Docket #: S11-087

COVE ITS – Automated Tutoring for Shiphandling Training

Prof. Stanley Peters has developed an artificially intelligent tutoring system designed to augment virtual training for conning large ships. This technology, COVE ITS (Conning Officer Virtual Environment Intelligent Tutoring System), detects both the process and the execution of orders to measure a student's performance and detect problems that may arise. It is modeled on human instructor behavior to give pointers on common and predictable problems - before they become unmanageable, but not before the student has a chance to see the effects of an error. Because COVE ITS can replace some of an experienced human instructor's role, it could enable an overall reduction in dollar and manpower costs of training.

Stage of Research
Students trained using COVE ITS with oversight by an instructor show proficiency gains comparable to students trained with traditional one-on-one training. Studies are ongoing to determine if the system is similarly effective when scaled-up to one instructor supervising two or three COVE stations. Additional development plans include expansion to different levels of students and creation of a practice-only mode.

Applications

- **Shiphandling training** with immersive virtual reality simulations

Advantages

- **Reduced costs** - virtual training simulations with COVE ITS require less manpower than traditional one-on-one instruction

Publications

- "Automated Support for Learning in Simulation: Intelligent Tutoring of Shiphandling" Stanley Peters, Susan S. Kirschenbaum and Elizabeth Owen Bratt. To appear in Proceedings of The Interservice/Industry Training, Simulation & Education Conference (I/ITSEC), Orlando, FL, November, 2011.

Innovators

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