

TC3Sim 2020

Transforming Combat Medic Training through Immersive Technology

A recognized leader in military medical training, ECS has been developing the U.S. Army's Tactical Combat Casualty Care Simulation (TC3Sim) for over 16 years, continually investing in new and developing technologies. TC3Sim is a cognitive skills trainer for trauma medicine focused on the three preventable causes of death on the battlefield. The primary users of TC3Sim are Military, First Responders, Combat Medics, and Combat Lifesavers. ECS has delivered the updated cross-platform 2020 version of the application to support the existing training curriculum within the Army. This latest upgraded version, TC3Sim 2020, has transitioned to the U.S. Army Program Executive Office for Simulation, Training, and Instrumentation (PEO STRI).

Improvements and new features include:

- Extended gameplay to include Care Under Fire (CUF), Tactical Field Care (TFC), and Secondary Assessment
- Updated timeline-based After-Action Review (AAR) system for critical measures and detailed remediation
- Seamless multi-platform user experience across desktop, web browsers, and mobile tablets
- Multi-service scenarios and content including Army, USMC, Navy, and Air Force
- User profiles for the saving and loading of progress, completion, and proficiency

The updated TC3Sim system architecture and content is continually leveraged to advance innovation through ongoing research at ECS. This research focuses on integrating various virtual reality (VR) and extended reality (XR) platforms with groundbreaking haptic technologies that enable realistic touch, force feedback, and precise motion tracking.

TC3Sim 2020 and the related research demonstrates how Warfighters can use immersive training to further enhance their training experience and learning opportunities. The goal of this transformational use of serious games, XR, and haptics technology is to not only improve the quality and retention of training but lead to more lives saved on the battlefield.