Virtual Interactive Pattern Environment and Radiocomms Simulator

VIPERS (Virtual Interactive Pattern Environment and Radiocomms Simulator) is a bold leap forward in deployable training and rehearsal that users can carry with them for anytime, anywhere access.

Through a novel integration of synthetic agents, intelligent tutoring, and scenario-based training, VIPERS provides a PC-based environment where users can practice pattern procedures, make radio calls, listen to controllers and other traffic, and get valuable performance feedback.

Speech-Interactive Synthetic Agents

VIPERS employs advanced synthetic agents built using CHI Systems' iGEN® cognitive agent toolkit to create an interactive pilot training base in a laptop. VIPERS features verbally-interactive agents that populate an active pattern environment, including:

- air traffic controllers;
- an onboard Instructor Pilot (IP); and
- other traffic dynamically entering and departing the pattern.

Users interact directly with controllers and hear the calls made by other aircraft. The radio calls allow a user to build a mental picture of the pattern, visualizing aircraft positions as reported. To provide training in making radio calls, VIPERS offers advanced speech recognition and performance measures, so that controllers and IP agents not only respond to, but also log assessments of the user's comms for presentation during an automated debrief.

Proven Training Benefit

Data collected by the US Air Force during field trials showed statistically significant gains in performance among students using VIPERS—the more time students spent on the system, the faster they received favorable scores on training sorties.

Training Tools

VIPERS features a powerful mission-building tool that enables instructors to easily create and modify scenarios, map training objectives to scenarios, and review student performance. Students can also create scenarios for themselves and designate "self-study" scenarios to keep their performance confidential.

Contact: Dr. Benjamin Bell
Director, Business Development
CHI Systems, Inc.
1035 Virginia Drive, Suite 300
Fort Washington, PA 19034 USA
Phone: +1 267 934 8714
bbell@chisystems.com

Case Study : USAF

Undergraduate Pilot Training

Undergraduate Pilot Training (UPT) is a foundation of joint preparedness for the flying services of the US military. In collaboration with the Air Force Research Laboratory and the Air Education and Training Command (AETC), CHI Systems is using VIPERS to field ground-based situational awareness and comms training to UPT students, as a way to improve overall pattern proficiency and to help students make more efficient use of the limited flight time offered in the syllabus.

VIPERS is providing UPT students with on-demand, portable practice and feedback opportunities that have until now been available only in the airplane with a live instructor. Although VIPERS enjoys broad applicability, this UPT case study provides concept validation and a testbed for enhancing VIPERS technologies.

For more information about VIPERS, visit:

http://vipers.chisystems.com

or contact us via email:

vipers@chisystems.com