

# SENSOR PRODUCTS

ACCURATE SENSOR DISPLAYS

## RAPIDLY CREATE AND DEPLOY ACCURATE REAL-TIME 3D SENSOR DISPLAYS

### SENSOR PRODUCTS BENEFITS

- **Integration**

Delivered as integrated Vega Prime modules, IR, NVG, and Radar displays can be easily added to any Vega Prime application. Sensor displays can be developed through either the LynX Prime graphical user interface for greater efficiency and productivity or through a C++ Application Programming Interface (API) for increased flexibility. Numerous samples are provided to enhance productivity out-of-the-box.

- **Correlation**

IR, NVG, and Radar Sensor displays use the same geometry and are fully correlated with the out-the-window visual environment.

- **Realism and Accuracy**

Vega Prime IR Scene computes and displays quantitative sensor images of natural features, cultural features, and dynamic objects at real-time frame rates. With Vega Prime IR Sensor, users can add realistic sensor effects to scenes generated with Vega Prime IR Scene to match the characteristics of a wide range of sensors.

Presagis Sensor Products bring together a comprehensive set of optional modules and stand alone tools for the generation of correlated and accurate IR and NVG scenes. Based on the proven Vega Prime framework, these modules and tools provide the means to add accurate sensor displays to any visualization application.



From sensor material classification (Texture Material Mapper) to realistic radar displays (Vega Prime Radar) and atmospheric definition (MOSART Atmospheric tool), Presagis Sensor Products cover the full spectrum of requirements for the development and deployment of accurate, correlated sensor applications. With Vega Prime IR Scene, users can add real-time quantitative sensor displays to any Vega Prime application, and Vega Prime IR Sensor is ideal for adding realistic sensor effects to scenes, including night vision goggles (NVG) and medium and long wave IR devices.



## FEATURES

- Vega Prime IR Scene**  
 Vega Prime IR Scene computes and displays quantitative sensor images of any environment containing natural features, cultural features, and dynamic objects. Sensor Prime utilizes OpenFlight, the same source geometry as Vega Prime, and provides fully correlated out the window and sensor views.
- Vega Prime IR Sensor**  
 Vega Prime IR Sensor allows users to add realistic sensor effects to scenes generated with Vega Prime IR Scene that match the characteristics of a wide variety of sensors, including electro-optical (EO) imagers, night vision goggles (NVGs), and medium and long wave infrared devices.
- Vega Prime Radar**  
 Vega Prime Radar provides the ability to add a realistic radar display to any Vega Prime application. By asynchronously computing the radar display, Vega Prime Radar provides the appropriate update rates for a radar display without effecting the performance of the visual application. In the case of geo-typical use, Vega Prime Radar can use OpenFlight, the same source data for geometry as Vega Prime, thereby allowing users to effectively correlate the terrain and objects within both the visual and radar displays.
- Texture Material Mapper (TMM)**  
 TMM is an optional off-line tool that performs the material classification of textures in a visual/sensor database. With TMM, the materials themselves are contained in a user-extensible database that also includes descriptions according to wavelength-dependent reflectance, heat-transfer, and radar properties.

- MOSART Atmospheric Tool (MAT)**  
 MAT is an optional off-line GUI-based tool that provides the atmospheric properties used in a sensor scene—including geographical location and atmospheric conditions—along with computed data—including solar and lunar energy reaching surfaces and surface temperatures—that are relevant for a given simulation.

MOSART, or Moderate Spectral Atmospheric Radiance and Transmittance Code, is a U.S. DOD standard product for calculating atmospheric transmission and optical radiance backgrounds along user defined lines-of-sight. MOSART is used for calculating atmospheric transmission and radiance at low altitudes for line-of-sight paths within the atmosphere and for paths that intersect with the earth's surface.

Presagis Sensor Products deliver a COTS software application development environment for the creation and deployment of real-time 3D sensor applications.

Delivered as a set of optional modules and stand alone tools for Vega Prime, these modules and tools enable users to add accurate sensor displays to any Vega Prime application.

*Sensor Prime and its associated modules and tools are classified as ITAR controlled products by the US State Department. This brochure does not contain any ITAR restricted material. For more information on the listed products, please contact your Presagis representative.*

