

# HUMAN MACHINE INTERFACE \

# VAPS XT

RAPIDLY DEVELOP DYNAMIC, INTERACTIVE, REAL-TIME GRAPHICAL HUMAN MACHINE INTERFACES

Offering greater freedom and limitless design possibilities, VAPS XT is ideally suited for data display, simulation applications, and the development of software for embedded systems.



## THE EVOLUTION IN AVIONICS DISPLAY DEVELOPMENT

VAPS XT is a next generation software tool from Presagis for the rapid development of dynamic, interactive, real-time graphical Human Machine Interfaces (HMIs). With its new user-extensible core architecture and integrated logic capabilities, VAPS XT is the ideal tool for HMI design and deployment for advanced cockpit displays. VAPS XT also integrates seamlessly into any existing process or environment through its unprecedented integration with the Presagis STAGE™ family of simulation products and 3rd party partner solutions.

### VAPS XT BENEFITS

- The automatic code generation capabilities included in VAPS XT allow the user to automatically generate display code with the click of a button.
- For simulation and advanced prototyping requirements, VAPS XT extends the graphical and drawing capabilities already found in VAPS and adds in photo-realistic effects, unlimited textures, shading and graphical libraries for the ultimate in simulated cockpit displays.
- Through its unprecedented integration with the STAGE family of simulation tools via nCOM™, Engenuity's new integration toolkit, VAPS XT provides unmatched capabilities for display concept testing and evaluation in a simulated test environment.

Built on years of industry expertise and developed through close consultation with top avionics manufacturers, VAPS XT is already being used to rapidly develop dynamic, interactive, real-time HMIs for next generation aircraft, including the Boeing 787 "Dreamliner" jet. Extending the already powerful capabilities of VAPS, VAPS XT boasts new features for use throughout the complete development cycle. With its open and extensible architecture, VAPS XT offers HMI developers an unparalleled level of control and flexibility in the development of software for next generation cockpit displays.



VAPS XT features fully integrated UML-based logic design that enables both programmers and non-programmers to visually create complex menu-based applications or to assign complex behavior to graphical objects without having to write code or purchase additional software. From prototyping and embedding to documentation and certification, VAPS XT dramatically reduces time to market and improves both the visual quality and performance of the HMI application.



With its intuitive drag-and-drop graphical user interface, VAPS XT allows both programmers and non-programmers to easily create and customize detailed graphics and objects. HMI developers and human factors experts can use VAPS XT to design and test the look, feel, functionality, and behavior of devices from early specification through to final production display.

## PRODUCT FEATURES

### Unmatched Usability

- User-friendly GUI meets the needs of both beginner and expert users.
- Drag-and-drop object creation.
- C++ object-oriented architecture supports touch-controlled displays, interactive graphics, and menus.
- Create, customize, and save new objects and then re-use across multiple projects.
- Integrated UML-based Statecharts for easy logic definition.
- Standards-based and humanreadable XML file format.
- Easily add functionality and customize the tool with the user-extensible, model-based core architecture.
- Award-winning online documentation.

### High-Quality Object Creation

- Raster file import capability.
- Scalable Vector Graphics (SVG) object creation.
- Transparencies, texture-mapping, and smooth shading support.
- GUI object library included to easily create interactive, Windows-like displays.

### Seamless integration with mainstream tools

- Interoperability with STAGE Scenario for training applications.
- Integrates with STAGE Flightsim/ Helisim for flight simulation and test and integration
- Integrates with Telelogic DOORS for requirements traceability.

VAPS XT offers HMI designers an unparalleled level of control and flexibility when designing for the complex requirements of next generation cockpit displays.



Image Courtesy of Barco

Interoperability with The Mathworks Simulink for system behavioral modeling.

- Integrates with Rational ClearCase for project lifecycle management.

### Industry-leading code generation enabled by CODE nGEN™

- A high-performance, robust code generator designed specifically for VAPS XT.
- Automatically generate code to create a fully-functional, interactive desktop executable.
- Automatically generate optimized code for minimal memory footprint for embedded systems, such as Windriver VxWorks, Greenhills Integrity, and 3D enabled PDAs.
- Choose between the generation of native OpenGL code or any other graphics standard to efficiently meet the needs of your embedded system.