Lana3D®
3drendering

## Advanced **3D rendering, visualisation and interaction**

Lana3d is a real-time 3D rendering engine. It is designed to support the development of interactive visualisation applications including virtual and augmented reality. Lana3d is based on a scenegraph architecture which can be built and manipulated programmatically. Its rendering is based on modern OpenGL using programmable vertex and fragment shaders for advanced effects and performance.
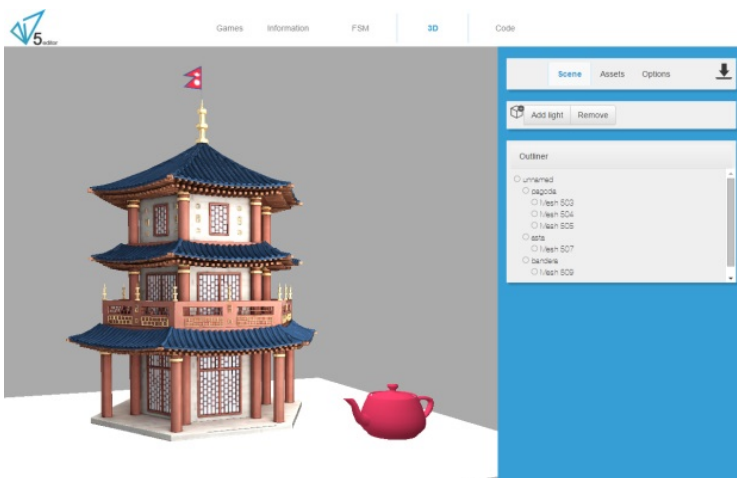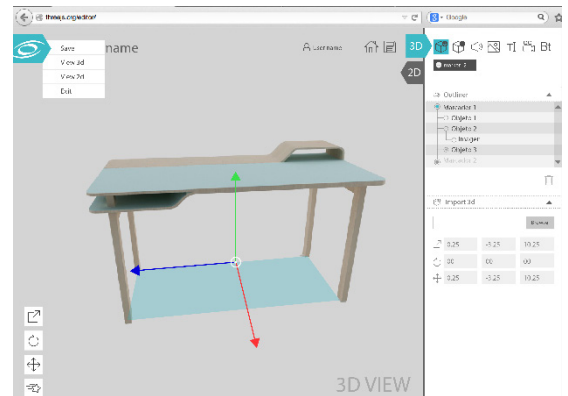

Applications

- Education and training

- Visual simulation of industrial environments

- Virtual and Augmented reality
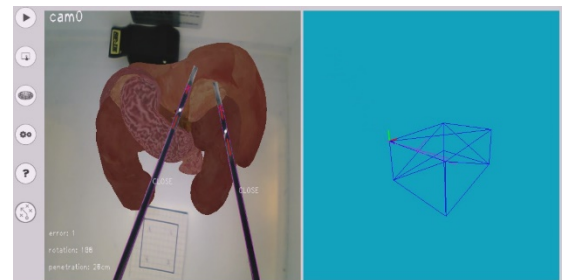
- E-commerce

- Gaming

Use cases

RAutor

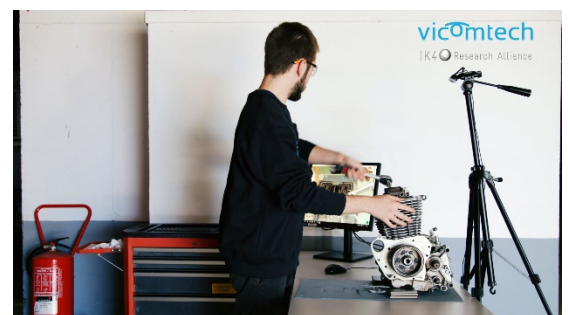Web based author tool to configure augmented reality environments

SurgSim

Surgical simulator for professional medical training

Assembly

Real-time markerles tracking for computer aided assembling

Lana3d Modules and Features

Module	Description	Platforms *Minimum requirements
lana_core	Scenegraph structure, nodes, assets and rendering engine.	Android IOS Windows Linux
lana_animation	scenegraph structure, nodes, assets and rendering engine.	

Features:

Modern hardware acceleration: uses OpenGL 3.3 or OpenGL ES 2.0 depending on the target device capabilities.

Supports multiple 3D model/scene formats: COLLADA, FBX, PLY, STL, OBJ.

High performance: can use instancing for faster rendering of similar objects if supported in hardware.

Materials
Advanced tool to create Augmented Reality applications

Postprocessing
supports multipass shaders for postprocessing effects

Animation
Skeleton/skinning-based character animation and morphing

Lighting
Directional, Point, Spot, Ambient