

VR images and videos
with Blender for Virtual Tours

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VRiaVwBfVT

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Blender for 360 VR tours

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Virtual

Augmented

Mixed

Hyper

Reality

Hardware

Virtual Reality: To replicate an environment by simulating the physical presence of the user

VR

Hardware

Virtual Reality: To replicate an environment by simulating the physical presence of the user

VR

360° Video

immersive real footage videos



CG VR

Computer generated graphical content



Hardware

Virtual Reality: To replicate an environment by simulating the physical presence of the user

VR



YI

HALO

< 17.000 \$



Stereoscopic

rendering

Renderfarm (+ people)

Hardware

Virtual Reality: To replicate an environment by simulating the physical presence of the user

VR



**Gear
VR**

**Google
Daydream**

800 €



**Pimax
8K**

**HTC
Vive**

series

**Oculus
Rift**

series

800 €



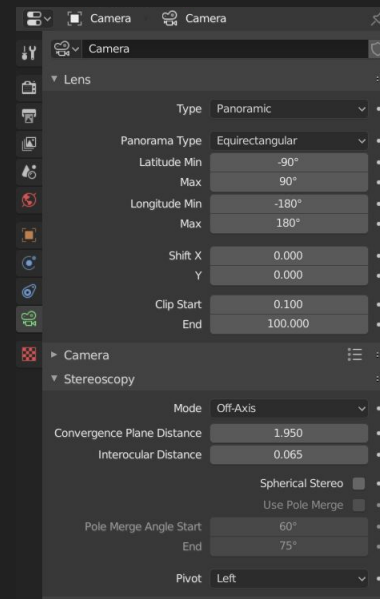
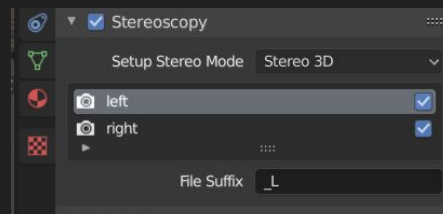
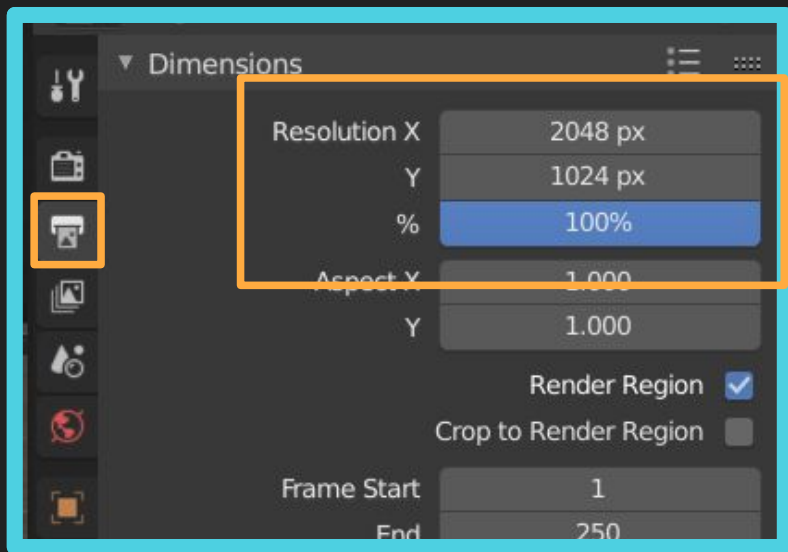
Exercise

Size and Proportions

2048x1024 for the preview

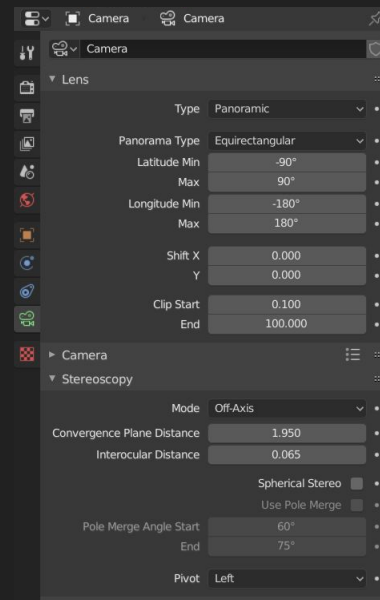
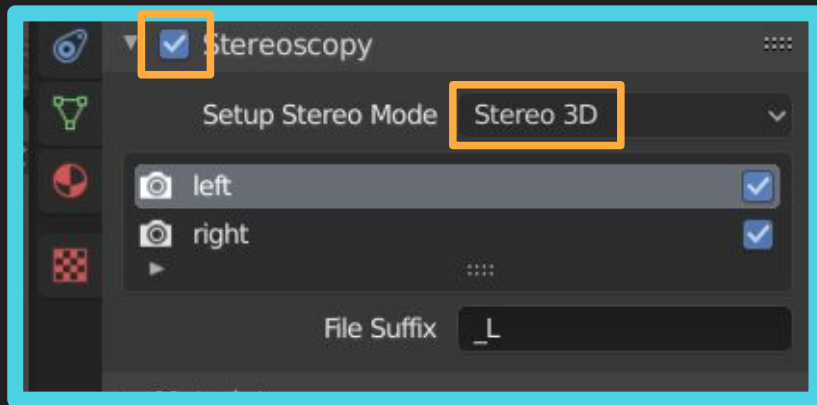
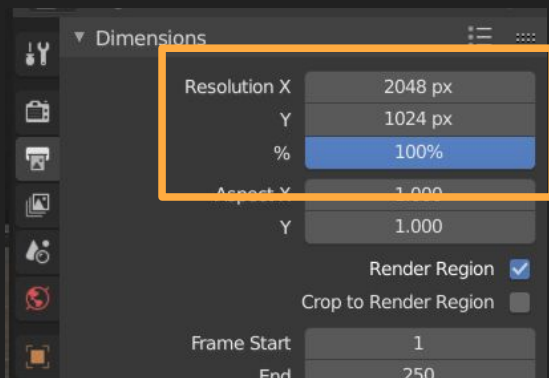
4096x2048 for the final render

(200%)



Size and Proportions

Enable Stereoscopy

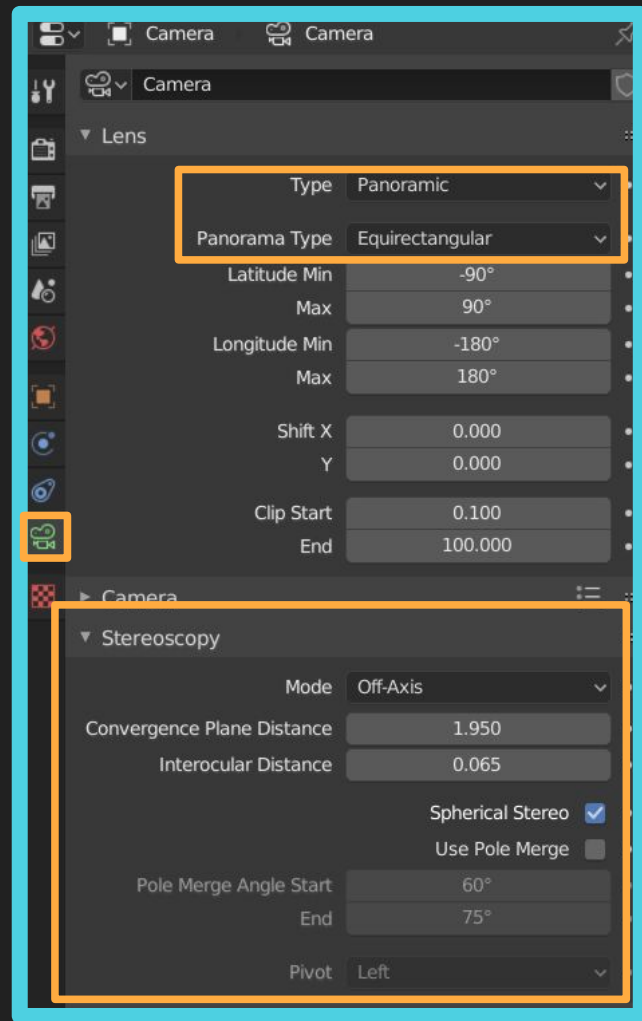
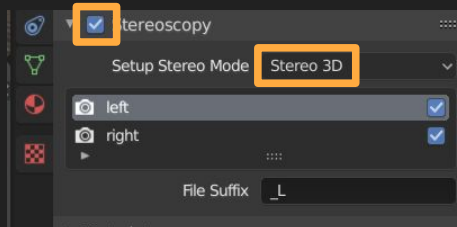
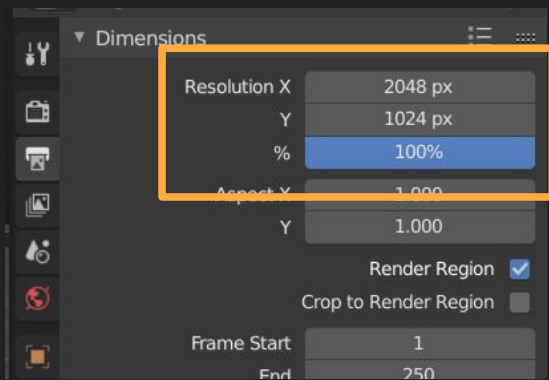


Size and Proportions

Panoramic Camera

"Equirectangular" type

Enable "Spherical Stereo"

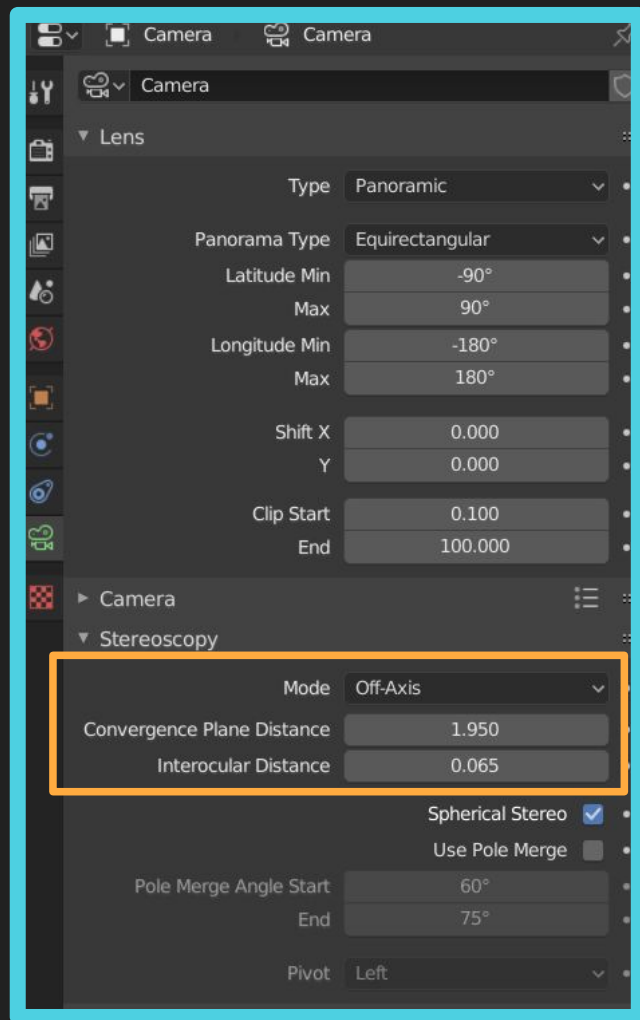
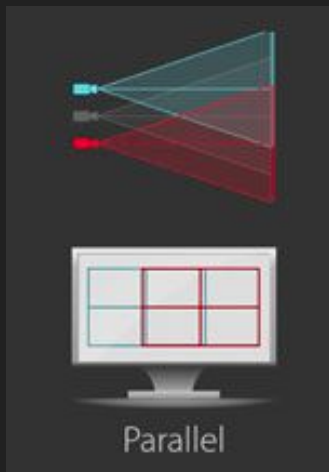


Convergence

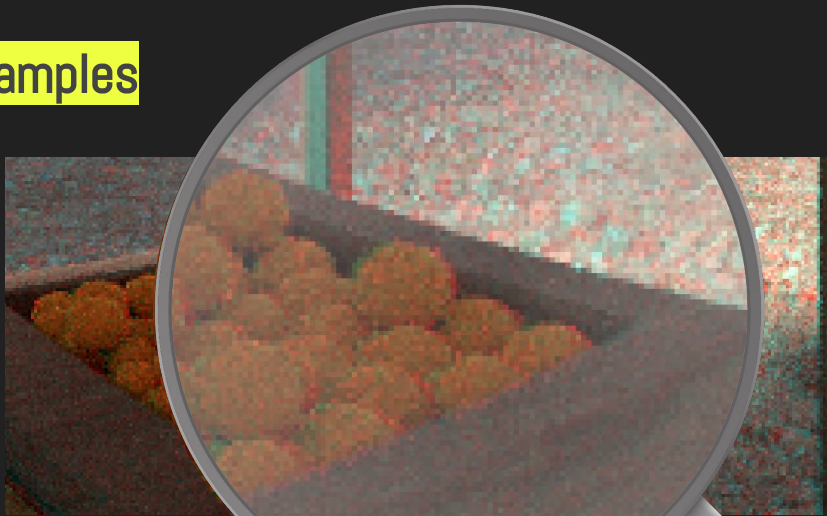
Off-Axis



convergence plane distance



Samples



Scene

Render Engine: Cycles

Feature Set: Supported

Device: CPU

Open Shading Language:

Sampling

Integrator: Path Tracing

Render: 10

Viewport: 10

Advanced

Light Paths

Max Bounces

Total	3
Diffuse	2
Glossy	1
Transparency	8
Transmission	1
Volume	1

Clamping

Direct Light: 0.00

Indirect Light: 0.00

Caustics

Filter Glossy: 0.00

Reflective Caustics:

Refractive Caustics:

Samples



Scene RenderLayer

- View Layer
- Passes
- Filter
- Override
- Denoising

Radius: 8 px

Strength: 0.50

Feature Strength: 0.50

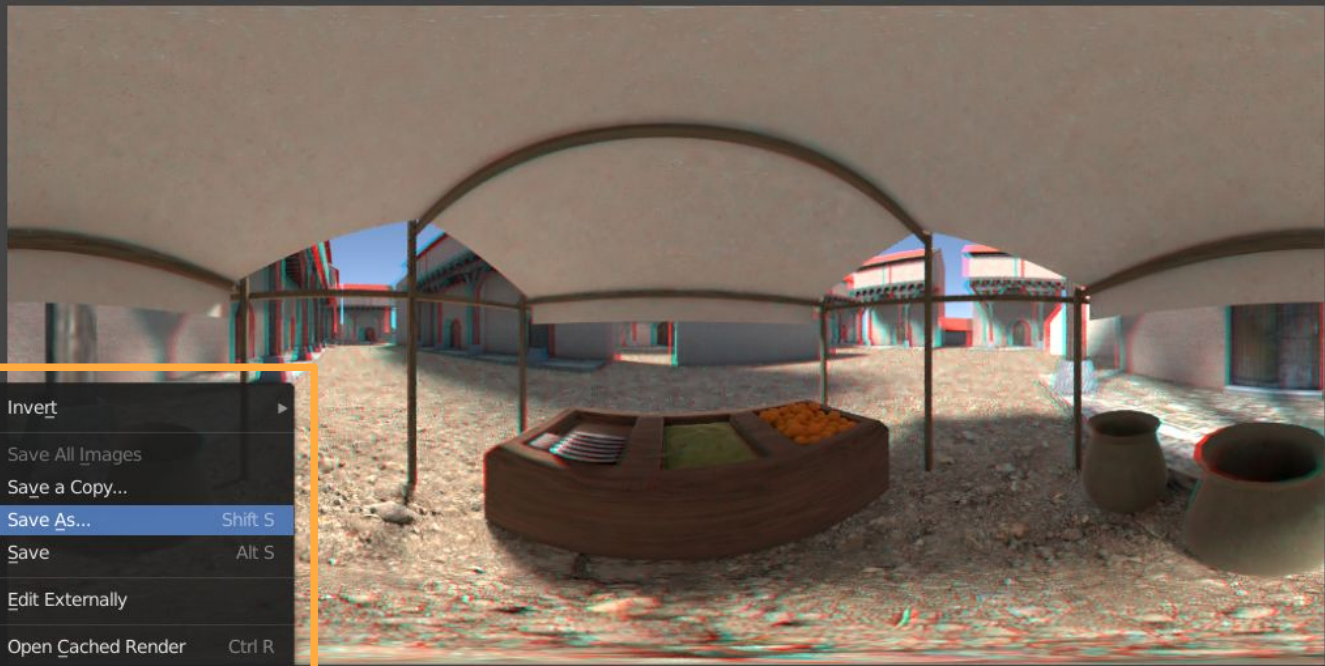
Relative filter:

Diffuse	Direct	Indirect
Glossy	Direct	Indirect
Transmission	Direct	Indirect
Subsurface	Direct	Indirect

Save Image

File Edit Render Window Help 3D View Full Animation Compositing Default Default.001 Game Logic Motion Tracking Scripting UV Editing Video Editing +

Frame:1 | Time:02:51.81 | Mem:123.77M, Peak: 185.75M



- Invert
- Save All Images
- Save a Copy...
- Save As... Shift S
- Save Alt S
- Edit Externally
- Open Cached Render Ctrl R
- Open... Alt O
- New Alt N
- Image

View View

Render Result

Slot 1 RenderLayer Combined

Save Image

The screenshot shows the Blender 'Save As Image' dialog box. The file format is set to JPEG, color to RGB, and quality to 90%. The 'Use Multi-View' checkbox is checked, and the 'Views Format' is set to 'Stereo 3D'. The 'Stereo Mode' is set to 'Top-Bottom'. The background shows a file explorer view of the directory 'D:\Lezione_AVR_2019\BlenderVR\Exercise\' with a file named 'shot_07_11_stereo_test_360.jpg' selected.

File Format: JPEG

Color: RGB

Quality: 90%

Save As Render

Copy

Use Multi-View


Views Format: Individual, Stereo 3D

Stereo Mode: Top-Bottom, Squeezed Frame

File Explorer: D:\Lezione_AVR_2019\BlenderVR\Exercise\
shot_07_11_stereo_test_360.jpg

File Name	Value	Size
shot_07_11_stereo_test_360.jpg	Value: shot_07_11_stereo_test_360.jpg	1.84 MiB
shot_07_11_stereo_test_360_L.jpg		436 KiB
shot_07_11_stereo_test_360_R.jpg		435 KiB

Save Video

File Format  FFmpeg video

Color BW RGB

▼ Views

Views Format Individual Stereo 3D

Stereo Mode Top-Bottom

Squeezed Frame

Scene


Post Processing

Output

/home/sparazza/Scrivania/..IdeoTutorial/Porticoes_02

Overwrite Placeholders

File Extensions Cache Result

File Format  FFmpeg video

Color BW RGB

▼ Views

Views Format Individual Stereo 3D

Stereo Mode Top-Bottom

Squeezed Frame

Encoding

Container MPEG-4

Autosplit Output

Video

Video Codec H.264

Output quality Medium quality

Encoding speed Good

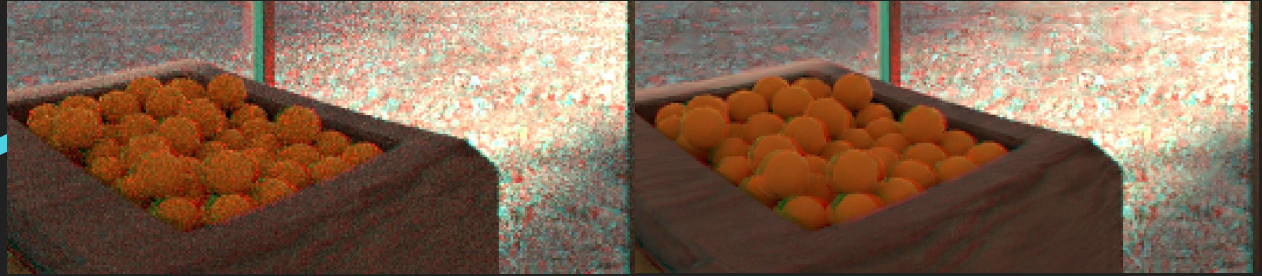
Keyframe interval

Max B-frames

Audio

Audio Codec No Audio

Tips & Tricks



Denoiser

Set your **Convergence Plane** closer → objects will be far

Object yes → **Billboard** no

Side or backward jumps and grabs → **Motion sickness**

Say NO to **cross fading**

Set a human height **~1,5mt**

Background or Dome (sky or dusty)



Publish

VR Media Player - 360° Viewer

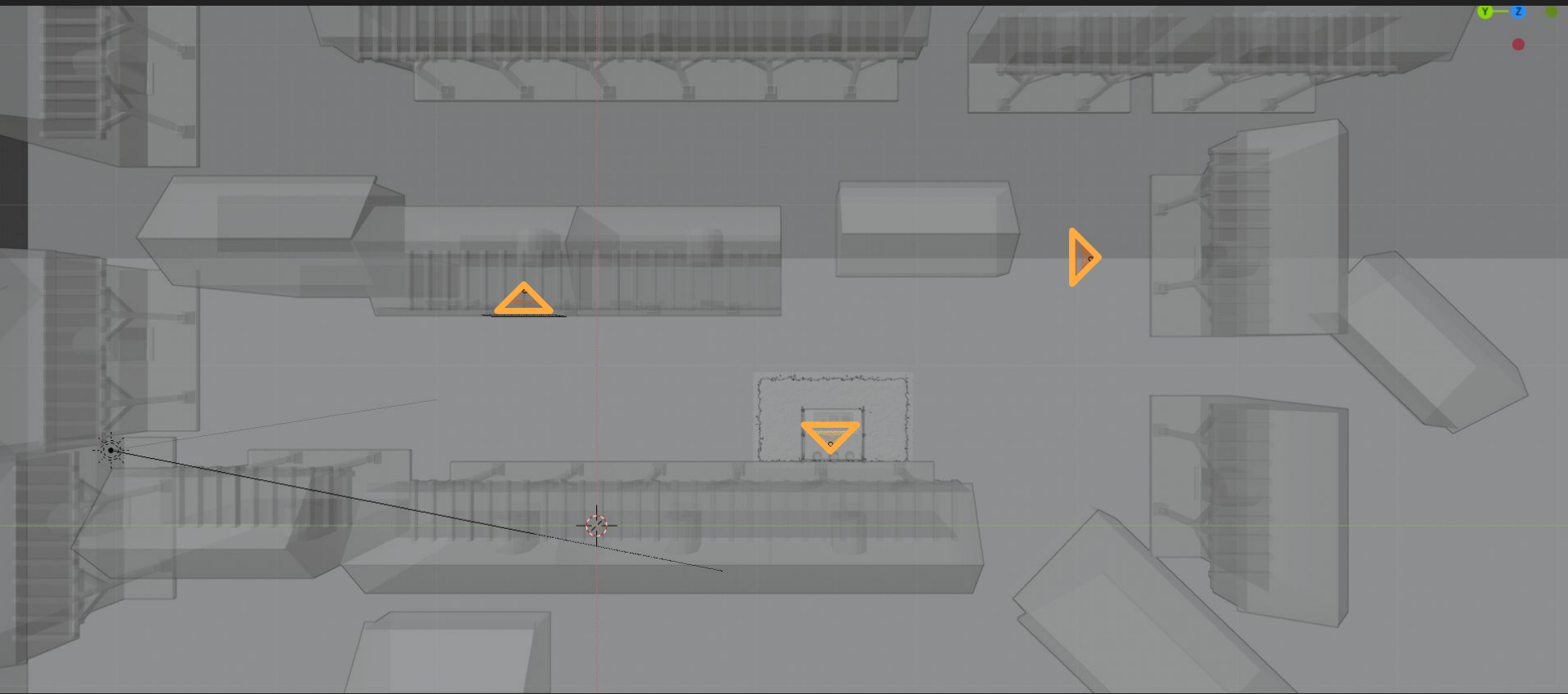


Youtube
(Media Injector)

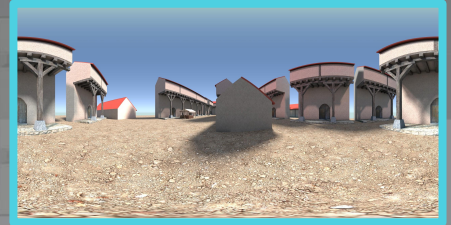
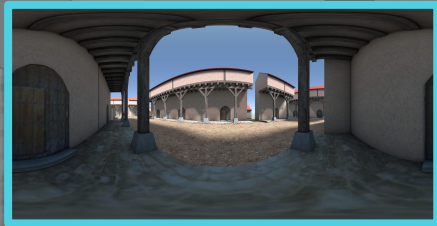
<https://github.com/google/spatial-media/releases/tag/v2.1>



Your Tour: 3 cameras (with same parameters and different conv. plane) in the end file



Your Tour: Ready-made renders into your exercise folder



Publish



Google Tour Creator



Tour Creator

Go to:

vr.google.com/tourcreator/

Get Started

GET STARTED

Login

New tour



New tour

Templates



Tour Creator

Title

Ghost Bologna

A spooky town with no-one in sight
('cause 3d characters are expensive)

Category

History





Tour Creator

Add scene

Street View

Upload

Drop a 360° or 180° image here

or

Select a 360° or 180° image

Allowed file types: .jpeg, .jpg, .png



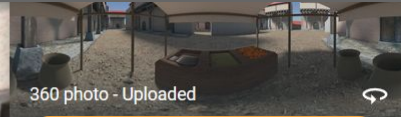
Cancel

Add scene



Tour Creator

Use every tool to create yours



360 photo - Uploaded

Untitled scene

Location

Description

Credits



Untitled point of interest

26/50

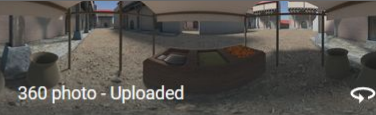
Describe this point of interest



+ Add point of interest

Untitled scene

Add scene



360 photo - Uploaded

Untitled scene

Location

Description

Credits

Untitled point of interest

26/50

Describe this point of interest

Add point of interest

The right sidebar contains a 360-degree photo viewer and two panels for scene and point of interest management. The 'Untitled scene' panel has fields for Location, Description, and Credits, along with volume and user icons. The 'Untitled point of interest' panel shows a progress indicator (26/50), a description field, and icons for image and user, with an 'Add point of interest' button at the bottom.

Untitled scene

Add scene

The bottom left corner features a panel with the text 'Untitled scene' and a blue 'Add scene' button.



Thanks for
your
attention



Thanks for
your
attention

Any
Questions?