

MODELING & SIMULATION \

UNIVERSITY OF CENTRAL FLORIDA

THE UNIVERSITY OF CENTRAL FLORIDA USES PRESAGIS' SUITE OF MODELING & SIMULATION SOFTWARE TOOLS TO FACILITATE THE TEACHING OF CORE SIMULATION APPLICATION DEVELOPMENT CONCEPTS.



AT A GLANCE

Customer // University of Central Florida

Country/Region // Florida, USA

Domain // Education

Presagis Software

// Creator // Terra Vista // STAGE

// FlightSIM // Vega Prime



CUSTOMER BACKGROUND

The graduate-level *Interactive Simulation* course at the University of Central Florida (UCF) taught by Associate Professor Dr. Michael Proctor provides an introduction to the development and use of modern day simulators. The course is designed to teach both technical and non-technical students how to develop simulation applications using commercially available modeling and simulation (M&S) software tools. Students are taught M&S theory in the classroom and given the opportunity to apply their knowledge in the laboratory by developing 3D models, synthetic environments, and simulation and training scenarios.

ACADEMIC CHALLENGE

The course is attended by a group of interdisciplinary students—including Senior Military Officers, Computer Scientists, Engineers, Program Managers, Psychologists, and Educators. The diverse background of students means that some students have extensive computer programming skills, while others have little to none.

What's more, in earlier versions of the course, Dr. Proctor used disparate commercial software to teach his students how to develop simulation applications. This however provided a disjointed workflow and required additional development and integration "patchwork" in order for his students to seamlessly develop and deploy their end applications.

"We chose Presagis because the company provides an end-to-end solution. No other single vendor on the market is able to offer a complete and integrated simulation development suite that covers the entire M&S workflow."

- Dr. Michael Proctor, Associate Professor
University of Central Florida



INTERACTIVE SIMULATION COURSE OVERVIEW

The *Interactive Simulation* course at UCF provides students with access to Presagis' suite of M&S software tools. Hands-on training takes place in the *UCF Lockheed Martin Synthetic Environment Learning Laboratory* where students:

- Build 3D models and synthetic environments with **Presagis Creator** and **Terra Vista**. They have the option to either enhance the default Camp Pendleton database with roads, urban areas, etc., or build their own terrain database from scratch.
- Import their synthetic environments into **Presagis STAGE**, and in conjunction with **FlightSIM**, conduct aviation-based team training scenarios. Scenarios range from simple pilot taxi and take-off procedures and communications to more difficult scenarios such as flying an unmanned aviation vehicle (UAV) while tracking drug smugglers and other entities.
- Deploy and visualize their end applications using **Presagis Vega Prime** on PC desktop stations equipped with joysticks and other aviation control devices.

About the University of Central Florida

The University of Central Florida and its 12 colleges provide opportunities to 60,000 students from all 50 states and 140 countries. Located in Orlando, Florida, UCF is the nation's second-largest university. UCF is called a "Top Up-and-Coming" national university by U.S. News & World Report, a best-value university by The Princeton Review and Kiplinger's, and one of the nation's most affordable colleges by Forbes.

About Presagis

Presagis is a global provider of software for the development of modeling, simulation, visualization, and embedded display applications. Focused on building intimate relationships with its customers, the company provides integrated and comprehensive end-to-end solutions based on open standards, with a unique combination of commercial software tools, and professional development and advisory services.

Presagis makes the future safer by building software that helps its customers reduce development risk, improve time-to-market and lower costs in complex projects, in addition to developing DO-178 certifiable applications. With recognized expertise in the aerospace and defense markets, the company services more than 1,000 active customers worldwide, including many of the world's most respected organizations such as Boeing, Lockheed Martin, Airbus, BAE Systems and CAE.

WHY UCF CHOSE PRESAGIS

While UCF did consider other commercially available software on the market, it was the integrated nature of Presagis' simulation development tools that made Presagis a clear winner. There was no need to patch together different tools and file formats—Presagis' suite was pre-integrated right out of the box.

In addition, Presagis software offers user-friendly graphical user interfaces that enable students to do far more than if they were faced with a pure coding challenge. This is particularly important with a class of interdisciplinary students with varying levels of technical expertise. Not only is the software easy-to-use, but Presagis provides superb support. "We are fortunate to have instructional support from Presagis during the practical laboratory segments of the *Interactive Simulation* course," explained Dr. Proctor.

SUMMARY

UCF needed a set of simulation development tools that would facilitate the teaching of core simulation development concepts to both technical and non-technical students at UCF. Presagis' suite of M&S software tools provides a complete and tightly integrated simulation development environment that enables students to learn about all aspects of modern M&S application development.

"Presagis software ensures that my students are exposed to the entire interactive simulation development workflow in one semester. In the early 1990s, this took as many as three semesters," said Dr. Proctor. Students are provided with hands-on training using a variety of tools that are easy-to-use and represent the entire M&S application development workflow.