

Operator Performance Laboratory (OPL) Research Project Synopsis



Quality of Training Effectiveness Assessment (QTEA)



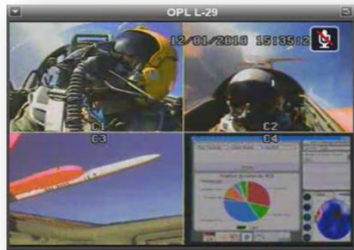
Office of Naval Research, contract N00014-09-C-0598

Project Goals:

The evolution of the role of flight simulation has reinforced assumptions in military aviation that the degree of realism in a simulation system directly correlates to the training benefit, i.e., more fidelity is always better. QTEA is a tool that simulator designs can use to determine the optimal level of fidelity in a virtual environment.

Training effectiveness can be enhanced with our system by virtue of providing instructors with detailed information on real-time performance of the pilot while performing training mission task elements and during after action review (ARR). Real-time observation with QTEA during performance of training tasks

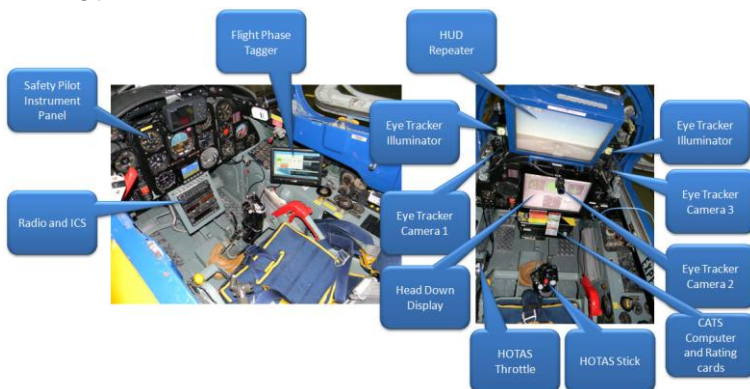
affords the instructor with an opportunity to assess the cognitive loading of his/her student so that the training task can be adjusted in real-time to prevent under or overloading. Under loading is undesirable because it wastes precious simulator or aircraft resources without offering any training benefit to the student. Overloading is equally undesirable as failing to perform the training task for an extended provides no training benefit.



How it works:

The pilot is fitted with neurocognitive and physiological sensors. The signals from these sensors are processed with OPL proprietary models that can quantify pilot workload. The active electrode sensor cap is worn under the helmet with an additional soft helmet liner for wearer comfort.

For a demonstration of QTEA call Tom Schnell at 319 631 4445.



For more information visit <http://opl.ecn.uiowa.edu>