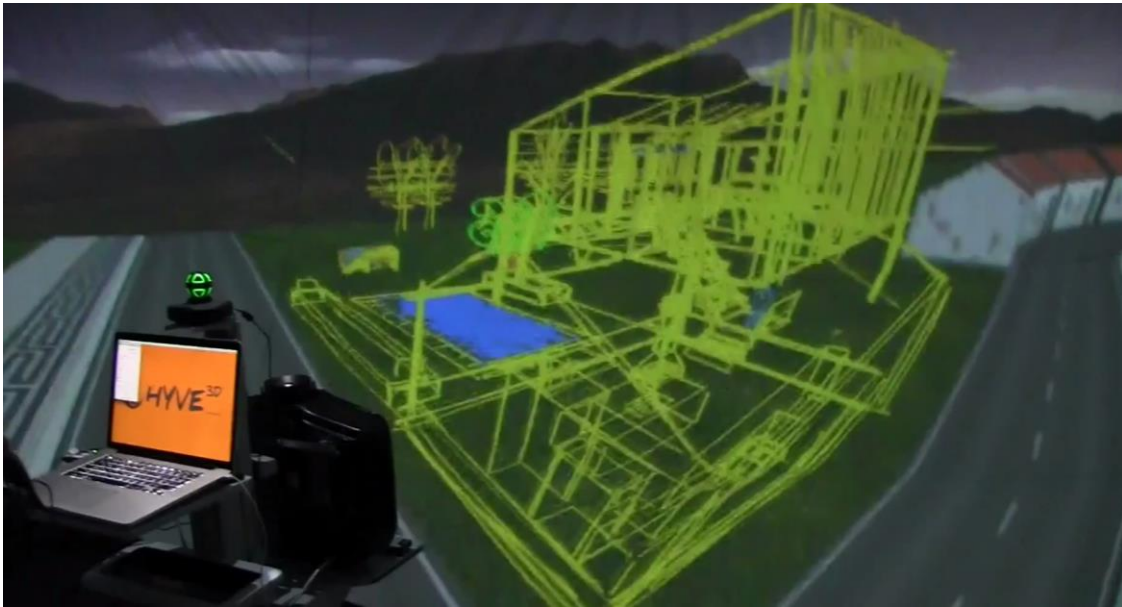# VR Final Project
Sketching in 3D

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The main idea of the project is to make possible to create 3D sketches in virtual environment. It could be helpful in fast preliminary asses of some 3D models.

We considered existing analogies, for example **hyve3d** that uses the handheld tablet and stylus for sketching in 3D.

http://www.hyve3d.com

For the project we decide to improve the input process and use tablet Wacom Cintiq21UX for hand-drawing and SpaceMouse for Manipulation and Navigation.

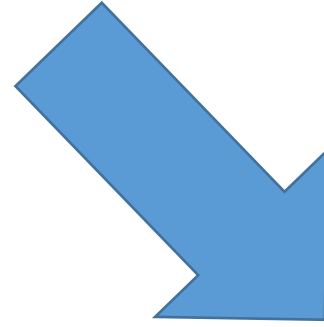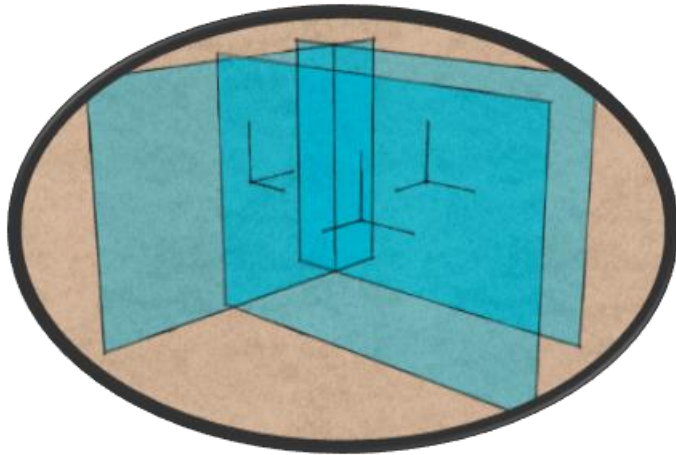The process of drawing in such setup requires next steps:
- Look at the main screen and translate the drawing plane in desired position manipulating by the view and cursor by the SpaceMouse.
- Look at the tablet screen to start drawing. Look at the main screen to control process in 3D.
- If needed – final manipulations on drawing plane on main screen.
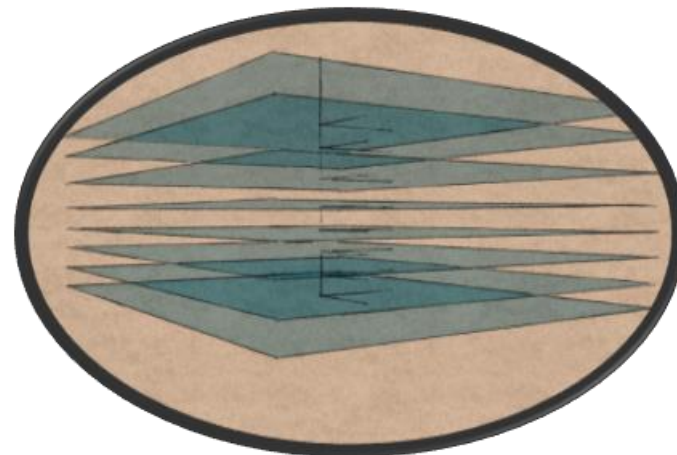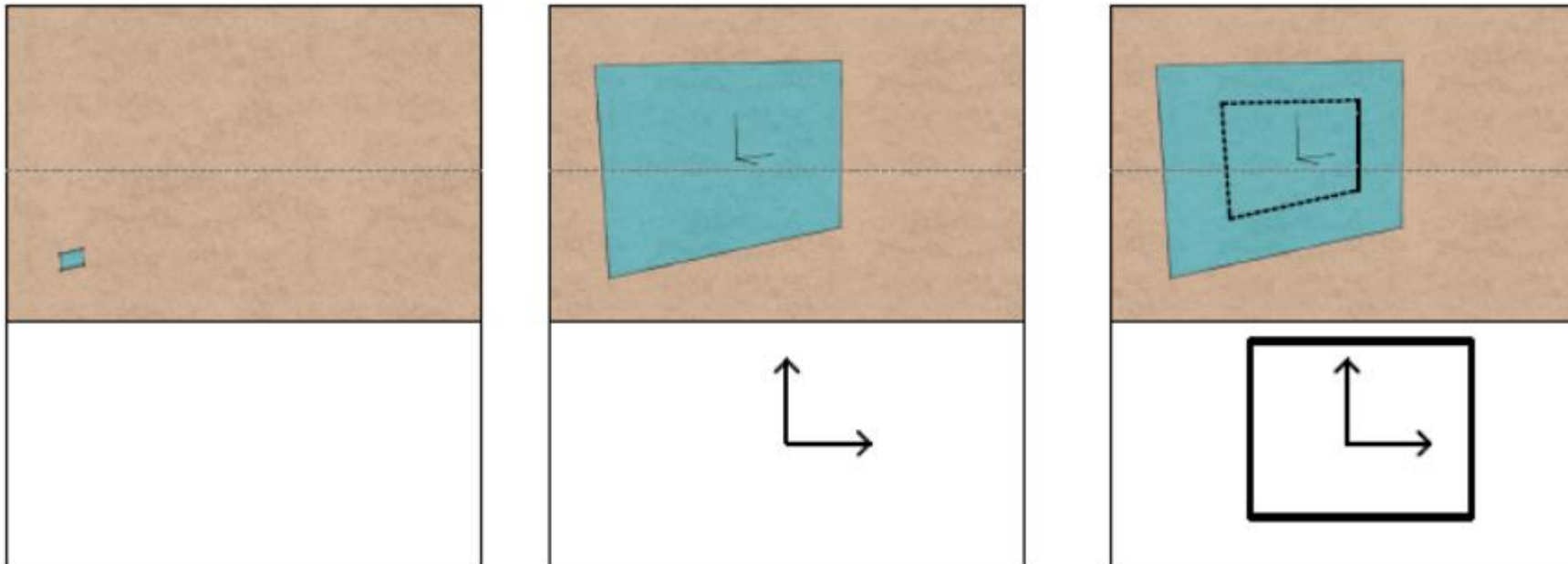
Two drawing metaphor were implemented.
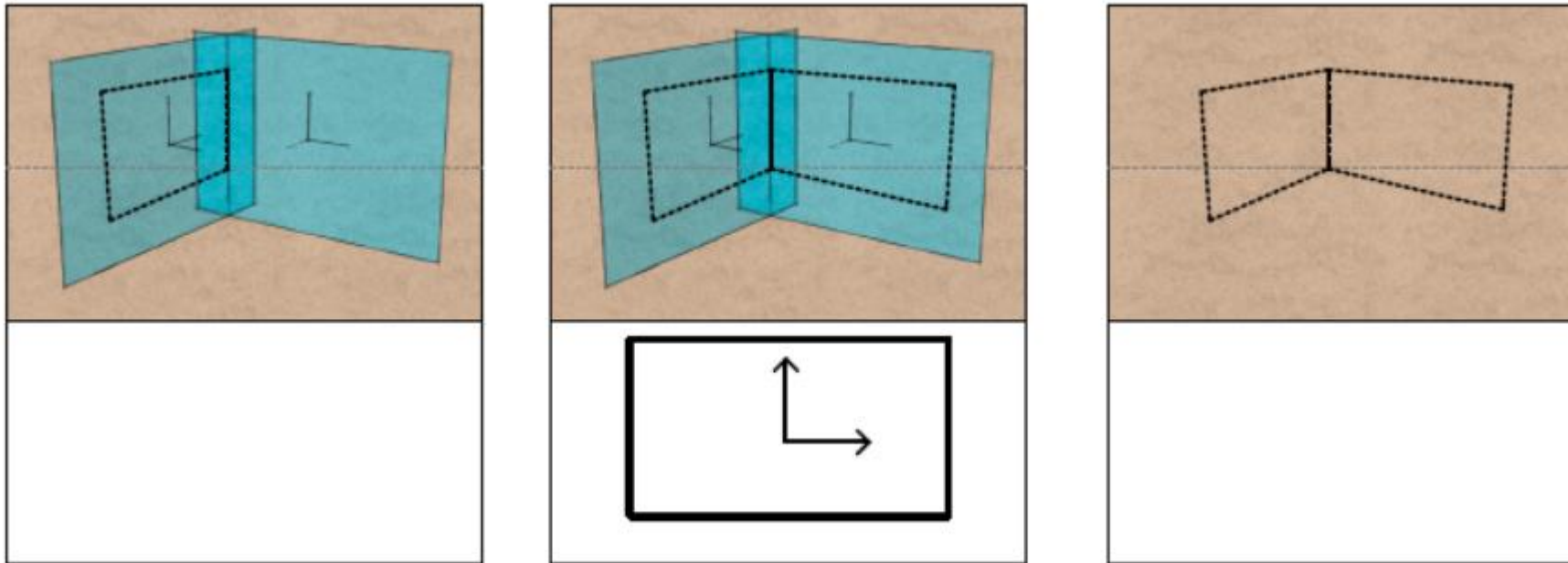
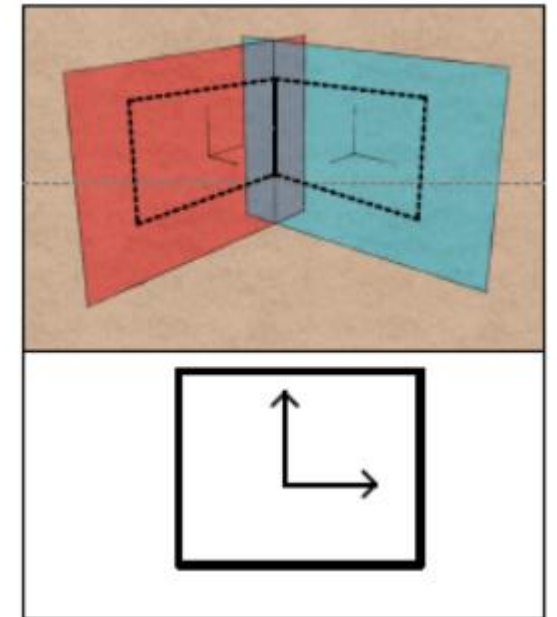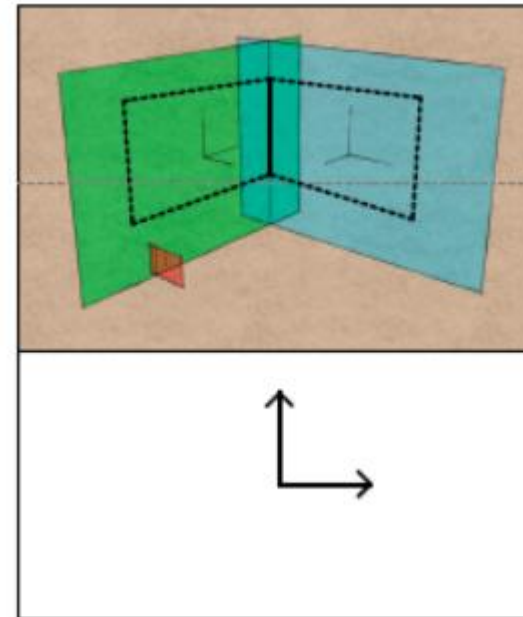"2D mode"   "3D mode"

"2D mode"

Simple drawing on 2D plane and next manipulation on it

The process of such drawing include creating lots of 2D planes and composite it. In this mode available selecting of any previous 2D planes for edit the drawing on it or manipulate.
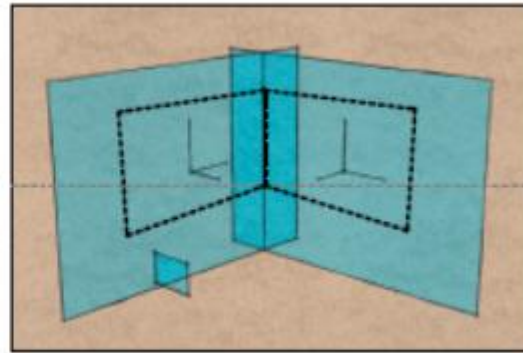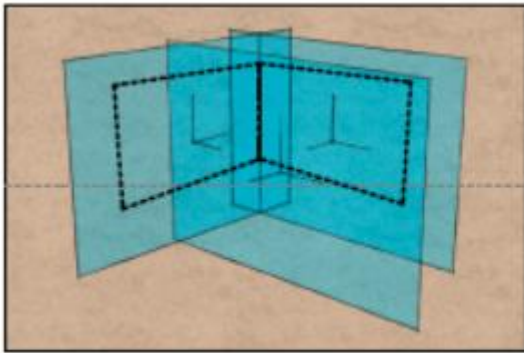
"2D mode"

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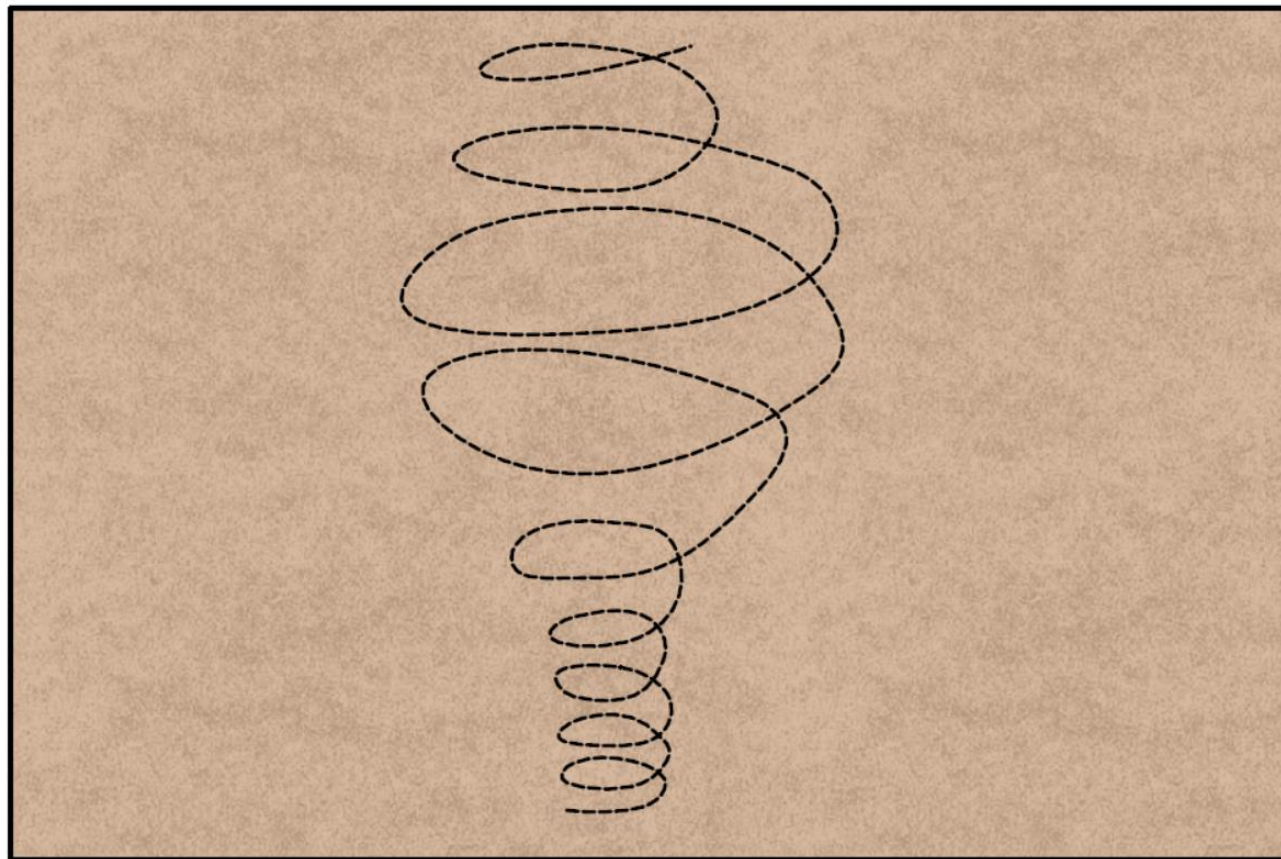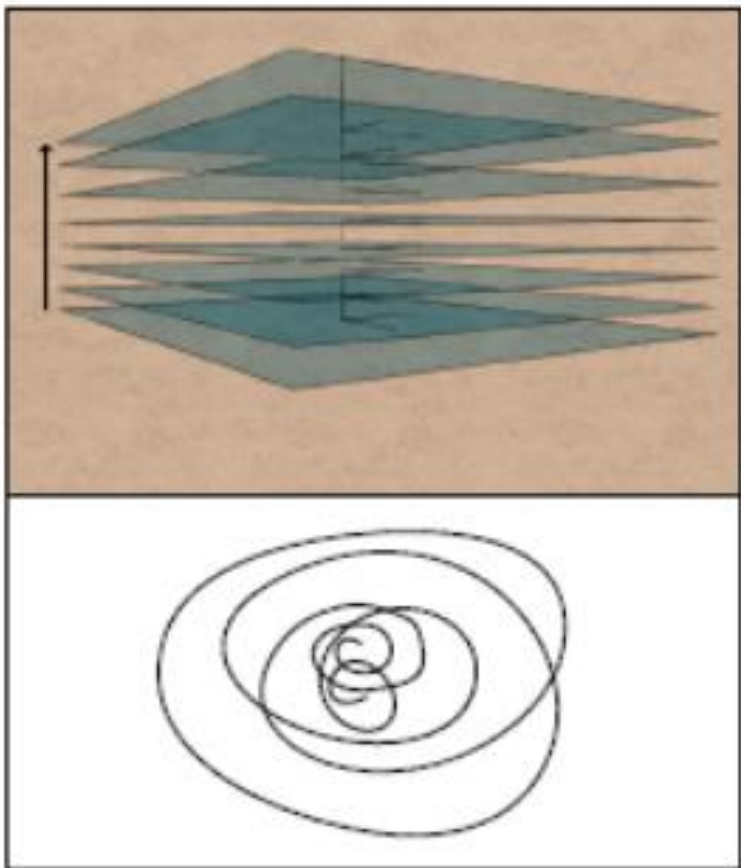
"2D mode"

Edit

The process of such drawing include creating lots of 2D planes and composite it. In this mode available selecting of any previous 2D planes for edit the drawing on it or manipulate.
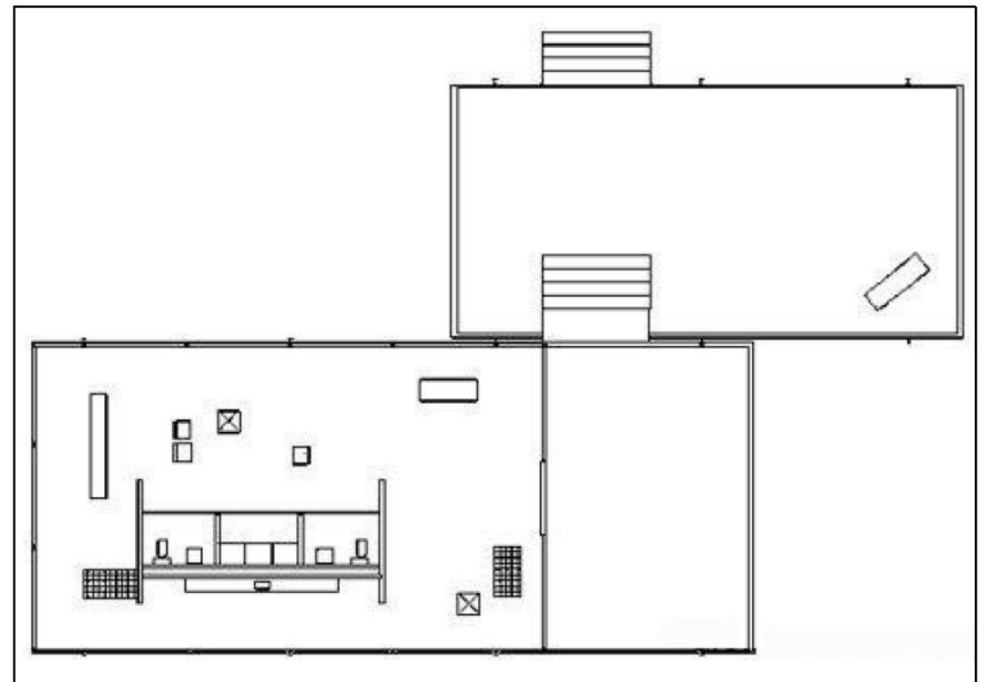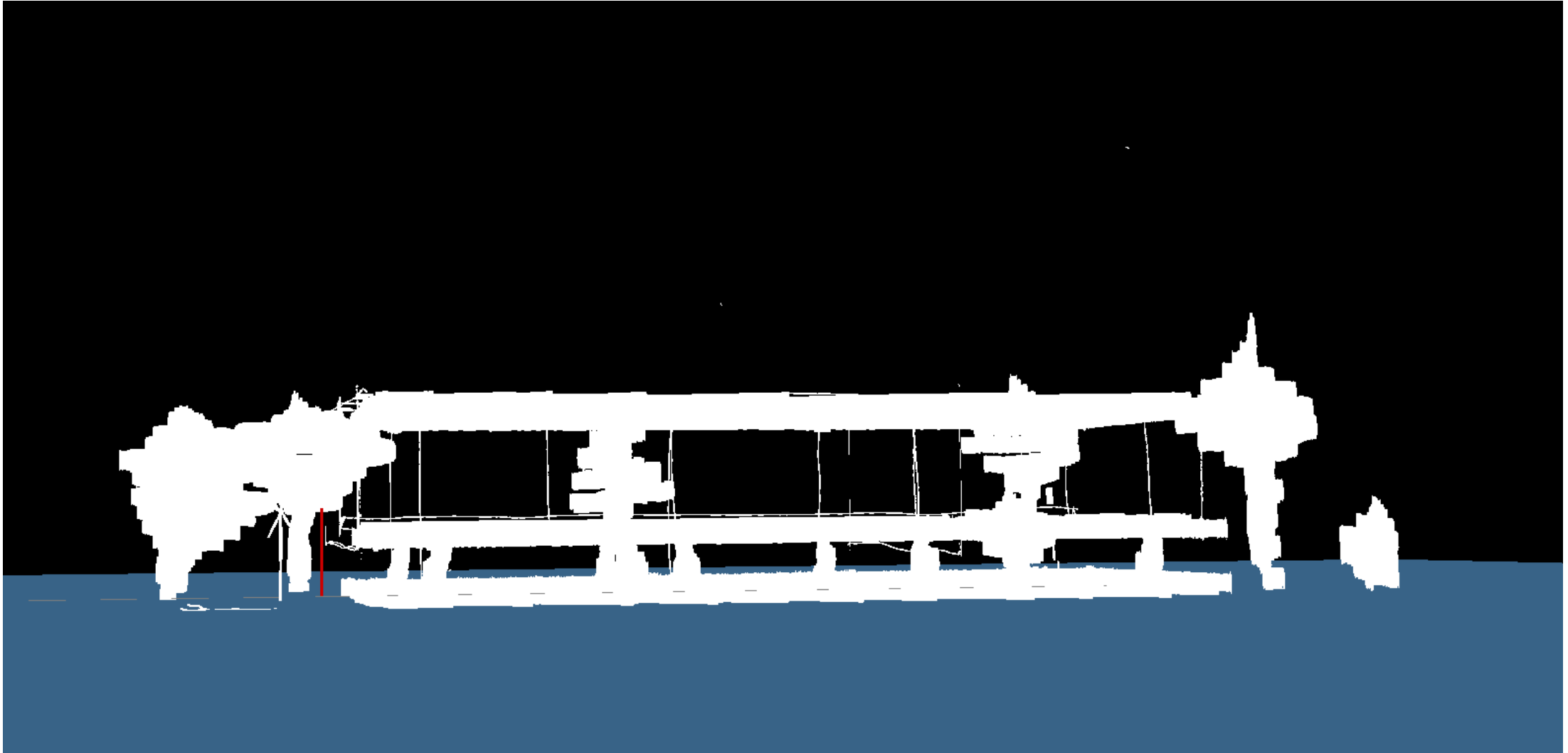
"3D mode"

Time ->

Editing is possible until new plane will created

Example

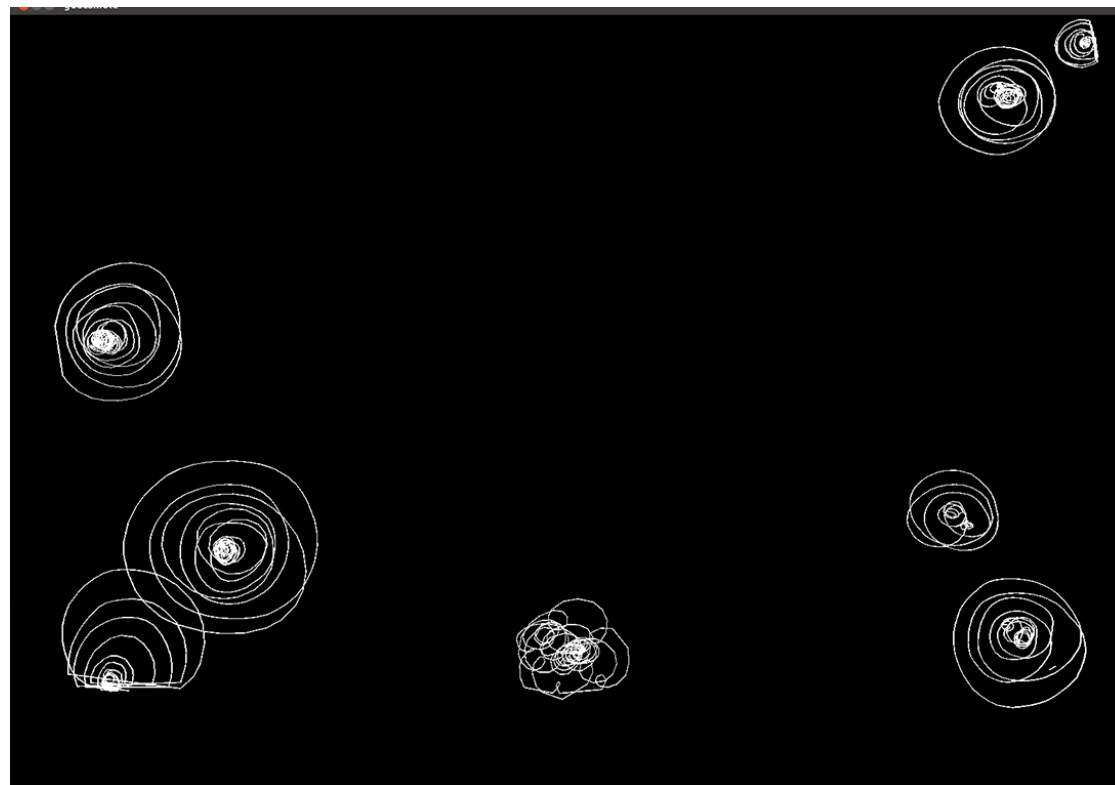As a simple 3D volume there was chosen Mies van der Rohe's Glass house.

Example

Example

Example

Visible drawing planes

Trees in 3D plane