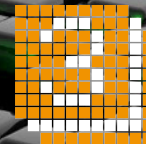imcube
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# imcube 3D Cinema/ Home
A Professional 2D-to-3D Conversion Technology

# imcube 3D Cinema

A Professional 2D-to-3D Conversion Technology

## Introduction

imcube has launched **imcube 3D Cinema**, a semi-automatic conversion software for conversion from 2D to stereoscopic 3D and to multiview (naked) 3D, the highest quality range currently in demand by Hollywood studios, IMAX and broadcasters. In contrast to other post-production tools widely used for 3D conversion, the imcube software takes an innovative computer vision approach to stereoscopic conversion and thereby provides features not previously known in manual conversion techniques. This product was used successfully for clients like Warner Bros, Lionsgate, BBC Worldwide and other leading international 3D production houses.

## Workflow

The 2D-to-3D conversion process can be basically divided into the following steps:

1. Rotoscoping / object segmentation
2. Depth assignment / object shaping
3. Inpainting for occlusion handling

imcube 3D cinema has a tool-box of processes for assigning depth to all individual rotoscoped objects imported into the software, as follows:

- Gradient
- Ellipse
- Cylinder
- Mesh-grid
- Multi-point gradient
- Shape distance for object roundness
- 3D tracking and stereo-view synthesis
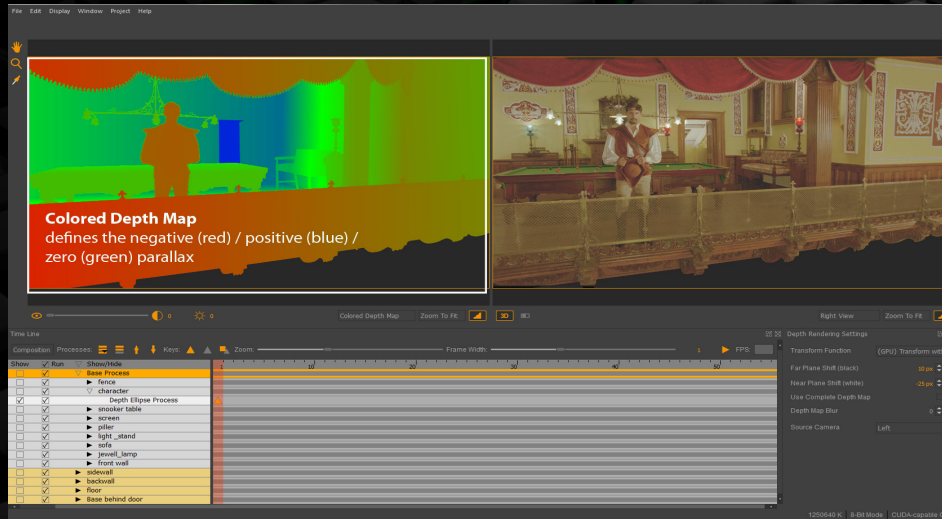


imcube 3D Cinema workplace

Furthermore, the software has several visualization options to support the artist while creating the stereo layout. These consist of:

- Gray-scale depth map
- Coloured disparity map
- Depth scan view
- Left/right toggle view
- Left/right difference view
- 3D model view
- Stereo-view (anaglyph, shutter, line-by-line, side-by-side, etc.)

imcube 3D Cinema has additionally a plug-in for Deadline render-manager in order to do the final rendering via the render farm.

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**Colored Depth Map**
defines the negative (red) / positive (blue) / zero (green) parallax

Graphical User Interface (GUI)



Scene navigation tools

View of the original camera

Screen plane

Predefined standard positions

3D Model Viewer with Zero Parallax Plane

## USPs and Benefits

- High quality 3D through efficient and realistic object modeling
- Pre-visualization for Stereographers and conversion artists
- 3D live-adjustment and efficient depth-grading (convergence adjustments, depth re-mapping)
- Efficient screen-size-adjustment for perfect viewing comfort
- 2D to multiview conversion for glasses-free 3D displays
- High resolution conversion up to 8K
- Efficient instruction and communication tools for Stereographers and S3D Supervisors
- Import of Silhouette and Mocha roto shapes and Boujou camera tracking data

## System Requirements

| Category | Requirement |
|---|---|
| Operating system | Microsoft Windows 7 (x64) |
| Processor (CPU) | Multicore Intel processor recommended |
| Graphics (GPU) | OpenGL 3.0 support required and CUDA recommended |
| Memory (RAM) | 4 GB RAM |
| Storage (HDD) | 500 MB |
| Additional hardware | 3D screen for playback of stereoscopic output |

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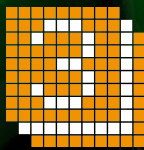
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