NAVAL AIR WARFARE CENTER
TRAINING SYSTEMS DIVISION
ORLANDO FLORIDA

EXHIBIT FACT SHEET

# Configurable Aviation Trainer – Aiding Learning by Integrating Simulation Technology (CAT-ALIST)

Recent Naval aviation guidance calls for development of low-cost, high-fidelity, reconfigurable aircrew training devices. A variety of reusable, government purpose and government-funded technologies provide the baseline of effective and efficient simulation-based training solutions to meet this need.

The Aviation Threats Aeromedical Trainer, for instance, supports a wide variety of aviation training requirements, including extreme environments like inclement weather and night landings; carrier landings; hypoxia and spatial disorientation; situational awareness, and emergency flight situations.

**Instructor Operator Station**

Advanced Disorientation and Aviation Physiology Training System (ADAPTS) brings together proven instructor station technology with Small Business Innovative Research (SBIR)/Small Business Technology Transfer Research (STTR)-funded monitoring and display technology to provide a master control center for scenario development, runtime, and After Action Review (AAR). ADAPTS provides a streamlined touch screen interface that draws attention to critical performance characteristics including physiological and flight data. PMA-205 Air Warfare Training Development (AWTD) and SBIR/STTR programs provided initial funding for this component technology.

**Visuals**

The Out-The-Window (OTW) visual system and the Deployable Sensor Scene Simulation System (DS4), bring together the features available in Interservice Common Sensor Model (ICSM), Synthetic Environment Radiometry Engine (SERE), and GenesisRT to create a standalone application that is ideally suited for just-in-time visualizations. This solution is a low-cost (i.e., no license costs for government use) and field-upgradable (i.e., addition of gaming areas without visual engineering support required) capability that provides a high-fidelity and geo-specific OTW visual scene. DS4 also provides next-generation capability in this respect by relying only on refined source data, such as NAVAIR Portable Source Initiative (NPSI), to produce rich simulations. PMA-205 AWTD and SBIR programs provided initial funding for this component technology.

**Modular/Small Footprint Crew Station**

The reconfigurable crew station for the trainer leverages a cockpit developed under the SBIR program that provides realistic, moderate fidelity controls. The overall system includes a three-channel OTW display, a configuration side panel, a long-throw F-18-like stick, adjustable F-18-like ejection seat, and a touch screen, heads-down display. The SBIR program provided initial funding for this component technology.

For further information on this exhibit, or on business opportunities with NAWCTSD, please contact our Business Support Team by telephone at (407) 380-4763, by e-mail at orlo_businesssupportteam@navy.mil, by fax at (407) 381-8744, or by mail at Business Support Team, NAWCTSD, 12350 Research Parkway, Orlando, FL 32826.