WebVR site

This document describes how the IVS WebVR page works.

WebVR is an open technology making it possible to experience VR in your web browser. Rather than installing a VR application, WebVR make it easier for everyone to get into VR experiences. All you need is a VR headset such as the affordable Google Cardboard and a compatible browser.

As for the IVS lab, this section of the website will allow users to immerse into 360 images and videos.

The WebVR section is accessible on http://www.ivs.auckland.ac.nz/webvr/

Note

Currently the upload directory `upload/` used for the WebVR site is not writable for normal users. For that reason the media files are temporarily relocated in `/quick_stereo/upload/webvr/` .

Please make sure for the future to give permissions to the `upload/` directory and update all the links in the `.php` files for a cleaner architecture.

Getting started

WebVR & A-Frame

Compatibility

Some of the WebVR may not work due to compatibility issues. Please ensure your web browser is compatible on the official A-frame support:
https://aframe.io/docs/0.8.0/introduction/vr-headsets-and-webvr-browsers.html#which-browsers-does-a-frame-support

Viewers

The index page gives access to different panoramic viewers displaying the images and videos

contained in the gallery.

If you want to add a new image or video, copy the file directly on the server in the specified directories. However it is also possible for external users to upload a temporary file and see it in the viewers. Further details are provided in the **Upload Images** section.

360 viewer

-> `360viewer.php`

This is the most basic viewer. It displays panoramic images. The images are automatically loaded from the directory `gallery/360images/` .

A default image is displayed in 360. The other pictures contained in the gallery directory are displayed in thumbnails.

The current thumbnails layout is a line, but if there are two many images, you can change it by modifying the `<a-entity id="links" layout="..." >` tag, for example by choosing a box layout and specifying the number of columns. See https://www.npmjs.com/package/aframe-layout-component for further details. Ideally the layout should be dynamically modified based on the number of images.

To change the main 360 image displayed, hover or click on a thumbnail.

360 stereo viewer

-> `360stereoViewer.php`

This viewer allows to visualize stereo images (left and right, to recreate 3D). A default pair of images `left.jpg` and `right.jpg` contained in the `gallery/360stereoImages/` is displayed. If you have more samples, you may want to create a modal gallery as used for the **360 video** viewer.

You can also render another pair of images by using the upload feature detailed in the **Upload Images** section.

360 video

-> `360video.php`

This viewer can be used to watch 360 videos. Clicking on the viewer icon will show a pop-up containing a video gallery. Click on a thumbnail to enter the viewer.

Temple   Dinosaurs

⚠ If the video is not playing correctly, please check browser compatibility.

360 videos playing might not work depending on the device and browser you use. See the **Compatibility** section for further information.

As the 360 video files are quite heavy, uploading video on the server is not possible yet. If you want to add a new video, copy the file in the `gallery/360videos/` folder and add a linkable thumbnail in the appropriate location in the `index.php` file, as in this example:

```
<div id="360videoModal" ...>
...
            <!-- Dinosaurs museum video -->
            <div class="col-sm-6 col-md-3">
                <a href="360video.php?video=dinosaurs">
                    <img src="img/portfolio/video-thumbnail2.png" alt="video-thu
                </a>
                <div class="caption text-center">
                    <p>Dinosaurs</p>
                </div>

            </div>
...
</div>
```

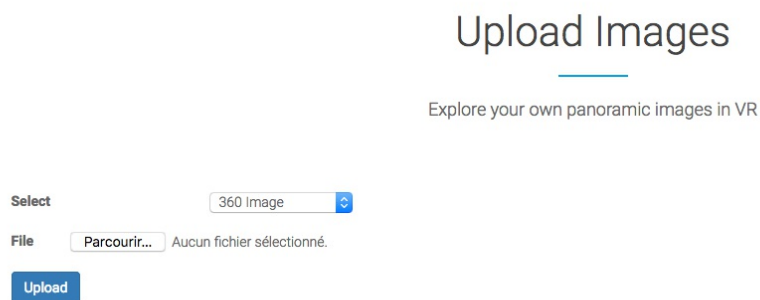## 360 stereo video

-> `360stereoVideo.php`

The viewer can render 360 stereo videos. It was tested with a `.webm` 3D video. However, there is no 360 stereo video sample in the lab at the moment.

For further details check this tutorial:

https://github.com/oscarmarinmiro/aframe-stereo-component

Upload Images

At the end of the webVR main page, there is a **Upload Images** section. You can upload a 360 image and render it in the corresponding viewers.

Select the `360 Image` option to upload a simple panoramic image. Then click on `Upload`. If the upload was successful, you will be redirected on the 360 viewer with your image displayed.

Upload directory

The uploaded files are relocated in the `upload/` directory (or another directory if it is not writable, as explained earlier) and renamed accordingly:

- `panorama.jpg` for uploaded 360 images
- `left.jpg` for left stereo image
- `right.jpg` for right stereo image

To display these uploaded files instead of the gallery files, the viewers pages check the `upload` get parameter value as in this URL:
http://www.ivs.auckland.ac.nz/webvr/360viewer?upload=true

If the parameter is true, then the uploaded file is displayed. If it is not true or not specified, the default gallery pictures will be displayed.

VR menu

Alternatively, you can use the VR menu to navigate between the viewers. Click on the `Get started` button, enter VR mode and choose one of the viewers.