# ROLE-PLAYING SIMULATIONS (RPS)

Increasingly, strategic thinkers, analysts and public officials are required to understand how they or others might think, reason and react in specific situations. By testing out ideas and playing them out in a live environment, role-playing has become a time-tested method for building this sort of "outside the box" thinking. ICT's Role Playing Simulation (RPS) project takes this concept to a new level by providing an immersive environment in which participants may "walk a mile in another man's shoes." By using the RPS tool, participants develop insight and deep understanding of the thought processes, motivations, and potential actions of others -- be they teammates or enemies.

A participant in an RPS is presented with a combination of video, text, graphics and sound that inform them about unfolding events and necessary background on the role they are playing. The participant is then forced to react to events in the role of their character, interacting live with others in the simulation, who are out of eyesight/earshot of the role player. All interactions take place over the PC network, and are captured for review at the end of the simulation.

USC's Institute for Creative Technologies (ICT) regularly brings computer game technologies, award-winning artificial intelligence and computer graphics research together with entertainment industry expertise to create a variety of simulations. In the case of RPS's, ICT is creating scalable, multi-user role playing simulations built on top of a game engine. The engine will support multiple players over a secure network connection, allowing for voice interaction, video-conferencing, full-motion video and other media-rich features.
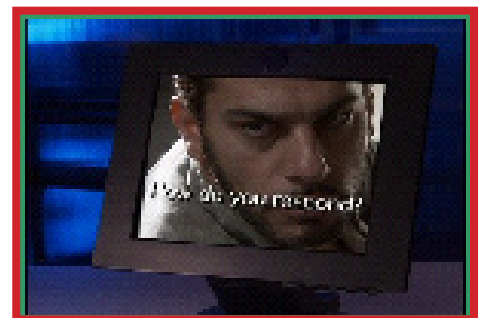
ICT's artificial intelligence (AI) technology is an integral part of the engine. The AI will track data relating to characters, events, locations, interactions, and communications, and incorporate this into an interactive after action review. In addition, AI technology will monitor

the progression of events during the simulation, and dynamically develop strategies to keep the simulation progressing toward the scenario's defined learning objectives. The AI system can either implement these strategies directly by altering the course of events in the simulation, or present them as suggests to a human "SimMaster" (or instructor) who oversees the simulation experience and ensures that the simulation stays true to the learning objectives of the participants.

Role Playing Simulations are especially useful in learning through process. Participants often find that just being forced to assume a particular role and discussing each participants reasoning for their actions in an After Action Review allows them to better understand the motivations and actions of others. By utilizing different scenarios based in different parts of the world, the user is forced to learn, understand, and adapt to the particular culture of a region, the inherent modes and styles of communication, and gain overall insight and awareness of a foreign country. Further, when participants discuss and deconstruct each others' actions in an After Action Review, each participant learns from the choices of the others as well.

Through the combined effort of subject matter experts, a production team, and ICT programmers, new RPS applications can be developed and produced in a matter of months.

Each RPS application will operate on Windows-based PC's and laptops with a LAN or broadband connection.