatives (US and allies) that are being pursued and explore opportunities that should be accelerated.
- Recommend technology solutions, investments and developments required.