

vsVIEWER Free Real-time Image Generator : AEROPVS012

vsVIEWER is a real-time Image Generator (IG) developed by virtualsim to serve the simulation industry. It is tightly integrated into vsTASKER, a professional software package used to generate C++ code for military tactical simulations, air traffic control, and process optimization.

Key Capabilities and Features

- ✓ Built from the ground up: Designed specifically as a pure IG utilizing free game engines and 3D graphics toolkits.
- ✓ Graphics engine support: It relies on architectures like OpenSceneGraph (OSG) v3.4.0 and OsgEarth v2.8 to power its 3D environment.
- ✓ Host communication: Real-time simulation host applications interoperate with the IG using peer-to-peer or distributed standard and bespoke protocols, including *vsData* messaging.
- ✓ Configuration interface: It includes a native Windows application allowing users to easily generate configuration files and retain live control over the IG during execution.
- ✓ vsTASKER integration: Integrated directly into vsTASKER's runtime (/Runtime/Qt/SimpleUI), enabling direct scene control, smooth road and rail component rendering, and scenario map rotations.
- ✓ vsVIEWER is a real time Image Generator for the simulation industry. It has been designed from the ground-up as a pure IG, using free game engines and 3D graphics tool-kits; Real-time hosts interoperate with the IG using standards and bespoke protocols.
- ✓ The free version processes a configuration file which describes the protocol and 3D models used.
- ✓ The paid version provides the libraries and an API to extend and customize all the default features and behaviors which are defaulted in the free version.
- ✓ The product roadmap will incorporate more functionality with coming versions.



Graphic Engines Notes

OpenSceneGraph v3.4.0 – available

OsgEarth v2.8 – available

Unreal Coming

- ✓ A Windows application is provided to the user to generate the configuration files used by the IG. This application is also capable of controlling the IG during runtime.

vsVIEWER is a real-time Image Generator (IG) and 3D visualization tool developed by **VirtualSim** to complement their flagship scenario editor, **vsTASKER**. Built specifically for the simulation industry, it allows users to render realistic, immersive 3D environments and monitor simulations in real-time.

Key features of vsVIEWER include:

- **Pure Image Generation:** Designed to act as a standalone, license-free image generator using open game engines and 3D libraries (like OpenSceneGraph).
- **Real-time Synchronization:** Integrates directly with vsTASKER to bridge the gap between 2D scenario logic and 3D operational views.
- **Terrain & Sensor Visualization:** Renders detailed 3D terrain, camera views, and dynamic objects, which makes it ideal for UAV/drone mission controls, radar simulations, and defense trainers.

You can download updates and find more documentation on the VirtualSim Downloads Page, or view their official capabilities on the vsVIEWER Product Page.

Are you looking to integrate vsVIEWER into a **defense, aviation, or civilian simulation project**? If you have specific requirements, I can tell you more about its **OpenSceneGraph support** or its **compatibility with vsTASKER**.

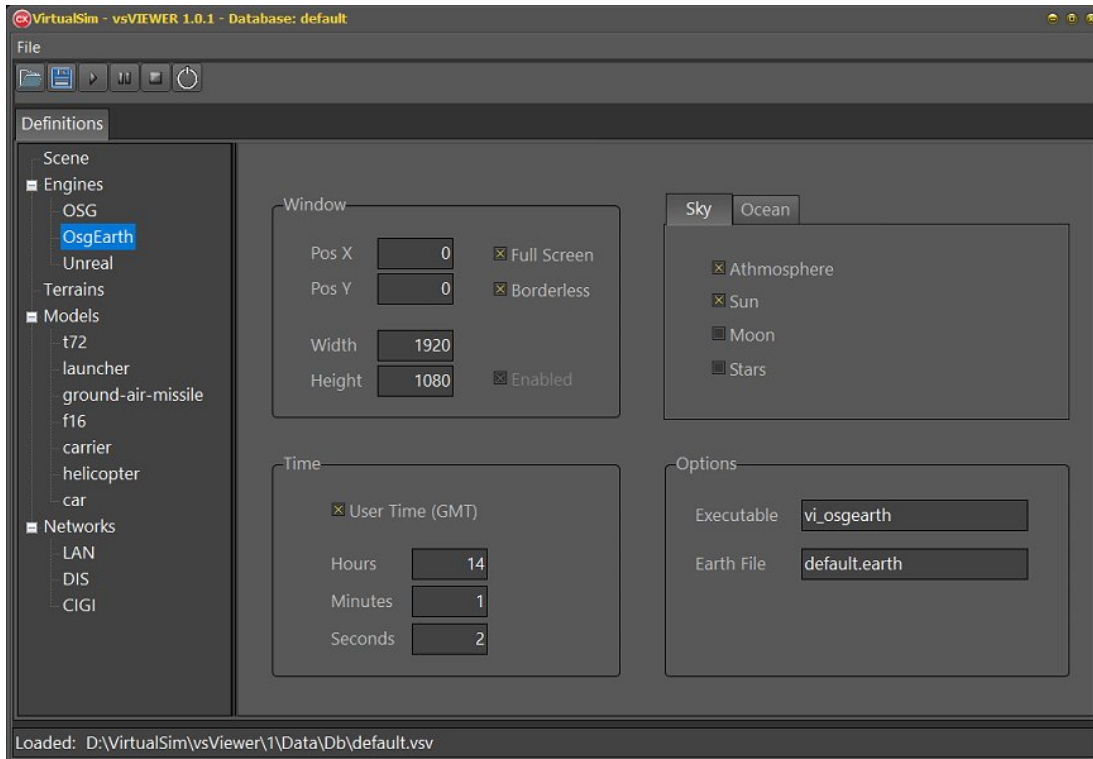
vsTASKER and **vsVIEWER** are software products developed by VirtualSim designed for military, training, and real-time simulation.

- **vsTASKER**: A real-time visual programming and simulation toolkit used to design complex models and generate standalone C++ code for scenarios like air-traffic control, drone swarms, and battlefield simulations.
- **vsVIEWER**: A real-time 3D Image Generator designed to visualize the scenarios and logic created in vsTASKER.

For a brief overview of what vsTASKER does and how it speeds up simulation development:

What is vsTASKER and why you should use it

Would you like to know more about the **technical specifications of vsTASKER** or how to request an **evaluation download** for either product?



- ✓ To communicate with the IG, simulation host applications must use one of the below protocols (peer to peer or distributed).

Note that *vsData* messages can be used in addition of any of the others.

Protocol	Notes
vsData	Proprietary and documented. Simple UDP based messages.
DIS	v6 – Available (basic PDUs supported)
CIGI	v3.4 – Coming (basic messages supported)
HLA	1516 / Evolved – RPR-FOM based – Coming (basic objects supported)
MQTT	vsData based – Coming
DDS	vsData based – Coming

vsVIEWER is an integrated real-time Image Generator (IG) designed specifically to provide high-fidelity 3D visualization for vsTASKER, a core simulation modeling software developed by VirtualSim.

Within the vsTASKER simulation platform, vsVIEWER acts as the primary tool to transform abstract, text-based, or 2D tactical scenario data into fully immersive, real-time 3D visual environments.

Core Architecture and Integration

- Pure Image Generator: Built from the ground up as a dedicated IG utilizing open-source game engines and 3D graphics toolkits like OpenSceneGraph (OSG).
- Directory Integration: Integrated natively inside the vsTASKER application structure under the /Runtime/Qt/SimpleUI directory.
- Seamless C++ Logic: Because vsTASKER generates native C++ code, the simulation engine links seamlessly with vsVIEWER's rendering capabilities, bypassing the need for complex, heavy communication protocols.

Key Capabilities in vsTASKER

- Tactical Realism: Enhances tactical military, air traffic control (ATC), and unmanned aerial vehicle (UAV) simulations by projecting accurate environmental interactions, line-of-sight analysis, and atmospheric obscuration.
- Globe and Terrain Mapping: Powering the "Globe Viewer" feature to generate textured earth visualizations, satellite ground tracks, and multi-layered geospatial terrain.
- Runtime Control: Supports programmatic and GUI-driven landscape manipulation, such as rotating terrain maps in radians and smoothly pathing dynamic components along curves or roads.
- Standard Interoperability: Outside of its native link, it supports standard defense simulation protocols like CIGI (Common Image Generator Interface) and DIS (Distributed Interactive Simulation) to talk with external hosts.

Free vs. Paid Version Structure

When deploying vsVIEWER alongside vsTASKER, the toolkit is distributed in two main tiers according to the VirtualSim Product Suite:

Free Version: Processes a static configuration file mapping out the simulation protocols and 3D models used by the simulation. It includes a dedicated Windows management application to build these configuration files and control the IG at runtime.

- **Paid Version:** Supplies complete developer libraries and a robust API. This allows developers to fully extend, customize, and override default graphical behaviors or implement custom simulation logic directly within the visual output.

If you are setting up or troubleshooting this integration, I can provide more details.

Would you like to know about:

- The network protocols required to connect vsTASKER to an external IG?
- How to configure OpenSceneGraph (OSG) terrain databases within the GUI?

- The process for handling C++ code updates between vsTASKER and your compiler?

vsVIEWER

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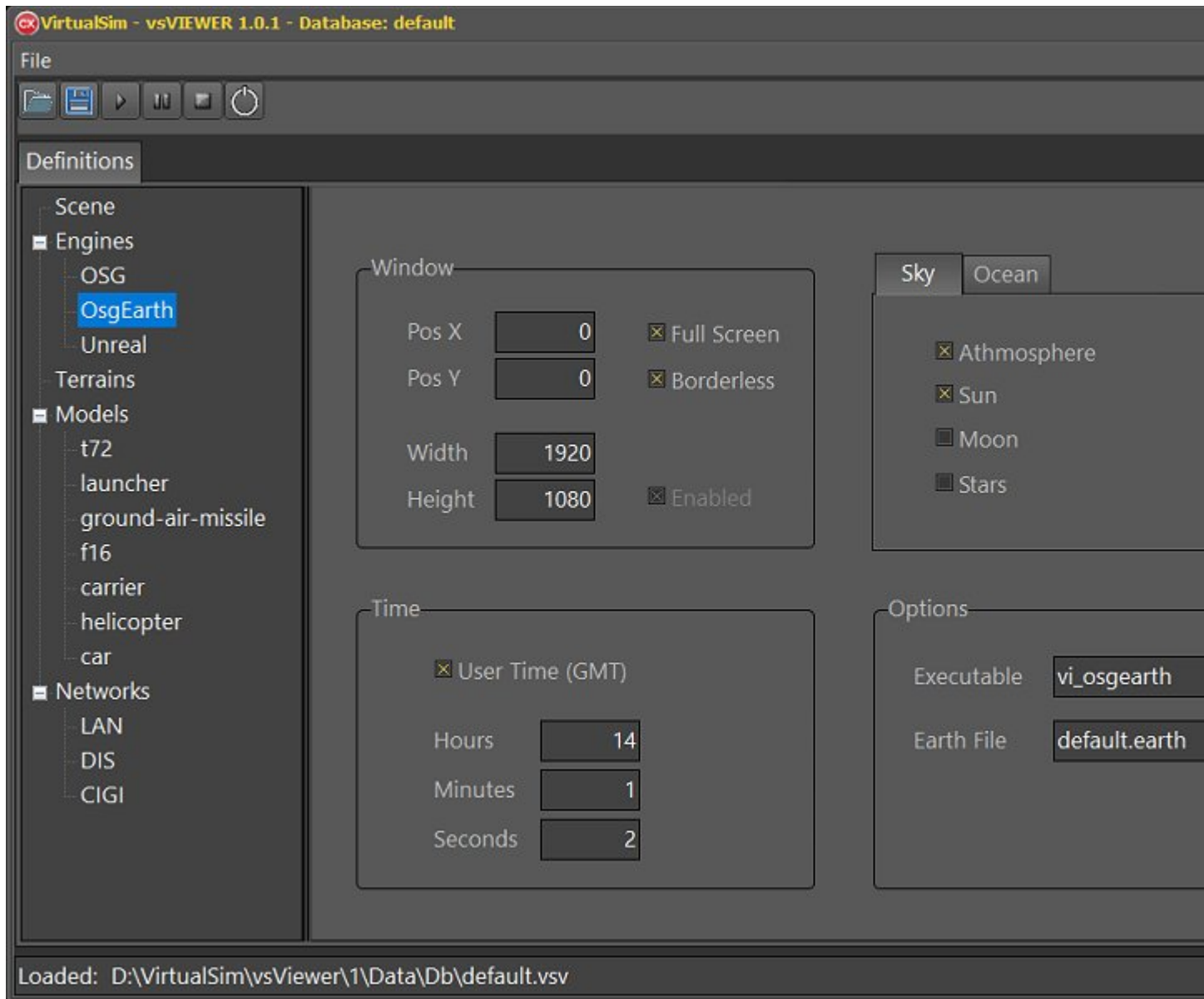
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OS & HARDWARE SUPPORT	INDUSTRY APPLICATION

Note: ** Specifications are copied from manufacturer data. Please contact before buying.