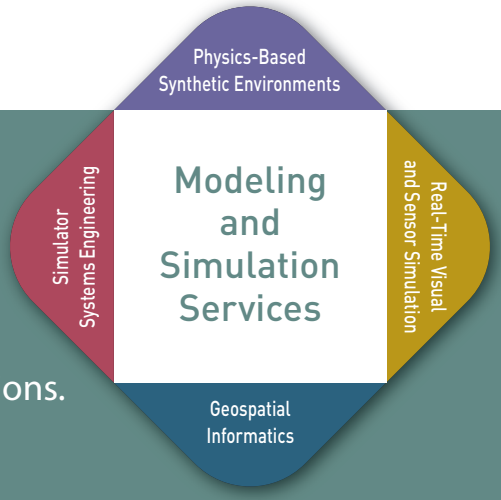
RENAISSANCE SCIENCES CORPORATION

RSC Corporate Overview

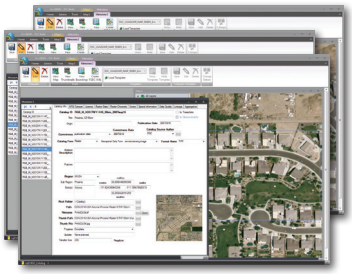
Renaissance Sciences Corporation (RSC) is a technology and products company committed to excellence, agility, and a customer-oriented culture with a proven history of delivering on a broad range of scientific and engineering services for virtual training, mission rehearsal, and physics-based sensor solutions.



Our scientific and engineering disciplines deliver state-of-the-art simulations.

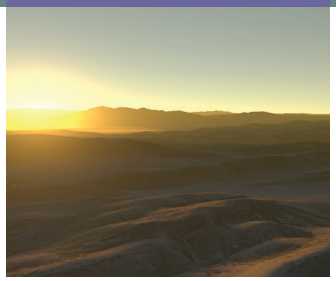
We are recognized for our innovative technology and ability to successfully execute on a variety of high-risk technical efforts while maintaining a consistent focus on our customers' requirements and satisfaction.

Geospatial Informatics



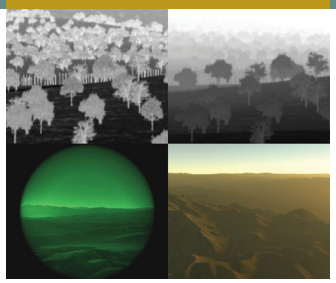
Expert analysis, design, production, and management of refined source data for real-time simulations and other visualization applications. Our support of common geospatial data initiatives across USAF, USN, USArmy, and SOCOM has established RSC's superior reputation as a trusted partner.

Physics-Based Synthetic Environments



We combine competencies in computer science and the physical sciences to pioneer novel constructive and virtual synthetic environment technologies such as high-fidelity atmospherics, natural photorealistic illumination and shadows, and the propagation of high-density urban lighting.

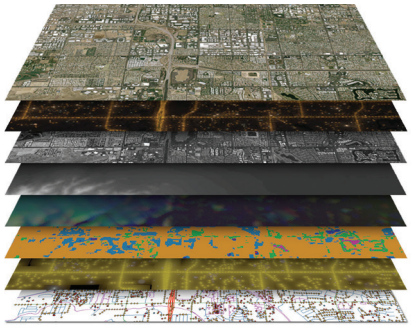
Real-Time Visual and Sensor Simulation



Combining our physics-based synthetic environment and real-time graphics expertise, RSC adapts rigorous predictive modeling methods to real-time capability in support of the highest fidelity visual and sensor applications.

Simulator Systems Engineering

RSC's research and development competencies are complemented by systems engineering and integration services supporting the entire lifecycle of simulator requirements, design, implementation, acceptance, and post-delivery technology insertion.



Refined Geospatial Data Production

RSC is an experienced producer and integrator of high-fidelity custom geospatial data and metadata sets, specializing in the production of quantitative and high-dynamic-range data layers for physics-based modeling and simulation. Our related work in simulation standards development has provided unique know-how in producing to established data preparation standards such as those published by USN and USAF.

SimHDR. SimHDR is a real-time multi-spectral radiative transfer model that provides GPU-based functions for computing illumination and shading for day/night for all geometry in the scene and modeling of the atmosphere's interaction with the natural lighting as impacted by scattering and absorption mediums. The result is a more realistic, correlated, and higher fidelity representations of accurate atmospherics for visual and sensor applications.

SimHDR-EO.

RSC's SimHDR-EO includes all of the capabilities of SimHDR for rendering physically-accurate illumination, atmospherics, and cultural lighting with the added capabilities of rendering real-time EO and NVG sensor effects in your existing visual applications and Image Generators. SimHDR-EO models physics-based radiance scenes into extremely realistic and radiometrically accurate sensor scene renderings and sensor stimulation of NVGs for the highest fidelity and most accurate physics-based NVG solution in the market today.

SimGDMS™ Geospatial Data Management

SimGDMS was developed by RSC to manage the workflow and distribution of source data for simulation exploitation. SimGDMS creates a framework for improved knowledge management and workflow involving massive worldwide geospatial data in a simulation context. Supporting a diverse set of traditional and physics-based data types. SimGDMS enables multiple users in a workgroup to cooperatively ingest, attribute, catalog, sort, retrieve, track commercial licensing and government handling caveats, and ultimately publish geo-specific visual data layers for downstream compilation to real-time simulation formats.

SimHDR-IR

SimHDR-IR includes all of the capabilities of SimHDR with the addition of a physics-based thermal model to render MWIR and LWIR sensor effects and phenomena across time-varying environmental and atmospheric conditions. SimHDR-IR provides extremely rapid GPU based sensor transforms on-the-fly to generate sensor displays with greater pixel density and reduced latency. SimHDR-IR's flexible architecture and open API allows developers to rapidly add physics-based IR sensor modeling to existing visual applications and Image Generators

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