Thank you for purchasing RealEyes for Unity! Although RealEyes is fairly simple process to get started, this manual will go over some of the features and settings.

What is RealEyes?

RealEyes is a solution for giving your characters AAA quality eyes. It consists of two shaders and two scripts:

- RealEyes.shader - This is the main shader. It requires pixel shader 3 support, although it falls back to the simple version if the hardware doesn't support it.
- RealEyesSimple.shader - This is a simplified version of the main shader. It runs on PS 2.0 hardware, but lacks some features, namely eye depth from parallax occlusion and cubemap reflection.
- RealEyesLookAt.cs - This is an optional eye controller script that will make the eyes look at a target.
- AutoDilate.cs - This is an optional script that will attempt to calculate the light coming into the eye and dilate the pupil accordingly.

Features

- Iris tint in shader- set the eyes to be any color you would like.
- Pupil Dilation- set the pupil size in the shader, or use the included AutoDilate script to do it for you based on the light level.
- Eye depth effect using advanced parallax occlusion.
- Raised cornia with reflection and specularity.
- Can render in one draw call! Multiple eyes can be dynamically batched.
- Works in DX9, DX11, and OGL ES 2.0. PS 2.0 fallback shader included.

How to use

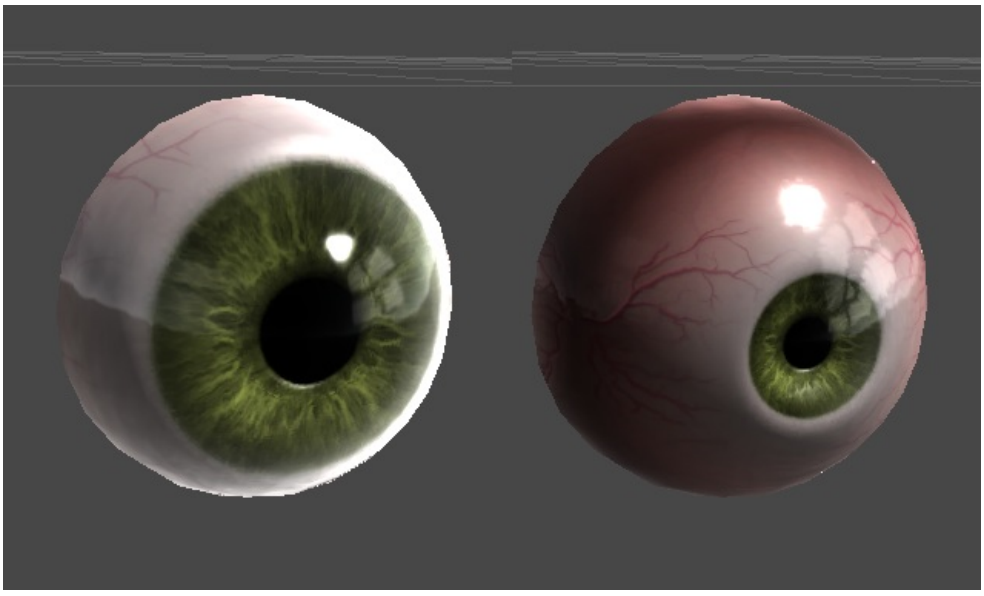
To use RealEyes, first remove any eyes that your character currently have, and then drag the prefab *RealEyesPrefab* into your scene. This prefab consists of a container GameObject that holds the scripts, and the two eyes meshes. Re-name the *RealEyesPrefab* to whatever you would like, and position it somewhere in your characters head. Parent the prefab to your character's head bone, and then adjust the individual eye position.

NOTE #1- The eyes are are made *to scale*, with a 25mm diameter(assuming 1unit = 1meter in Unity). This makes them quite small my default. If your character is larger, you may have to adjust the scale in the transform component of each eye.

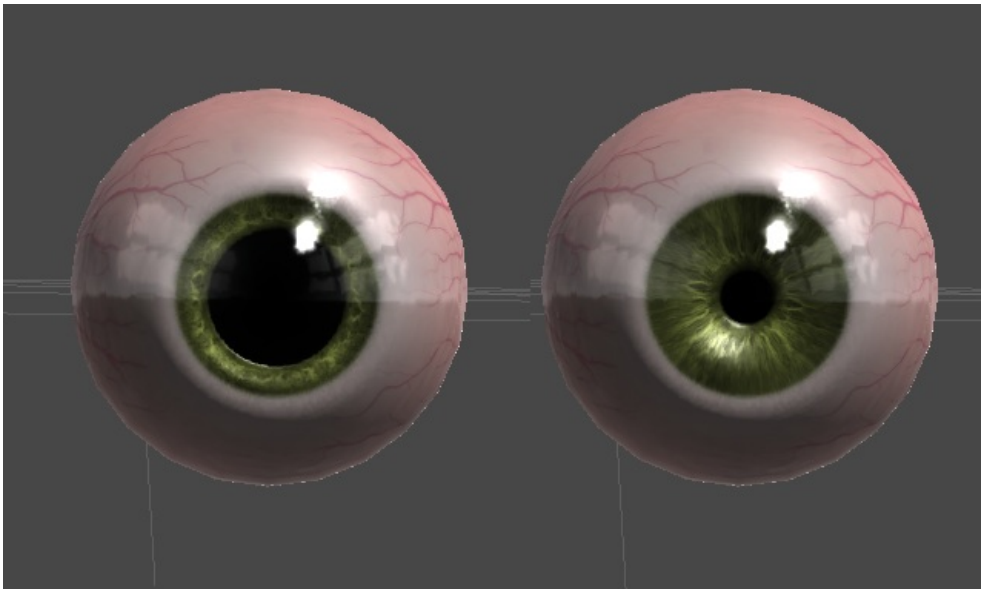
NOTE #2- If using the *RealEyesLookAt* script, attached to the *RealEyesPrefab* by default, changing the rotation of the eyes will have no effect. If you need to rotate the eyes outward so as to appear less crosseyed, there is a value in the *RealEyesLookAt* script to do just that.

Shader Settings

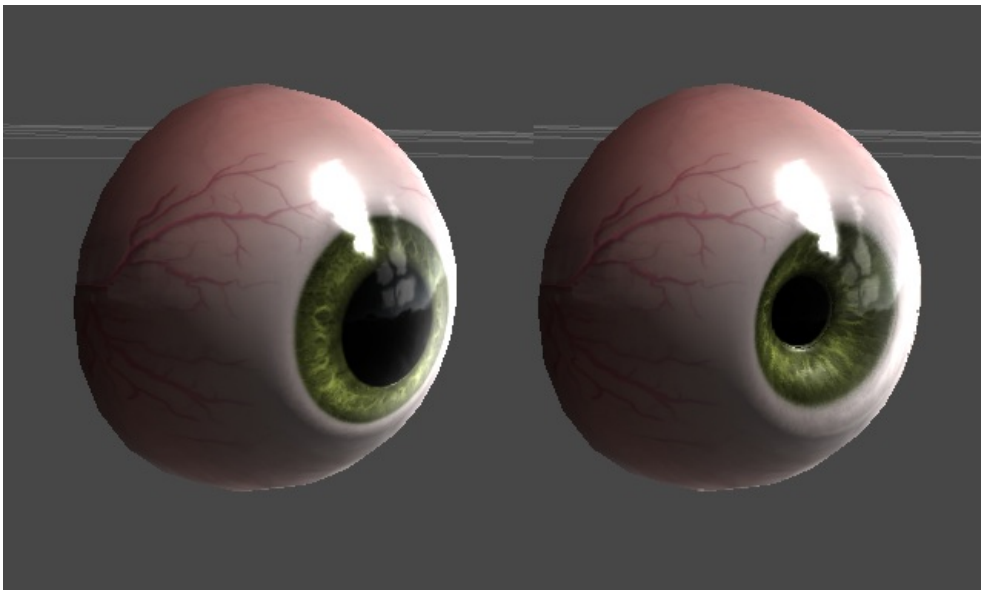
Scale - This value will scale the overall eye texture while maintaining its position in the center of UV space.



Dilation - This will make the eyes contract or expand. This value will be determined automatically when using the AutoDilate.cs script.



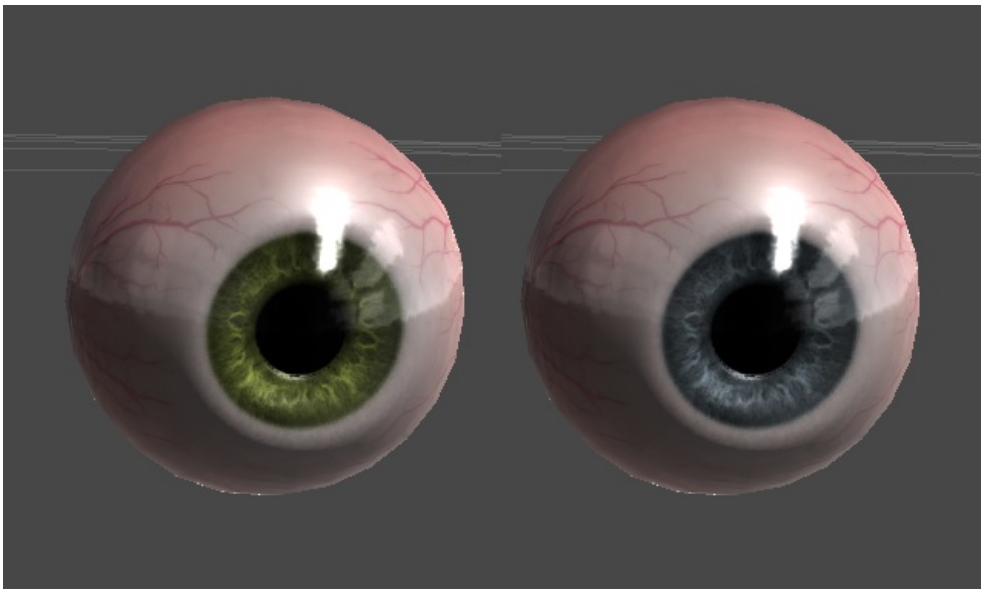
Eye Depth - Determines how "pushed in" the eye will appear.



Glint Strength - Determines how strong the specular highlights will be.

Glint Size - Determines how large the specular highlights will be.

Iris Tint - Determines what the color of the iris is.



Eyeball Tint - Determines what the color the whites of the eye are.

RealEyesLookAt.cs inspector settings

Target - This is a transform that the eye will look at.

Right Eye and Left Eye - The transforms of the two eyes.

Max Rotation Left/Right/Up/Down - Relative to the forward direction, these limit the amount of rotation that can be applied to the eye.

Crosseyes Degrees - How crosseyed the eyes are. A value of -2 to -4 is standard for most humans.

AutoDilate.cs inspector settings

Max Dilation - The most the eyes can be dilated.

Min Dilation - The least the eyes can be dilated.

Light Factor - How much light is necessary to contract the eyes fully. Higher numbers means that more light is required to contract the eye.

Lights - The lights that contribute to the total light level. On start, the script will look for all lights in the scene. Any additional lights added to the scene will have to pushed to this array.

Support

If you have any questions or comments, feel free to email the author directly at porter.johnross@gmail.com