VMVE

Release 0.1.0

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VMVE is a lightweight 3D renderer designed as a sandbox application for graphics testing and building virtual environments.

A project developed by Zakariya Oulhadj for his final year project.

GETTING STARTED

1.1 Installation

The latest version of VMVE can be downloaded here. For a complete list of current and previous versions, visit the VMVE website here.

1.2 Requirements

1. Windows
2. Vulkan supported GPU

USER INTERFACE

The user interface in VMVE is made up for four main panels. Each panel serves a specific purpose with all related functionality designated to that specific panel.
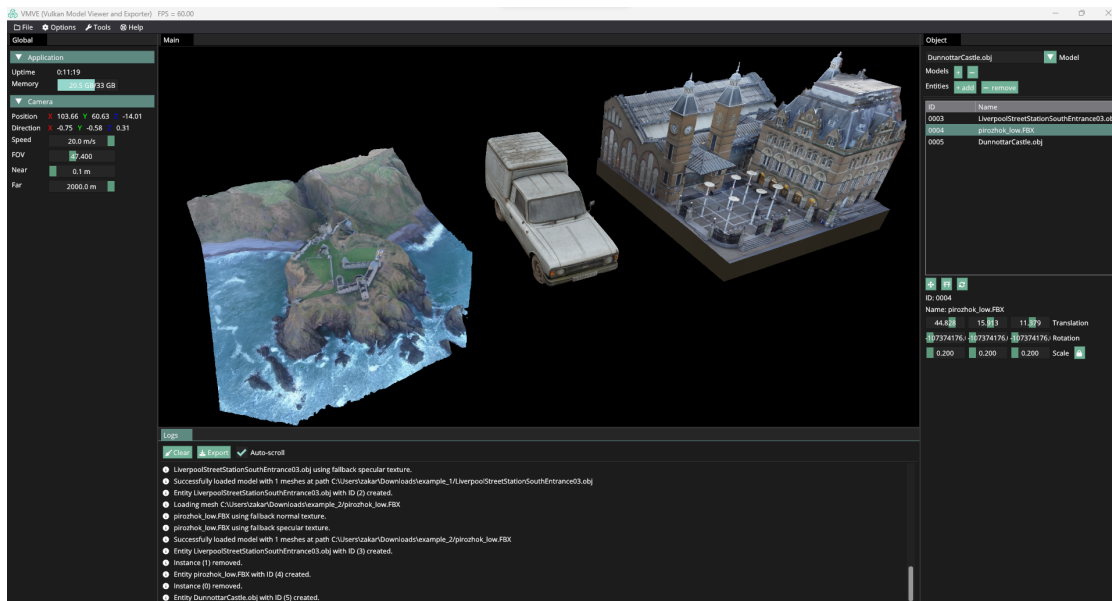
2.1 Main Viewport

All rendering occurs within the main viewport. This is the central most panel that displays the virtual environment.

2.2 Global Panel

The global panel located by default on the left side of the screen contains application wide settings and properties including general statistics and camera controls.

2.3 Object Panel

The object panel located by default on the right side of the screen contains per object information and allows the user to interact with each object individually.

2.4 Logs Panel

The last panel is logs which is primarily informational and provides the users with detailed information regarding the internal state of the underlying rendering engine.

CONTROLS

The shortcuts in VMVE are know as mnemonics and have been carefully chosen with the goal of being easy to remember. In other words, shortcuts will closely resemble the action being performed. For example, `Ctrl+L` will load a model and similarly `Ctrl+E` will exit the application.

The complete list of shortcuts can be seen in the table below

3.1 Global controls

Action	Shortcut
Open load model window	Ctrl+L
Open export model window	Ctrl+E
Open settings window	Ctrl+S
Toggle fullscreen viewport	Ctrl+F
Quit VMVE	Ctrl+Q

3.2 Viewport controls

Action	Shortcut
Camera movement	W, A, S, D
Move object	F1
Rotate object	F2
Scale object	F3
Toggle lighting	Alt+L
Positions view	Alt+P
Normals view	Alt+N
Specular view	Alt+S
Depth view	Alt+D

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ENCRYPTION

VMVE supports basic model encryption that can be used to safely secure digital assets.