

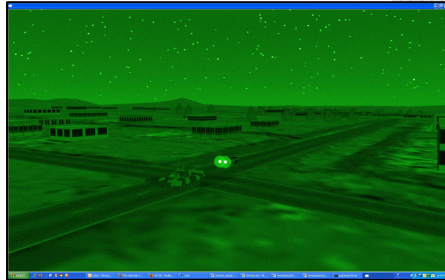
JRM Technologies

Real Physics • Real Sensors • Real-time

JRM Technologies specializes in state-of-the-art sensor simulation featuring credible physics-based and engineering-level phenomenology modeling.

Capabilities Overview

JRM was founded in 1998 with a vision of bringing better predictive physics, sensor phenomenology and realism to all areas of military sensor simulation - from high-fidelity, real-time training simulators and hardware-in-the-loop (HWIL) stimulator applications, to very high-fidelity, non-real-time multi- and hyper-spectral scene generation.



Since then, JRM's SigSim™, SenSim™, ASGARD™, GENESIS™, TAA™, OSV™ and CHIMAERA™ products have advanced that vision, bringing advanced synthetic environment, signature, propagation, and sensor-effects modeling to a broad range of sensor simulation applications throughout the 0.20-25.0um EOIR and 10KHz-40GHz RF spectra.

Our products and services are used by various US Government and industry defense customers throughout the Air Force, Navy, Army, DARPA, Defense Modeling and Simulation Office, and many other agencies.

Experience

JRM personnel have proven experience providing advanced sensor simulation applications, integrated hardware-software simulation/stimulation systems, and reliable technical support. This experience includes:

- 30-60 Hz man-in-the-loop (MITL) NVG, FLIR and visible "out-the-window" training simulators.
- 60-400 Hz HWIL IR stimulators and associated resistor-array/projector control/interfaces on state-of-the-art hardware platforms.
- Correlated multi-spectral (EO/IR/RF) sensor suite simulations.
- Full hyper-spectral sensor simulations.
- Engineering-level NVG/FLIR sensor effects simulations and real-time simulators.
- High-entity-count correlated-virtual and constructive simulation for MITL vs computer-generated forces (CGF) exercises.
- Semi-automated algorithms for material classification of remote-sensed imagery.
- High-resolution material-and thermal-encoded terrain database development.
- Metric and image-based EO/IR sensor performance prediction algorithm development.



JRM Products

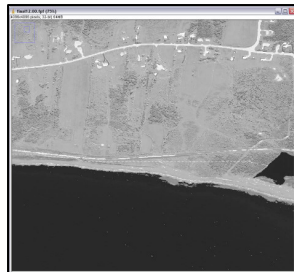
JRM is committed to providing our customers world class products and services, Our Product lines are designed specifically to meet the needs of the following end-user areas:

- **Products for Modeling and Simulation Developers:** JRM offers a comprehensive tool set for developing arbitrary constructive or virtual sensor solutions.
- **Products for Testing and Laboratory Environments:** JRM offers products and services for Laboratory and Testing environments to include HWIL Sensor Scene Generation and Stimulation.
- **Partner Integration Solutions:** JRM teams with key players in the M&S community to add realistic sensor simulation to their IG product lines and provide turn-key solutions.

Asgard

Advanced Spectral Scene Generator

Asgard™ is an advanced, physics-based spectral scene generation software package. Its highly realistic image output is ideal for advanced training system applications and tactical sensor studies.



OSG Viewer

JRM's Mid-range desktop 30-200 Hz Multip-spectral EO/IR Scene Simulator with network interface for real-time sensor position and orientation.



Genesis

GUI-based Semi-automated Image Material Classifier

Genesis is an advanced-algorithm software tool for creating material-classified-maps from remote-sensed terrain imagery or RGB-textured 3D models -- complete with physical properties and boundary conditions for realistic physics-based sensor simulations.

SigSim

Signature & Atmospheric Library for Sensors & Out-the-Window Visuals

SigSimRT is an advanced signature synthesis and atmospheric propagation runtime library for radiometrically-correct sensor displays and Out-the-Window (OTW) visuals.



SenSim

Advanced EO/IR Sensor SDK & Real-Time Effects Library

SenSimRT is an advanced sensor modeling toolkit and run-time library for real-time sensor effects simulation of any optical sensor in the EO or IR passband. It provides engineering-level modeling of the optics, detector, electronics and display components.

CHIMAERA

Hardware-in-the-Loop (HWIL) Image Generator

JRM's High-end, complete 60-400 Hz HWIL Multi-spectral EO/IR Scene Stimulation System, with support for IR Scene Projectors, Digital Injection I/O Box, Genlock sync-capability, Virtual Memory Interface, Host Interface Controller, super-sampled targets, and database-paging.

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