



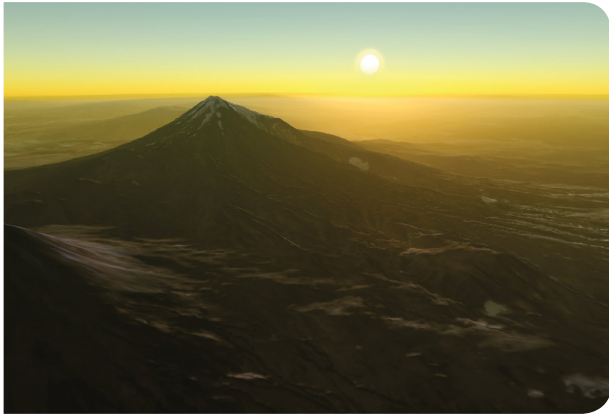
# SimIG HIGH PERFORMANCE IMAGE GENERATOR

SimIG offers advanced and real-time visualization in meeting the needs of high realism and high performance of an image generator system.

- Highly Realistic Visualization
- Multi-Channel Visualization
- Large Area Database Visualization
- Advanced Visualization of Environmental Conditions



# SimIG HIGH PERFORMANCE IMAGE GENERATOR



## Advanced Rendering

- 3.000.000+ km Visual Range
- Out of Atmosphere Rendering
- 1000+ Addressable Moving Models
- User Definable HUD Overlay Support
- 16 bit rendering pipeline

## Terrain Visualization

- Double Precision Globe Terrain Generation
- Advanced Technology for Visualizing High-Resolution, Photo-Realistic CDB Databases at 4K@60 Hz or WQXGA@120Hz
- Real-Time Terrain Generation from Height Maps & Imagery with Texture and Geometry Paging
- Texture and Geometry Level-of-Detail support
- High Performance Frustum Culling
- Included Whole Earth Database
- Realistic Ocean Rendering
- Height Maps and Imagery detail up to 20cm/pixel



## Advanced Visualization of Atmospheric Conditions

- Realistic Atmospheric Scattering
- Ephemeris Model for Sun and Moon Position Calculation
- Moon visualization with realistic size, phase and illumination.
- Volumetric Clouds that Move and Change Shape with Wind
- Real-time Cloud Shadows
- Up to 1400+ Light point Based Stars Positioned with Ephemeris Calculation
- 3D Particle Based Rain, Snow, Hail Visualization with Depth



## Lighting

- Dynamic Lighting Changing According to Time-of-Day
- Dynamic Shadowing Moving Objects and Object-on-Object/Terrain Shadowing
- Up to 11 Shadow Casting Dynamic Lights
- Up to 3072+ Non Shadow Casting Dynamic Lights



# SimIG HIGH PERFORMANCE IMAGE GENERATOR

## Multi-Texturing Techniques

- PBR (Physical Based Rendering) textures for scene models
- Normal Maps
- Shadow Maps
- Light Maps
- Generic Micro-Texture Support

## Multi-Channel Visualization

- Multi-Channel Support (Verified up to 32 Channel Synchronized or Asynchronized Operation)

## Special Effects

- Smoke, Dust, Trails, Fire, Explosion, Rain, Snow, Hail, etc.
- User Controlled and Modifiable Particle Effects
- Effect of Wind Direction and Speed on Particles

## Standards Compatibility

- Common Database Format (CDB) Support
- Common Image Generator Interface (CIGI) Support
- OpenFlight Model Support
- FBX (Filmbox) file format support

## Physical Based Query Support

- Line of Sight (LOS)
- Height of Terrain (HOT)
- Height Above Terrain (HAT)
- Laser Range Finder (LRF)
- Collision Detection
- Sea Point Height

## Character Animation

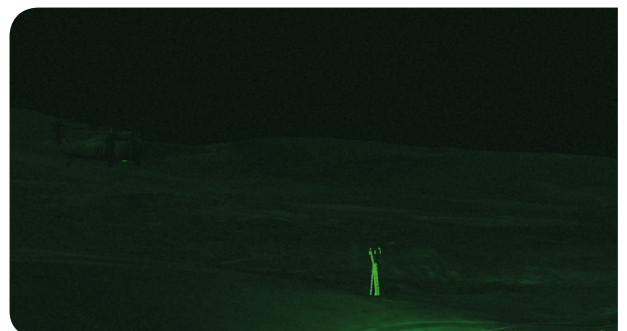
- Frame Animation
- Bone Animation
- Equipment Attachment

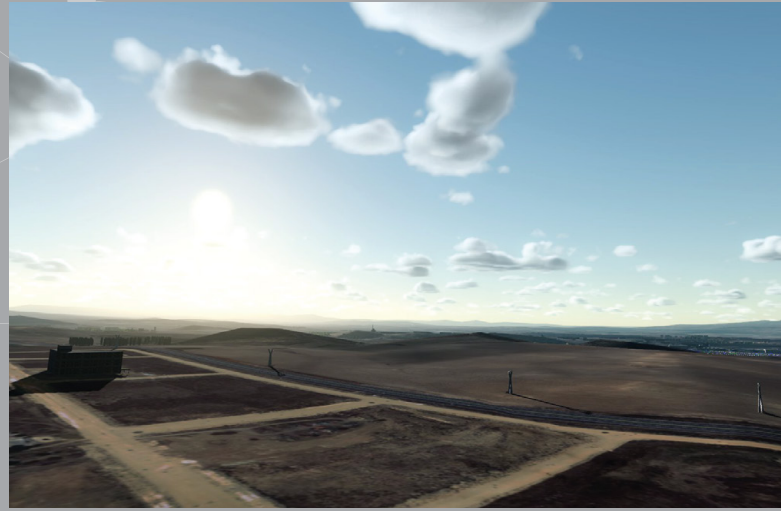
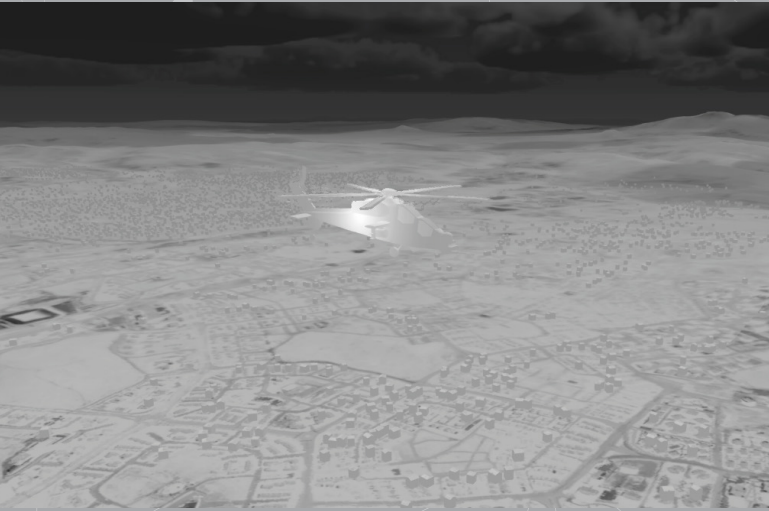
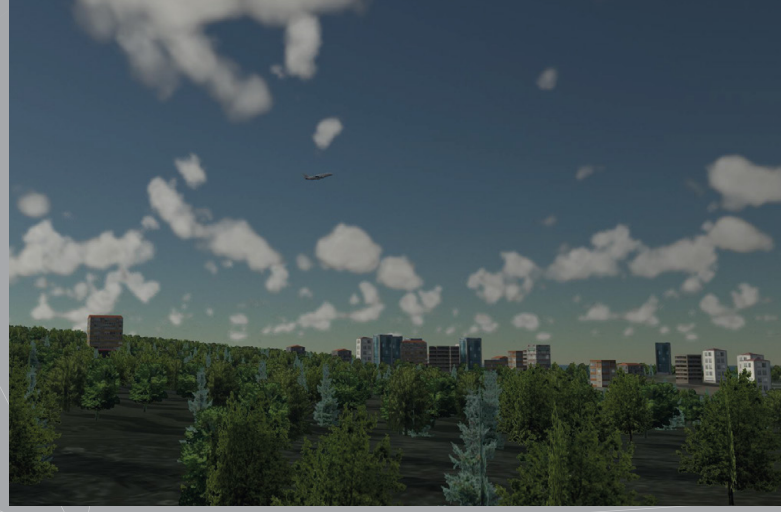
## Performance Features

- Multi-threaded Architecture can Utilize Modern Multi-Core GPUs Efficiently
- User Adjustable Memory, Disk or Server Caching of Data
- UDP Multicast Support
- GPU oriented design for Lowering CPU Bottlenecks

## Sensor Simulation

- Night Vision Simulation with Simulated and Stimulated Mode Support
- Physical Based Thermal Camera Simulation (White-Hot, Black-Hot Mode)
- IR/RIR, FLIR Simulation
- Post Processing Effects Including Zoom, Blur, Depth-of-Field, Level, Gain and Polarity, Eye Adaptation





SIMIG-EN-2312-105

Phone : +90 (850) 840 00 46

Fax : +90 (312) 210 00 47

E-Mail : [info@simsoft.com.tr](mailto:info@simsoft.com.tr)

Web : [www.simsoft.com.tr](http://www.simsoft.com.tr)

#### HEAD OFFICE

ODTÜ Teknokent SATGEB Bölge,  
Ortak Bina 1. Kat AR-GE Ofisi  
ANKARA, TÜRKİYE

#### SİMMER / KAHRAMANKAZAN

Ankara Uzay ve Havacılık İhtisas OSB  
SarayOSB Mahallesi, B28 Cadde No: 4/1  
ANKARA, TÜRKİYE

#### BİLKENT OFFICE

Ankara Teknoloji Geliştirme Bölgesi  
Cyberpark, Cyberplaza A Blok 5. Kat  
ANKARA, TÜRKİYE

#### İSTANBUL OFFICE

Teknopark İstanbul Sanayi Mah.  
Teknokent Bulvarı No: 1/3A 208  
İSTANBUL, TÜRKİYE

#### HACETTEPE OFFICE

Üniversiteler Mah. Hacettepe Üniversitesi  
Teknokent 6. AR-GE F Blok 8.Kat  
ANKARA, TÜRKİYE

#### USA FLORIDA

Simsoft Technologies 4250  
Alafaya Trail Ste 212-148 USA  
E-Mail : [info@simsofttech.com](mailto:info@simsofttech.com)