SRanipal Unity SDK Guide

Release version: 1.3.6.7

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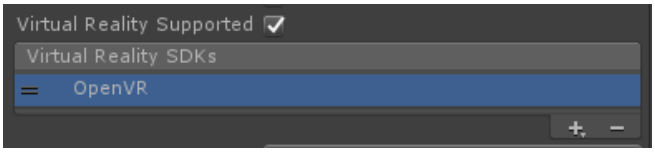
Prerequisites

The SRanipal SDK for Unity can be implemented only when the SRanipal SDK has been setup. If not, follow the guideline below to setup the SRanipal SDK — SRanipal_version\SRanipal_SDK_Guide.pdf.

Create a new project and import the SDK

1. Open Unity and create a new **3D** project.
2. Select **Asset** > **Import Package** > **Custom Package**.
3. Find the SRanipal Unity package at SRanipal_version\02_Unity\Vive-SRanipal-Unity-Plugin.unitypackage
4. In the **Importing Package** dialog, ensure that all files are selected and click **Import**.
5. Accept any API upgrades if prompted.
6. Enable **Unity VR support** (official manual).



Play the sample scene

1. In the Unity Project window, find the scene Sample.unity in: **Asset** > **ViveSR** > **Scenes**.
2. Ensure that all Requirements in SRanipal_SDK_Guide.docx are met and then click on **Play**.

Build the sample app

1. Select **File** > **Build Settings**.
2. In the Unity **Build Settings** window, adjust the **Architecture** on x86_64, and click on **Build and Run**.

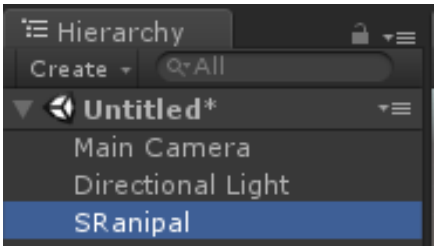
Next Steps

- Learn how to Enable SRanipal in your app.

Enable SRanipal in your Unity project

Enable the SRanipal Framework

1. Create an empty GameObject. We name it “SRanipal” here.



2. Add the component “SRanipal_Framework” to the Gameobject SRanipal.
3. Toggle on “Enable Eye” to enable the eye-tracking feature of the SRanipal SDK.
4. Explore the Eye features.

Eye relative features

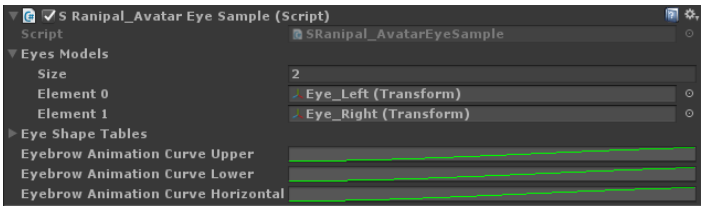
Focus

To retrieve the vector point of the player’s eye focus, refer to the script ViveSR\Script\Sample\SRanipal_EyeFocusSample.cs.

Control Avatar’ eyes

To reflect the player’s eye rotation and eye lid movement on an avatar, refer to the script ViveSR\Script\Sample\SRanipal_AvatarEyeSample.cs.

To animate the avatar's eye lids, we use Animation Curve in the sample script below to control the range of movement—ViveSR\Script\Sample\SRanipal_AvatarEyeSample.cs.



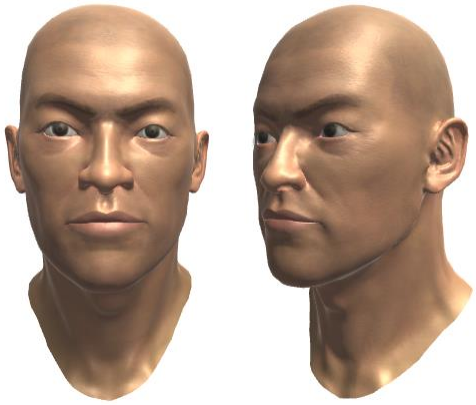
Eye Settings

To launch the eye calibration program for Vive Pro Eye and to adjust eye-tracking sensitivity, refer to the script ViveSR\Script\Sample\SRanipal_EyeSettingSample.cs.

SRanipal Compatible Avatar

Overview

Through SRanipal's eye-tracking features, an avatar's blendShape values can be animated with the player's eye movement. A compatible avatar for SRanipal has 12 blendshapes in version 1 and 2 more blendshapes in version 2 for eye tracking, demonstrated in this section.



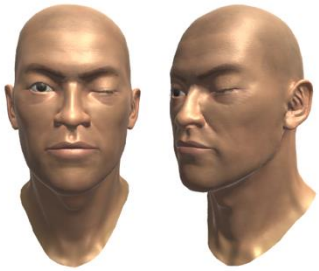
Sample Avatar

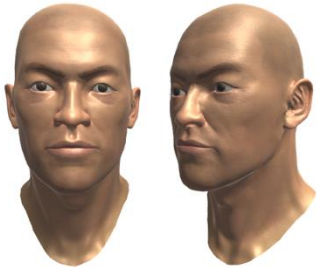
Version 2: add 2 new blendshapes

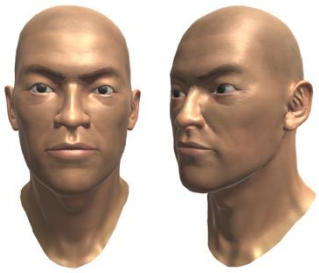
Eye_Left_squeeze	
	Description The blendShape close eye tightly when Eye_Left_Blink value is 100.

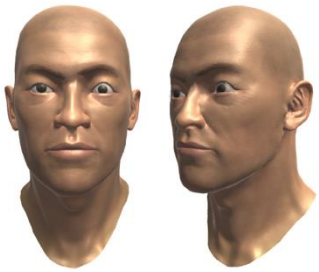
Eye_Right_squeeze	
	Description The blendShape close eye tightly when Eye_Right_Blink value is 100.

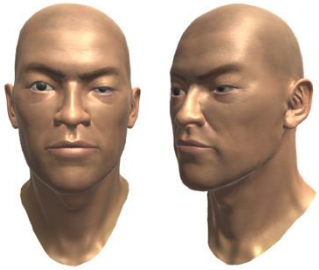
Version 1: Eye BlendShapes

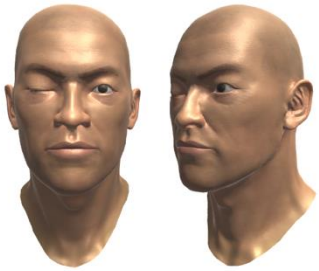
Eye_Left_Blink	
	**Description** This blendShape influences blinking of the left eye, closing it further with a higher value.

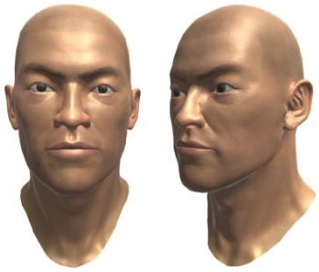
Eye_Left_Right	
	**Description** This blendShape influences the muscles around the left eye, moving these muscles further rightward with a higher value.

Eye_Left_Left	
	**Description** This blendShape influences the muscles around the left eye, moving these muscles further leftward with a higher value.

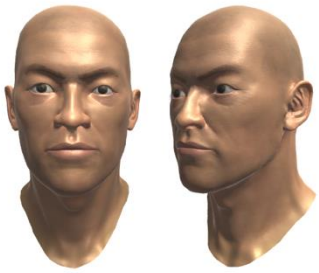
Eye_Left_Up	
	**Description** This blendShape influences the muscles around the left eye, moving these muscles further upward with a higher value.

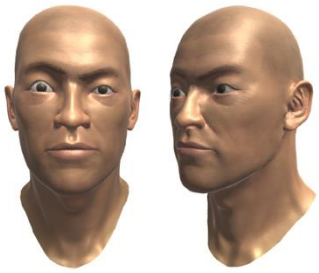
Eye_Left_Down	
	**Description** This blendShape influences the muscles around the left eye, moving these muscles further downward with a higher value.

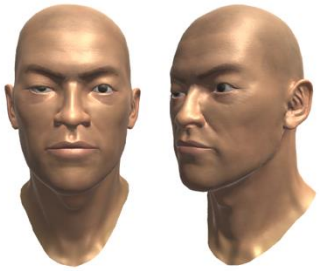
Eye_Right_Blink	
	**Description** This blendShape influences blinking of the right eye, closing it further with a higher value.

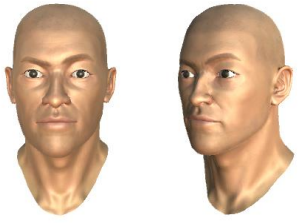
Eye_Right_Right	
	**Description** This blendShape influences the muscles around the right eye, moving these muscles further rightward with a higher value.

Eye_Right_Left	
	Description

	This blendShape influences the muscles around the right eye, moving these muscles further leftward with a higher value.

Eye_Right_Up	
	**Description** This blendShape influences the muscles around the right eye, moving these muscles further upward with a higher value.

Eye_Right_Down	
	**Description** This blendShape influences the muscles around the right eye, moving these muscles further downward with a higher value.

Eye_Left_Wide	
	**Description** This blendShape will open avatar's left eye wide, it should be done when Eye_Blink_Left = 0.

Eye_Right_Wide	
	Description This blendShape will open avatar's right eye wide, it should be done when Eye_Blink_Right = 0.