

## VIPERS Headed for USAF Trial

**Fort Washington, PA** -- An innovative software simulation for training radio communications skills for aircrew and controllers is on its way to a one-year trial at Laughlin AFB in Del Rio, TX. The Virtual Interactive Pattern Environment and Radiocomms Simulator (VIPERS) emphasizes situational awareness and decision making in providing a simulation of the Specialized Undergraduate Pilot Training (SUPT) environment. VIPERS provides the user with simulated training flights in a typical Joint Primary Air Training System (JPATS) pattern in which the user commands the aircraft and interacts verbally with controllers and a synthetic instructor. Using the VIPERS simulation, users maintain safety of flight by listening to and interpreting the radio calls between the controllers and the other (simulated) pattern traffic while commanding their own aircraft, responding to controller directives, and issuing appropriate radio transmissions.

During the field trials, SUPT students at Laughlin will be issued laptop computers loaded with the VIPERS software. The students will use VIPERS to augment the existing syllabus and a study will evaluate the effects VIPERS has on student performance in flying training.

VIPERS, developed by CHI Systems, Inc. of Fort Washington PA, is the result of a Small Business Innovative Research Phase II project funded by the Warfighter Training and Readiness Division of the Air Force Research Laboratory (AFRL); the one-year field testing is jointly sponsored by AFRL and the Air Education and Training Command.

According to Dr. Benjamin Bell the lead investigator for CHI Systems, Inc., VIPERS augments the current inventory of trainers by addressing a gap in simulation technology. "The simulations available today can reinforce some aspect of flying such as instrument procedures, but VIPERS gives users, for the first time, the ability to practice and receive feedback on radio communications". The technology behind VIPERS employs a novel integration of artificial intelligence, scenario-based training, and advanced speech processing. "Students will be making their calls while integrating the radio work with all the other cognitive tasks they have to manage, just as they do in the aircraft," Bell said.

CHI Systems, Inc. of Fort Washington, PA is a leading-edge software and systems research & development company that studies and models human intelligence and cognition to bring human-like behavior and capabilities to computer-based systems. CHI specializes in advanced technology for intelligent training, decision support, performance/work support, and command and control applications for the defense, aerospace, health, and bioscience information management markets.

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