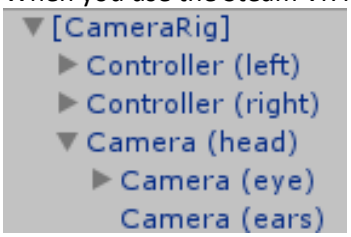
Unity Eye Tracking Instructions

Monday, November 27, 2017 1:21 PM

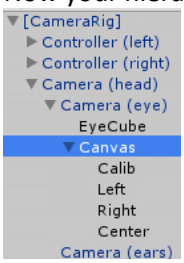
When you use the Steam VR Plugin for HTC Vive your Unity Hirarchy should look somewhat like this:



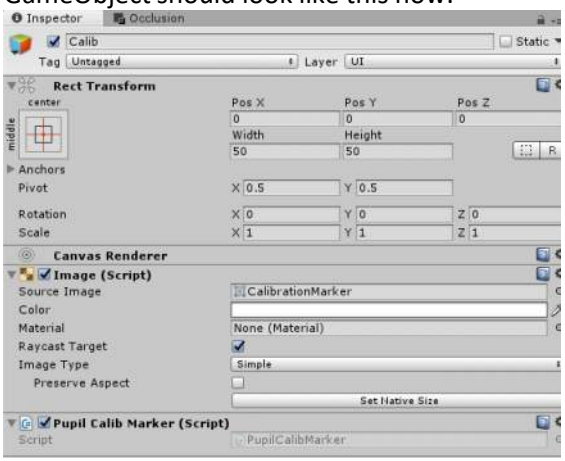
- [CameraRig] is the parent object of all player related game objects
- There are 2 Gameobjects for the two controllers
- The VR Camera is attached to Camera(eye) which is a child object of camera(head)

If your hierarchy does not look like this you have to adapt some names inside of the code in this folder. The code is written for this structure and those names.

- To set everything up download all 4 scripts in this folder.
- Every script has the variables which you need to define in the beginning. These are project specific bariables. The rest is tweeked for these name spaces.
- Once you have all the scripts and modified them to your wishes attach them to the matching Gameobjects:
  - PupilGazeTracker -> [CameraRig]
  - Recorder -> Camera(eye)
- The last two scripts requre additional game objects:
  - Add a simple object (eg 3D cube) as a chld object of Camera(eye) and call it "EyeCube". This is our reference object to calculate the 3D gaze
  - Add a Canvas as a child object to Camera(eye) which itself has 4 child objects named "Calib", "Left","Right","Center". These should be Images. The canvas will be used for calibration and validation.
- Now your hierarchy should look like this:

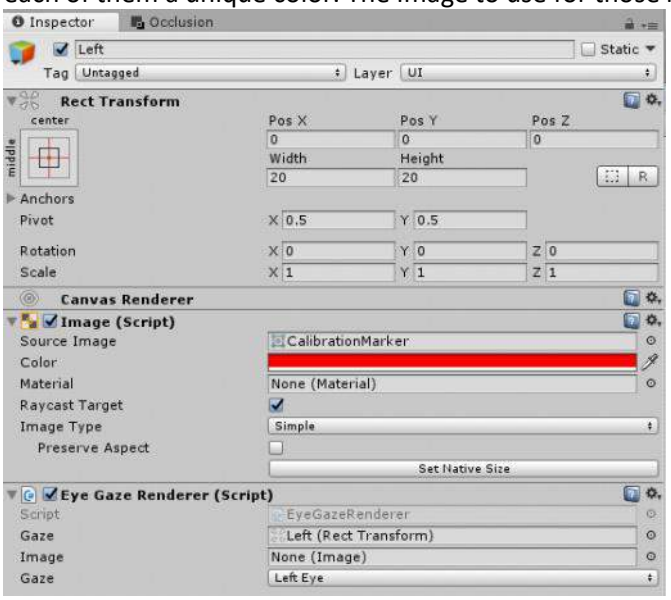


- You now add the "PupilCalibMarker" Script to your "Calib" object. You also drag the image called "CalibrationMarker" into the Source Image field in the Inspector. The inspector of your Calib GameObject should look like this now:



- Then you drag the EyeGazeRenderer Script into your Left, Right and Center GameObjects and give

each of them a unique color. The Image to use for those is also the CalibrationMarker.



- At last you need to adjust all settings to your own project and devices settings which you haven't set in the script yet. Importantly, check that Server IP and Server Port in PupilGazeTracker match the IP and Port shown in Pupil Labs and that Pupil Capute is running.

- You also need to have the matching folder structure to the paths specified in the scripts in order to save recordings
- Now you should be good to go! If you have any questions or comments just contact me (vkakerbeck@uos.de)