

June 23, 2004

CTC Project Named "Top Ten Invention" for 2003

The U.S. Army Research, Development and Engineering Command has named the VIRGIL Chest Tube Insertion Simulator, a CTC-managed project, as one of the ten "Greatest Army Inventions" of the past year. During awards ceremonies June 23, 2004, in McLean, Virginia, Lt. Gen. Richard A. Cody, Army deputy chief of staff, said:

"The inventions submitted demonstrate the vast experience within the Army laboratory community as a sincere commitment of these laboratories to improve the readiness of our Army."

The CTC-CIMIT Relationship

The VIRGIL Chest Tube Insertion Simulator was developed by the Center for the Integration of Medicine and Innovative Technology (CIMIT). CIMIT is a consortium of physicians from the Harvard teaching schools and scientists and engineers from Massachusetts Institute of Technology and Charles Stark Draper Laboratory who are committed to solving complex medical problems through innovative technology.

CTC is working with CIMIT to facilitate the adoption of CIMIT-developed innovations that can bring innovation to combat surgery training, first-responder training, and trauma cases in the private sector. As a result of these innovations—such as VIRGIL—medics and first-responders in the field will be better trained and more confident in their skills to treat life-threatening situations.

VIRGIL is Simulated Patient

VIRGIL addresses the specific needs of the Special Forces Medics. Using the life-like mannequin, medics learn and practice safe treatment of combat chest trauma. Preliminary results indicate that the VIRGIL Chest Tube Insertion Simulator met or exceeded existing lab training methods. People who are trained with VIRGIL are enthusiastic, citing better visualization and increased understanding of the procedure.

VIRGIL combines sophisticated computer-simulated 3-D anatomic models generated from CT Scans of human anatomy. Mannequins are built based on these 3-D simulations. Since the internal organs are proper in size, location, and density, mistakes that would happen to actual patients will also happen realistically to the simulator. This anatomic realism enhances the training process, even tracking the student's progress and detecting patterns of error.



Concurrent Technologies Corporation (CTC) is an independent, nonprofit, applied scientific research and development professional services organization providing innovative management and technology-based solutions to government and industry. As a nonprofit 501c (3) organization, CTC's primary purpose and programs are to undertake applied scientific research and development activities that serve the public interest. For more information, visit www.ctc.com.

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The CTC effort is led by Steve Johnson and Chris Brown of the Technology Management Directorate.

CTC to Participate in International Training Exercise

"Interest in VIRGIL is growing," says Chris Brown. In July, CTC will join the CIMIT Simulation Group on an international excursion to Dragoon Barracks in Klaipeda, Lithuania, for the RESCUER/MEDCUER (RM04) exercise. The RM04 is a U.S. Army Europe (USAREUR)-led exercise designed to train U.S., NATO, and partner nations to respond to disaster relief and mass casualty situations. CIMIT and CTC have been asked to bring VIRGIL Chest Tube Insertion Simulator to the exercise to demonstrate the technological breakthroughs in simulation-based training devices.

Brown concludes, "Several potential stakeholders have also expressed interest in VIRGIL, such as the Army's 2nd Medical Brigade in Baghdad. The goal is to get VIRGIL into the hands of our military medics and surgeons as soon as possible to help ensure the most proficient possible care for our warfighters."

NOTE: Virgil is not an acronym. VIRGIL was named because one of the scientist's young sons couldn't say "virtual." Rather, he repeatedly said, "virgil," so the team happily adopted the tot's rendition.

