

ADVANCED HAPTICS DEVELOPMENT TO SUPPORT MEDICAL SIMULATED TRAINING ENVIRONMENTS

(DHA Phase II SBIR)

Intergrating Haptic Devices to Improve Human Performance and Training Effectiveness

ECS has been awarded a Small Business Innovation Research (SBIR) project with the Defense Health Agency (DHA) entitled, Advanced Haptics Development to Support Medical Simulated Training Environments. This project will consist of designing and developing haptics-based virtual reality (VR) training systems to support combat medicine the U.S. Army's Synthetic Training Environment (STE) with potential expansion to the broader medical community. The research and development team includes ECS, Mayo Clinic (Jacksonville, FL), Florida to coordinate the usability study with medical professionals to capture feedback on the technology and training approach based on a prototype training scenario.

Our team is excited to contribute to this body of research related to human performance and training effectiveness for both the military and the medical community. By collaborating with HaptX and Mayo Clinic, this type of innovative work advances high-fidelity VR integration by blending state-of-the-art hardware and software solutions to deliver enhanced training to our Soldiers and to the broader medical community.

Year-One Objectives

- Partnered with HaptX & Mayo Clinic
- Training system for burn care treatment
- Multiplayer Tele-Teaching Scenario
- Mayo Clinic helping with usability with medical professional

Year-Two Objectives

- Multiplayer/MultiRole Care Under Fire Scenarios
- Explore STE integration opportunities
- Combat Life Saver (CLS) training
- Emergency personnel training
- Training Effectiveness Evaluation