VRCFaceTracking-Templates Chinese Documentation

Face Tracking Template Setup By Adjerry91

VRCFaceTracking 模板设置 By Adjerry91 翻译来自 ChatGPT(好奇猫 a)

Introduction
Prerequisites
Support
Face Tracking Menu Controls
Setup
Additional Setup
Testing in Unity
Understanding How Face Tracking Works
    Binary Layer
    Smoothing Layer
    Driver Layer
License

Introduction 介绍

This setup will go over how to set up the face tracking template animations to drive blendshapes and eye movements to Unity for VRChat.

本设置将介绍如何设置面部追踪模板动画，以在 Unity 中驱动 blendshapes 和眼睛运动用于 VRChat。

Prerequisites 先决条件

- VRCFaceTracking v5 setup and working. Test public face tracking avatars first before doing customs.

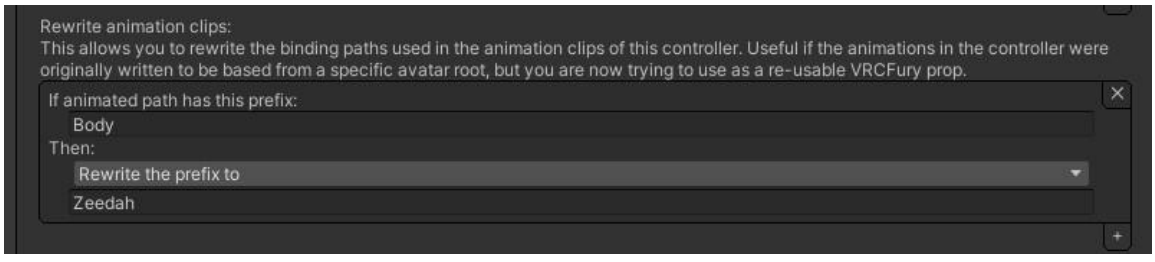
  已设置并运行 VRCFaceTracking v5。先测试公共面部追踪头像再进行自定义。

- Avatar with SRanipal, ARkit, and UnifiedExpressions Blend Shapes - Case Sensitive Note what blendshapes are being used on the avatar. If you don't know take look at this Face Tracking Conversion for naming

  具有 SRanipal、ARkit 和 UnifiedExpressions Blend Shapes 的头像——大小写敏感。注意头像上使用的 blendshapes。如果不确定，请查看此命名面部追踪转换。

- Blendshapes on Skinned Mesh Render named "Body" in the root of the avatar. You can change the mapping of the animations to other mesh renders with VRCFury "Rewrite Animation Clips" feature. Example face tracking shapes are on "Zeedah" skinned mesh render.

  在头像根部的 Skinned Mesh Render 上命名为"Body"的 blendshape。可以使用 VRCFury 的"重写动画剪辑"功能将动画映射更改为其他 mesh renders。例如，面部追踪形状在"Zeedah" skinned mesh render 上。

- Avoid unpacking FBX, make sure eye bones are assigned rig configuration before unpacking.

避免解压 FBX，确保在解压之前已分配眼睛骨骼的 rig 配置。

Support 支持

See the avatar-help-forum for advance support on Jerry's Face Tracking Discord

如需高级支持，请参见 Jerry 的 Face Tracking Discord 上的 avatar-help-forum。

Face Tracking Menu Controls 面部追踪菜单控件

Face tracking template has menu controls to allow toggling of the following:

面部追踪模板有以下菜单控件：

- EyeTrackingActive (Bool) - If true enables all eye tracking animations (VRCFaceTracking) and disables VRChat eye tracking

  EyeTrackingActive (布尔值) - 如果为 true，启用所有眼睛追踪动画 (VRCFaceTracking) 并禁用 VRChat 眼睛追踪
- LipTrackingActive (Bool) - If true enables all lip tracking animations (VRCFaceTracking)

  LipTrackingActive (布尔值) - 如果为 true，启用所有唇部追踪动画 (VRCFaceTracking)
- VisemesEnable (Bool) - If true enables Visemes.

  Tip - Recommend to leave VisemesEnable on with lip tracking as face tracking has network lag and is not useful for talking.

  VisemesEnable (布尔值) - 如果为 true，启用 Visemes。提示 - 建议在启用唇部追踪时保持 VisemesEnable 开启，因为面部追踪有网络延迟，不适合讲话。
- EyeDilationEnable (Bool) - If true enables dilation

  EyeDilationEnable (布尔值) - 如果为 true 启用瞳孔放大
- FacialExpressionsDisabled (Bool) - If true disables facial expressions. This does not do anything within the face tracking template, it is intended to be used in transitions for hand gestures on the FX layer to disable them when either eye or lip tracking is activated.

  FacialExpressionsDisabled (布尔值) - 如果为 true，禁用面部表情。这在面部追踪模板中不起作用，旨在用于 FX 层上的手势过渡中，当启用眼睛或唇部追踪时禁用它们。

Setup 设置

☐Add/Import VCC listing https://adjerry91.github.io/VRCFaceTracking-Templates/

添加/导入 VCC 列表 https://adjerry91.github.io/VRCFaceTracking-Templates/

☐Add/Import https://vrcfury.com/download

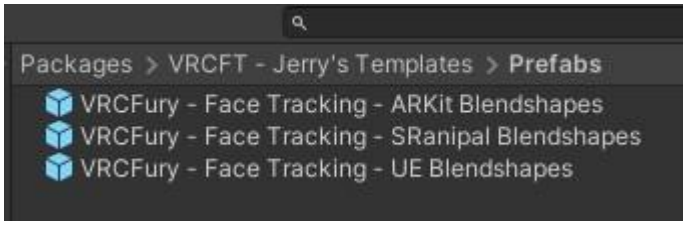
添加/导入 https://vrcfury.com/download

Note - VRCFury is not required. You will need to use merge animators, parameters, and menus manually which will not be covered in this guide.

注意 - VRCFury 不是必须的。您需要手动使用合并动画师、参数和菜单，这在本指南中不会介绍。

☐ Go to the Packages/VRCFT - Jerry's Templates/Prefabs folder. You will see the three different available blendshape VRCFury Face Tracking prefab templates. Tip - you can change the view of the project window text on the bottom right slider

转到 Packages/VRCFT - Jerry's Templates/Prefabs 文件夹。您将看到三种不同的 blendshape VRCFury 面部追踪预制模板。提示 - 您可以通过底部右侧滑块更改项目窗口文本的视图

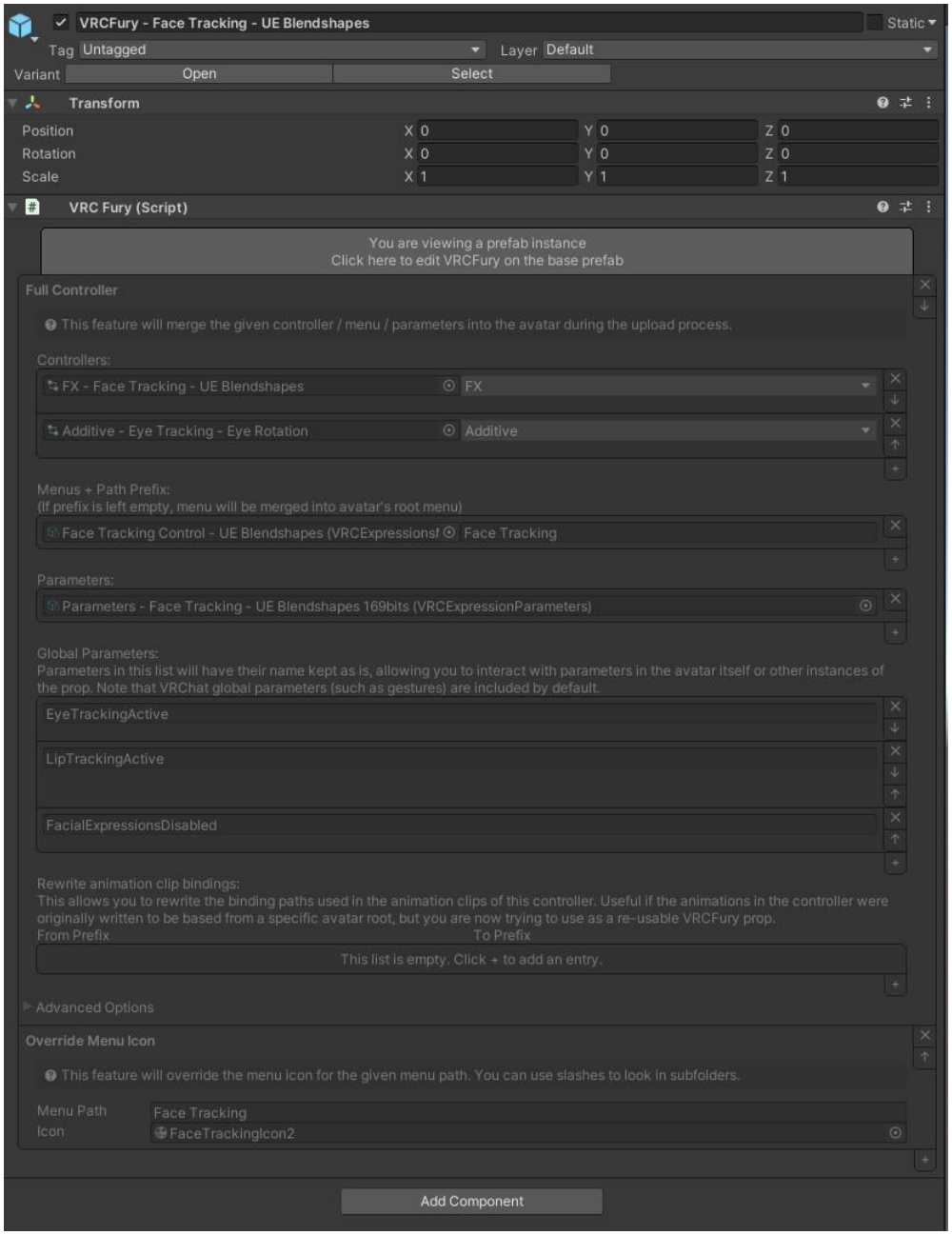


☐ Drag the corresponding template prefab to the base of the avatar.

将相应的模板预制件拖到头像的基座。

In the prefab you can see the details of the Face Tracking template. Note that this example UE template takes 169 bits for the parameters.

在预制件中，您可以看到面部追踪模板的详细信息。注意，这个示例 UE 模板需要 169 位参数。



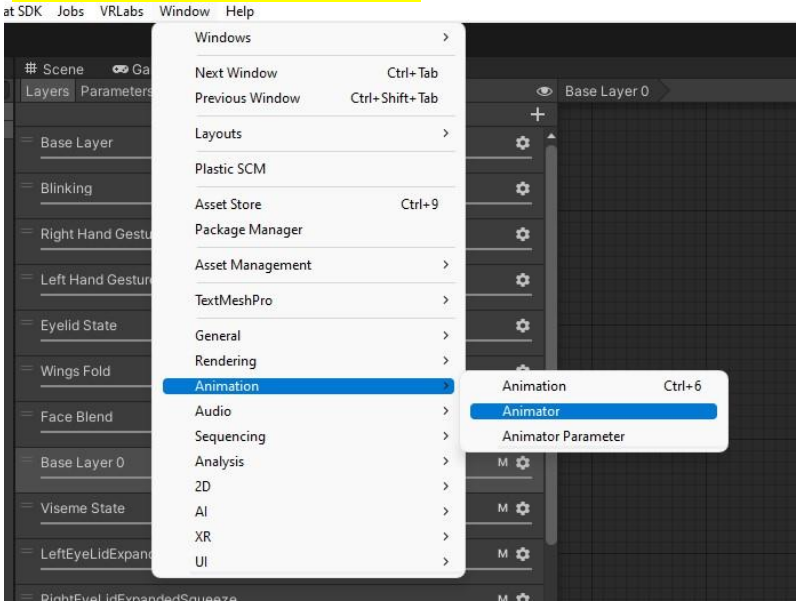
☐ Additional Setup **其他设置**

Blocking hand gestures and blinking overlaying with the face tracking.

阻止手势和眨眼叠加面部追踪。

☐ Show Animator and Animation Windows

显示 Animator 和 Animation 窗口



☐ Create the following parameters: 创建以下参数：

EyeTrackingActive (Float) EyeTrackingActive (浮点数)

Note - in parameters list EyeTrackingActive is a bool but in the animator it has to be float because of the face tracking template type casting.

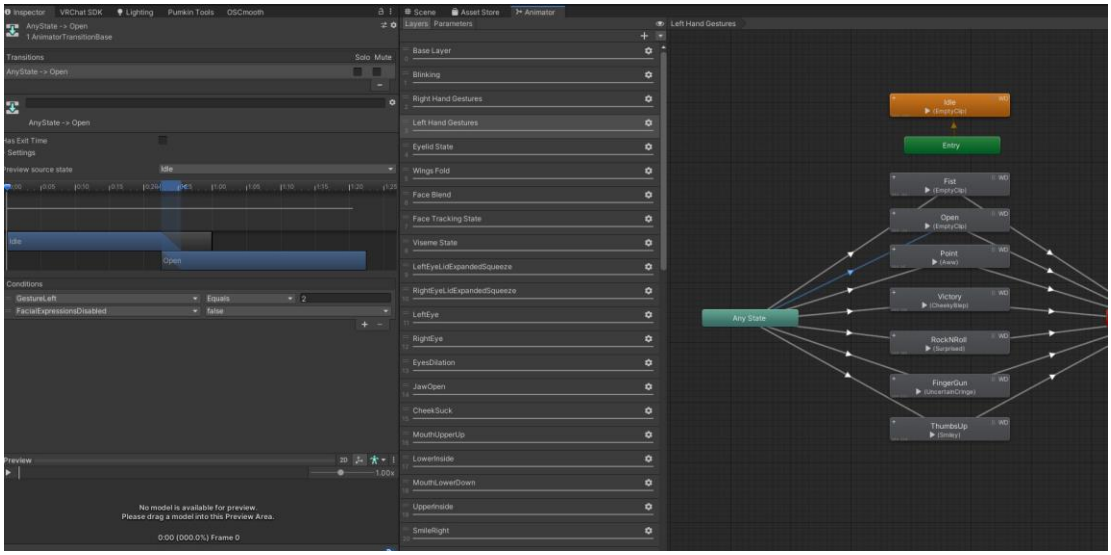
注意 - 在参数列表中 EyeTrackingActive 是布尔值，但在动画师中必须是浮点数，因为面部追踪模板类型转换的原因。

FacialExpressionsDisabled (Bool)

FacialExpressionsDisabled (布尔值)

- [ ] Add conditions for all hand gestures transitions to disable hand emotes. Click plus icon and add FacialExpressionsDisabled and set it to False. The toggle will automatically turn off gestures when starting face or eye tracking.

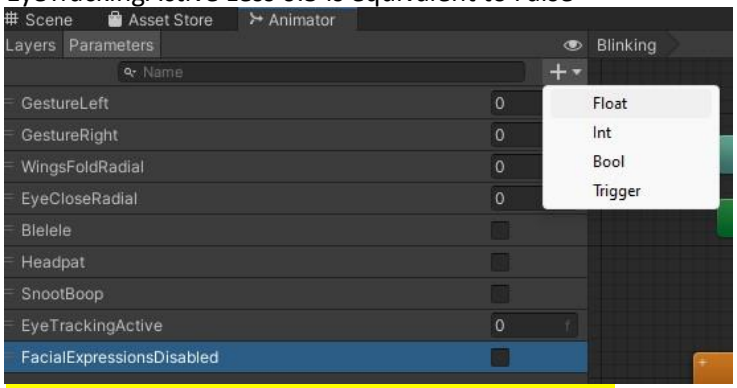
为所有手势过渡添加条件以禁用手势表情。点击加号图标，添加 FacialExpressionsDisabled 并设置为 False。启用面部或眼睛追踪时，切换将自动关闭手势。



- [ ] If blink is within the FX animator, add transition logic to disable the blinking animation. 如果眨眼在 FX 动画师中，添加过渡逻辑以禁用眨眼动画。

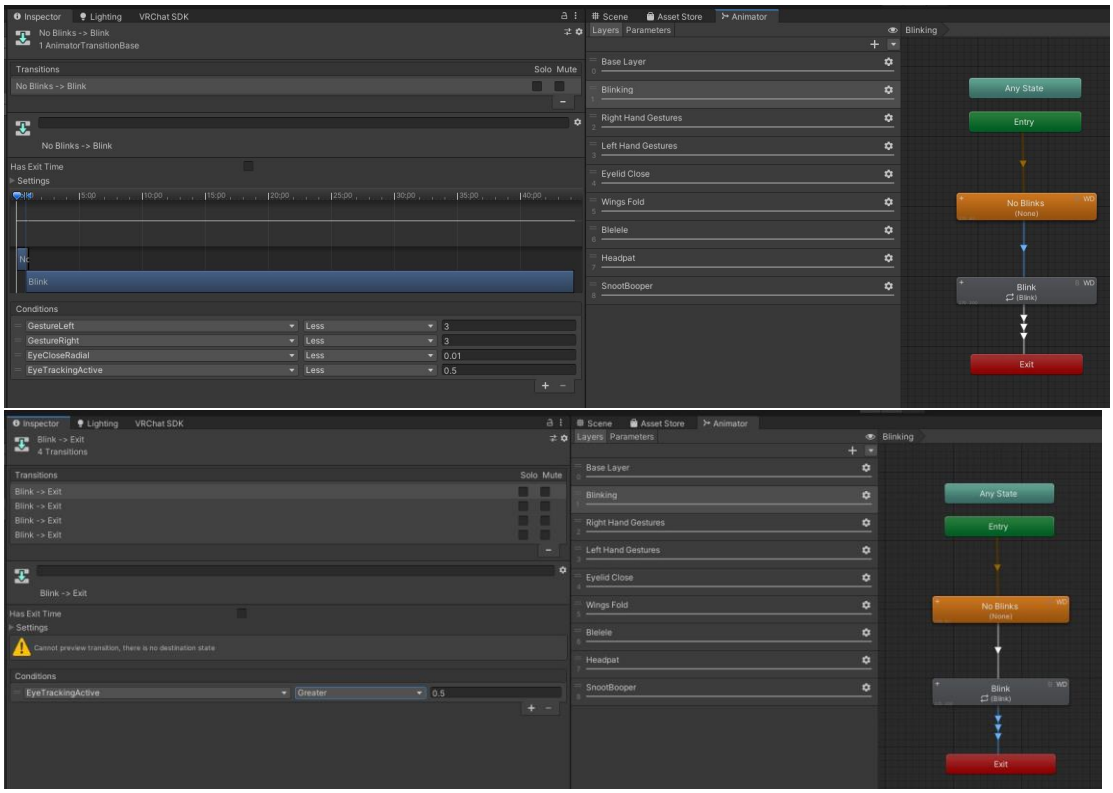
EyeTrackingActive Greater 0.5 is equivalent to True

EyeTrackingActive Less 0.5 is equivalent to False



EyeTrackingActive 大于 0.5 相当于 True

☐ EyeTrackingActive 小于 0.5 相当于 False



Note the multiple arrows on the exit transitions is equivalent to “OR” logic statement.

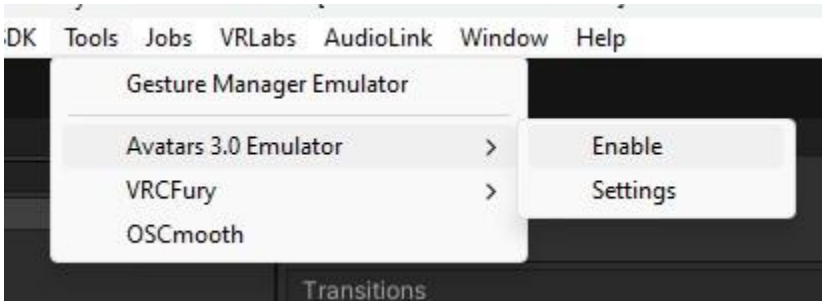
Right click transition from and select make transition then select exit as the destination. Click the exit transition arrows and you will see a new transition added to the list. Expand the settings, uncheck the exit time and change the transition duration desired, this is the time delay for the transition.

注意退出过渡上的多个箭头相当于“或”逻辑语句。

右键点击过渡并选择创建过渡，然后选择退出作为目标。点击退出过渡箭头，您将看到一个新的过渡添加到列表中。展开设置，取消选中退出时间，并根据需要更改过渡持续时间，这是过渡的时间延迟。

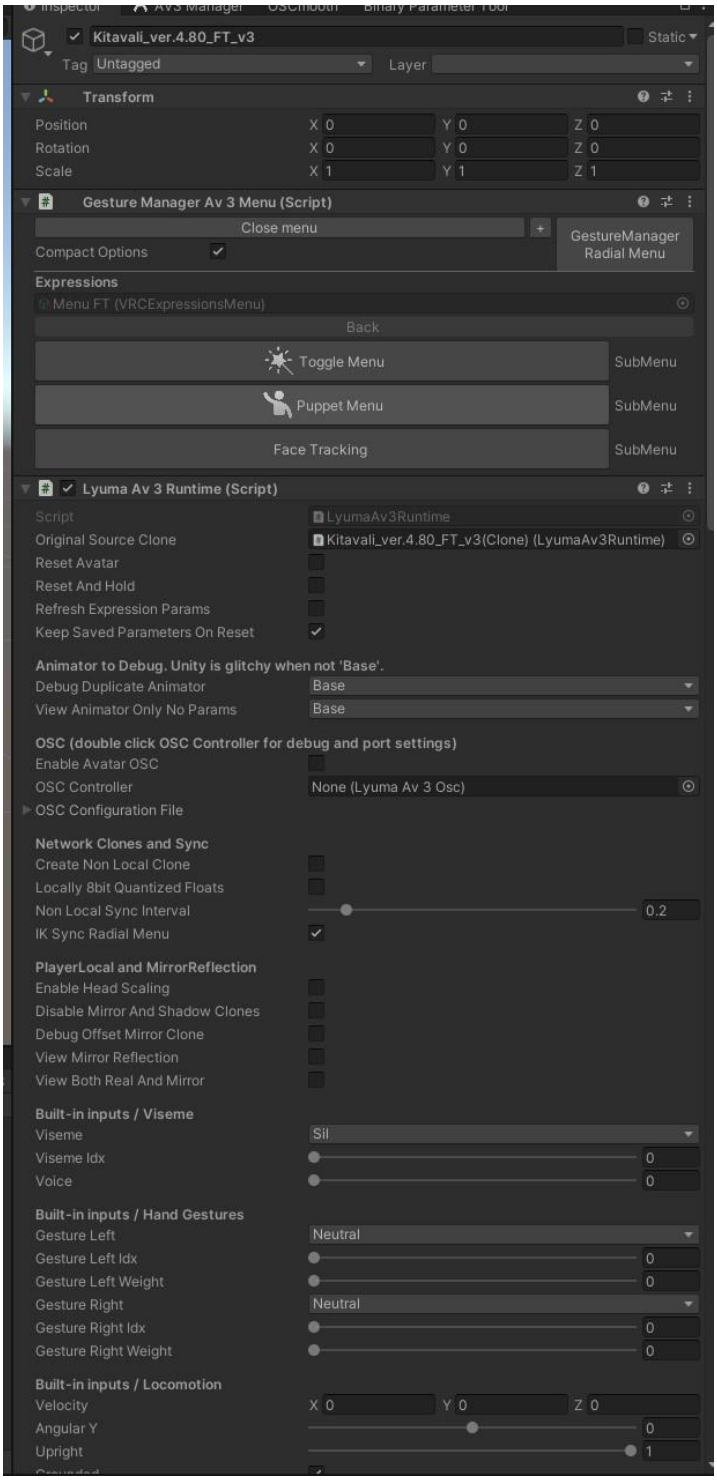
Testing in Unity **在 Unity 中测试**

- [ ] Import Lyuma Av3Emulator 导入 Lyuma Av3Emulator
- [ ] Click on play mode in Unity 在 Unity 中点击播放模式
- [ ] Enable **Avatar 3.0 Emulator** 启用 Avatar 3.0 Emulator



Click on the avatar to test. You will see a Gesture Manager Av 3 Menu and Lyuma Av 3 Runtime on the avatar.

点击 avatar 进行测试。您将看到 avatar 上的 Gesture Manager Av 3 菜单和 Lyuma Av 3 正在运行

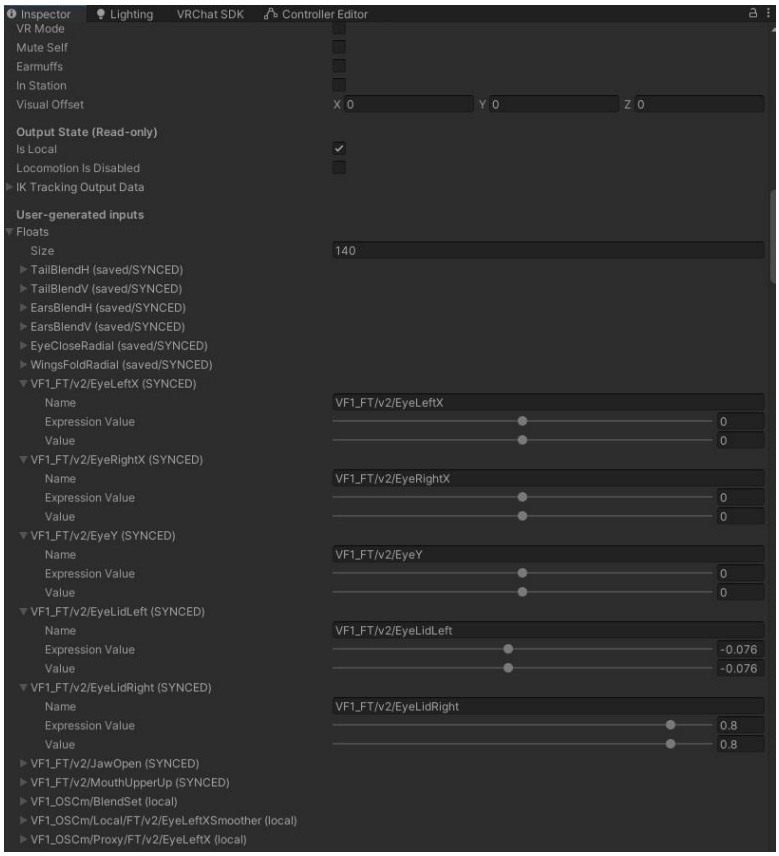
- [ ] 

- [ ] Go in menu an enable eye and lip tracking

在菜单中启用眼睛和唇部追踪

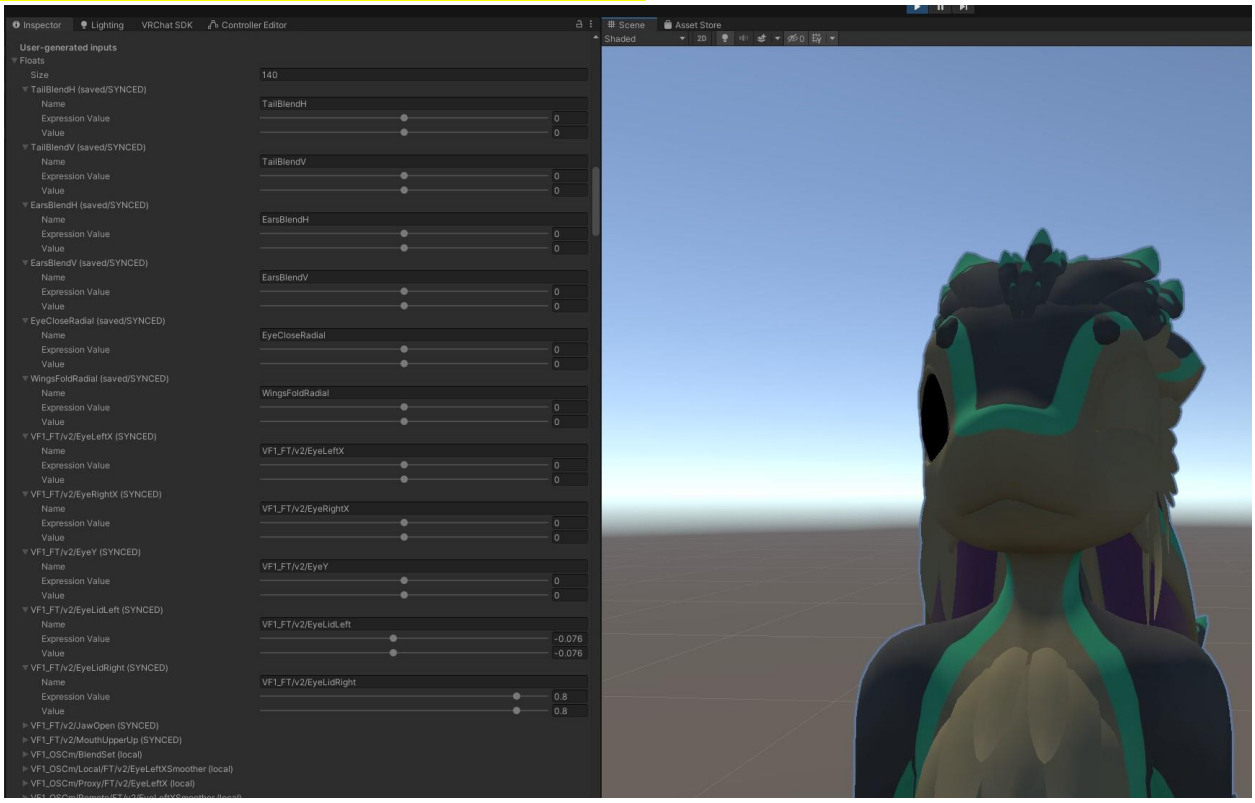
☐ Scroll down the inspect to the Use-generated input section and expand floats. Not that the eye tracking parameters state SYNCED, the parameters will be network synced in the game

向下滚动检查使用生成的输入部分并展开浮点数。注意眼睛追踪参数状态同步，这些参数将在游戏中进行网络同步。



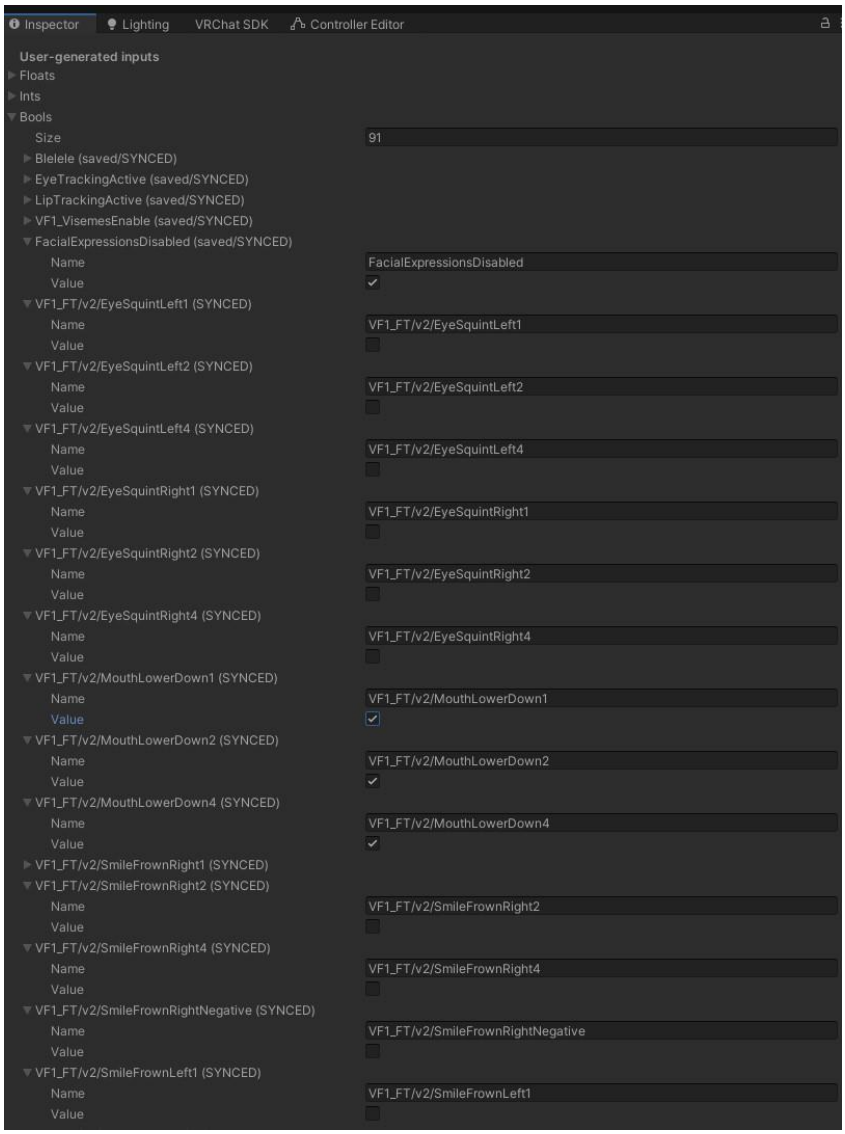
- [ ] Test each of the sync float parameters to see to test that they control the avatar.

测试每个同步浮动参数，查看它们是否控制头像。



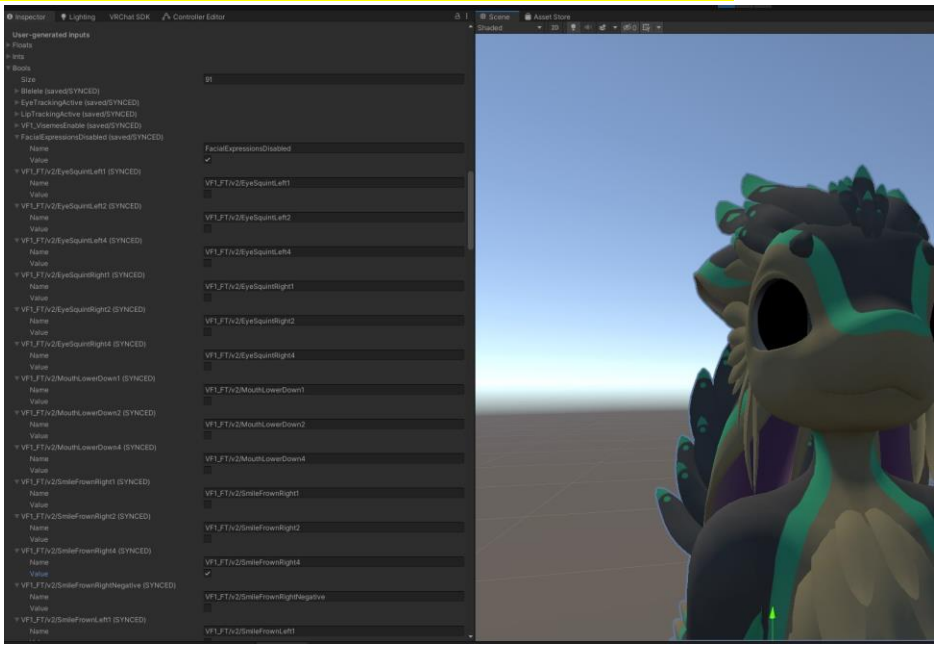
- [ ] When done with the float sync parameters now to test the binary parameters. Go to the Bools section.

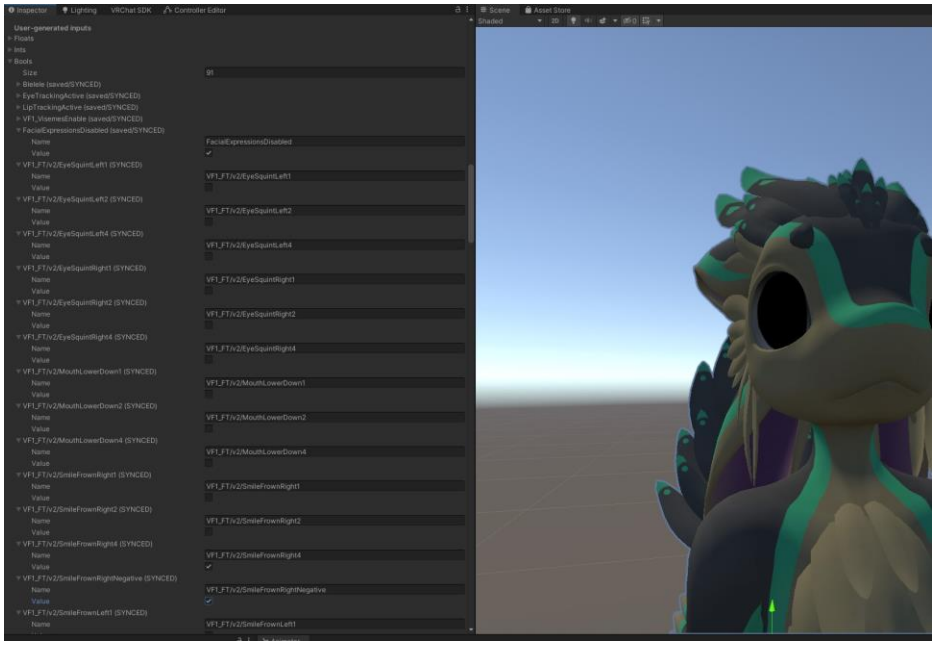
完成浮动同步参数后，测试二进制参数。转到布尔部分。



☐ Only need to really test the max values. Show the max bool and negative to test

只需要测试最大值。显示最大布尔值和负值以进行测试。





Understanding How Face Tracking Works **理解面部追踪的工作原理**

There are three different animation layers with different functions for face tracking in the animator.

面部追踪在动画师中有三个不同的动画层，具有不同的功能。

1. VRC Face Tracking parameters OSC values come in as floats and bools.

   VRC 面部追踪参数 OSC 值作为浮点数和布尔值输入。

2. Bools are converted to floats with binary layers

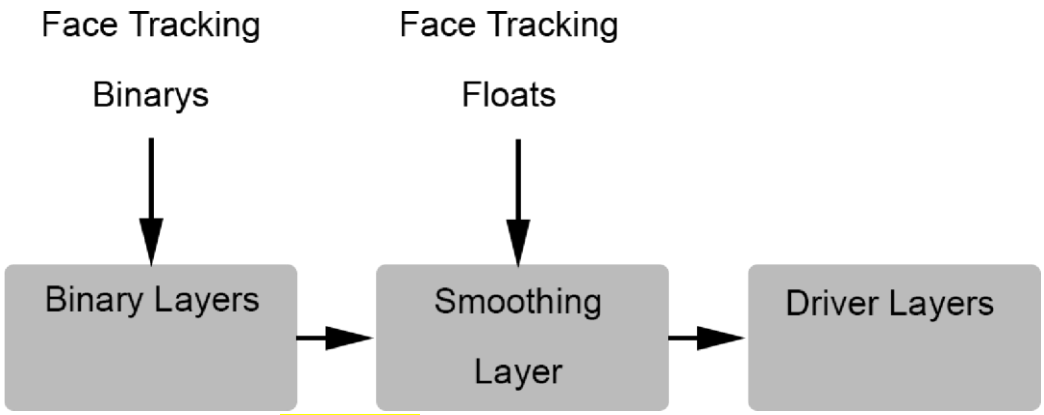
   布尔值通过二进制层转换为浮点数。

3. Floats are then smoothed with smoothing logic from OSCmooth to make face tracking not choppy with OSC

   浮点数通过 OSCmooth 进行平滑处理，以避免面部追踪的卡顿。

4. Proxy values will drive the driver layers to control the face tracking blendshapes/animations i.e. OSCm/Proxy/FT/v2/JawOpen

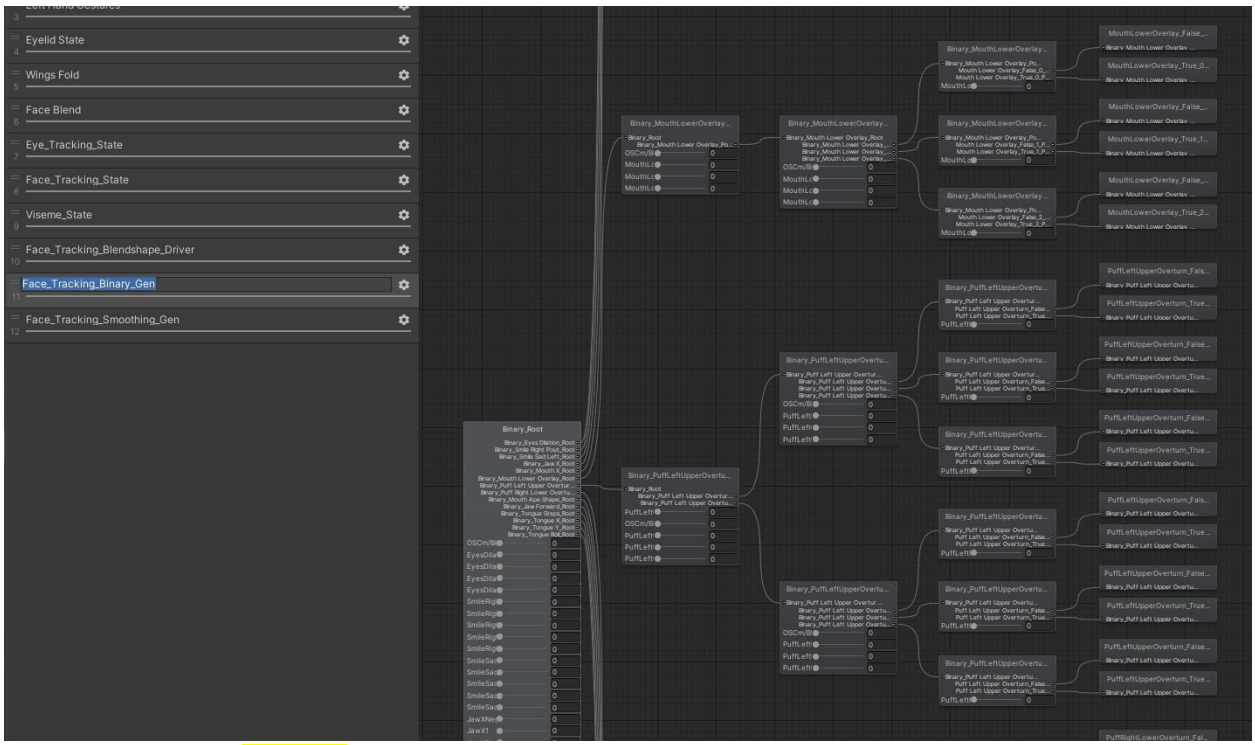
   代理值将驱动驱动层以控制面部追踪 blendshapes/animations，即 OSCm/Proxy/FT/v2/JawOpen。



Binary Layey **二进制层**

These layers are generated by the Binary Parameter Tool. These layers take binary parameters to reduce the amount of parameters on the avatar at the cost of resolution. Output of the layer is face tracking parameter float.

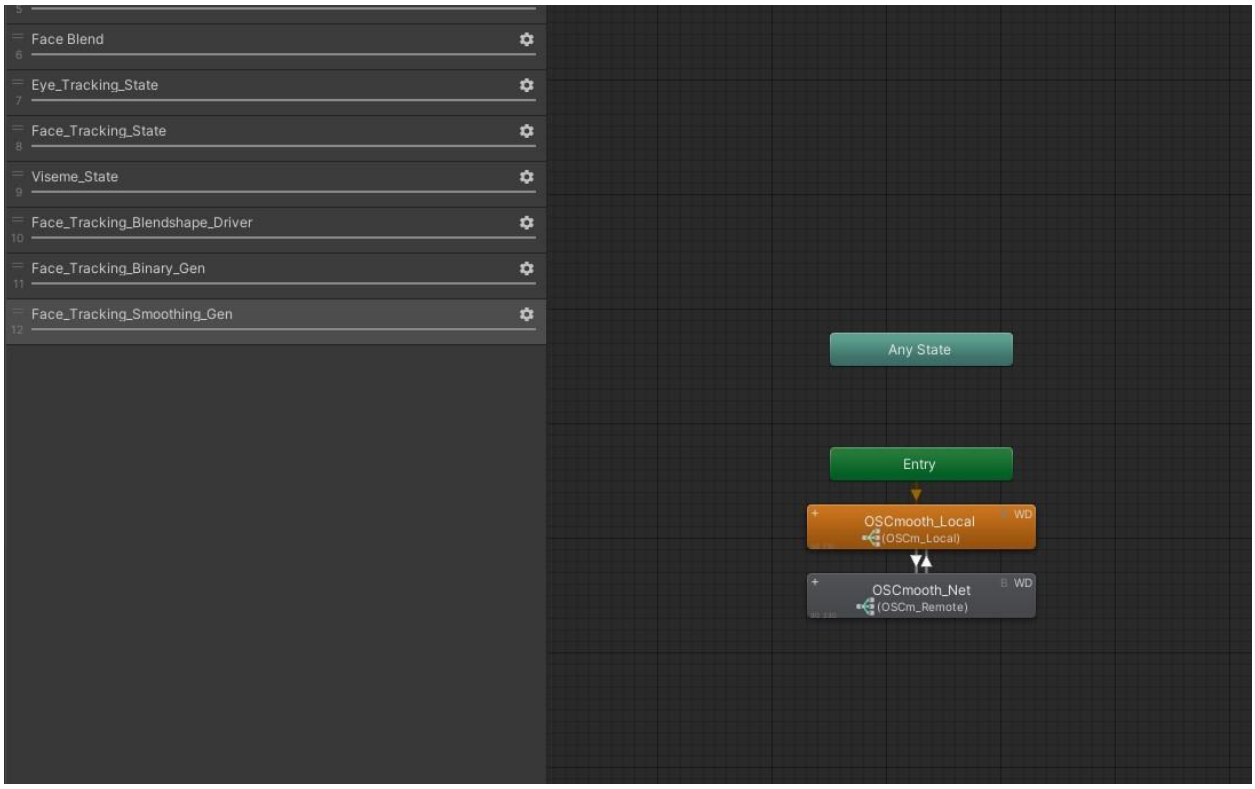
这些层由二进制参数工具生成。这些层采用二进制参数，以减少头像上的参数数量，但代价是分辨率。层的输出是面部追踪参数浮点数。



Smoothing Layer **平滑层**

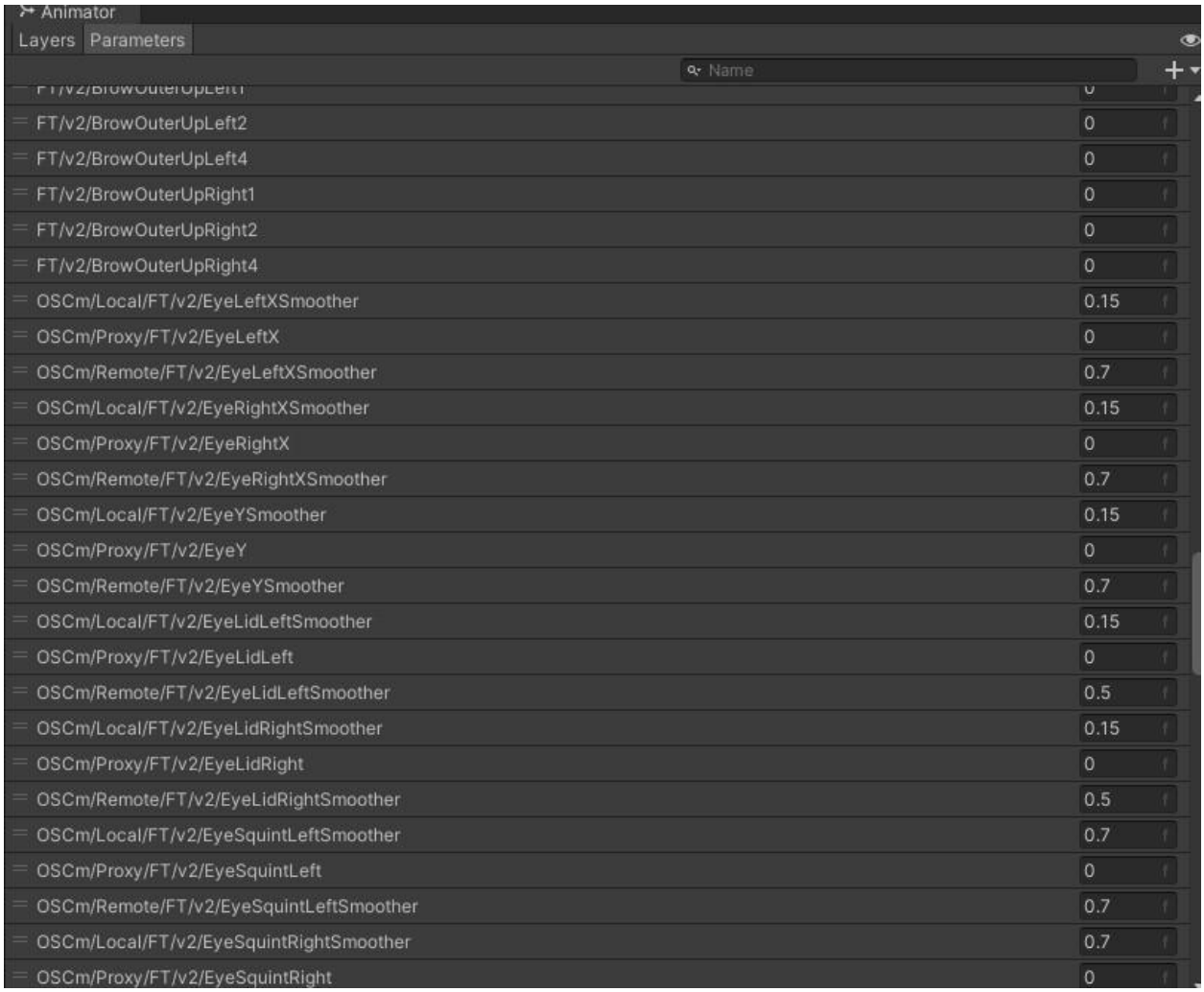
These layers are generated by [OSCmooth]tool. This has local and remote switch bases on the isLocal bool provided natively from VRChat.

这些层由 OSCmooth 工具生成。它具有基于 VRChat 本地布尔值提供的本地和远程开关。



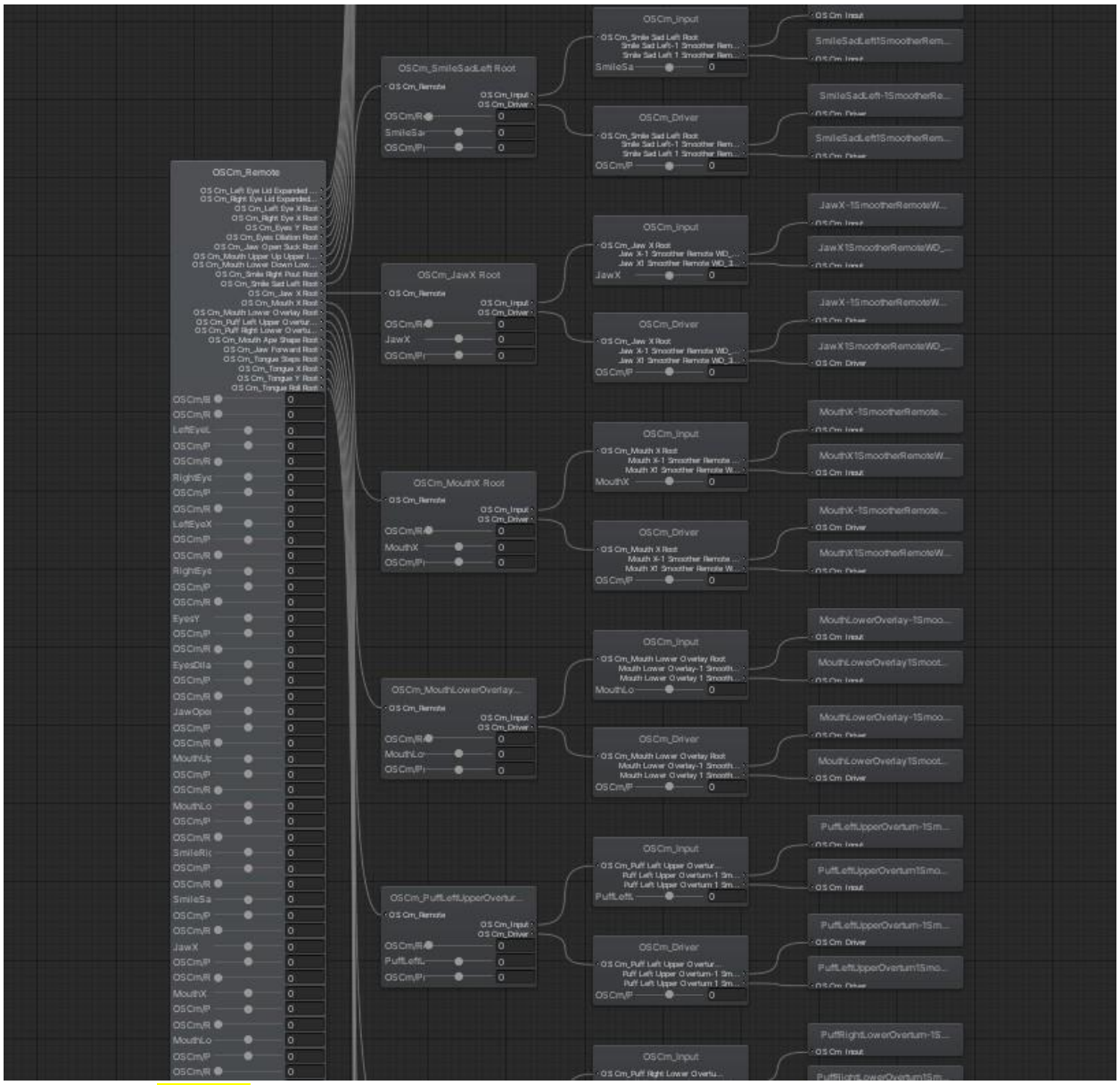
Smooth parameters have the prefix OSCm/Local/ and OSCm/Remote/ with the Smoother tag. These values can be changed as desired the higher the value more smooth lower the value less smooth. Do not set it exactly to 1 otherwise the smoothing is infinite so it freezes. This layer takes the face tracking float parameter and the output is float with the OSCm/Proxy/ prefix. Local is lower smoothing as the OSC update rate is good for local view but is slow for remote users, so more smoothing is used for the remote users. All smoother values a static variable and do not change and do not need to be networked.

平滑参数的前缀为 OSCm/Local/ 和 OSCm/Remote/，并带有 Smoother 标签。这些值可以根据需要更改，值越高越平滑，值越低越不平滑。不要将其设置为 1，否则平滑是无限的，因此会冻结。该层采用面部追踪浮点参数，输出为带有 OSCm/Proxy/ 前缀的浮点数。本地平滑较低，因为 OSC 更新率适合本地视图，但对于远程用户较慢，因此远程用户使用更多的平滑。所有平滑值都是静态变量，不会改变，不需要网络传输。



Smoother parameters are in the second blend trees in the OSCmooth_Local and OSCmooth_Remote.

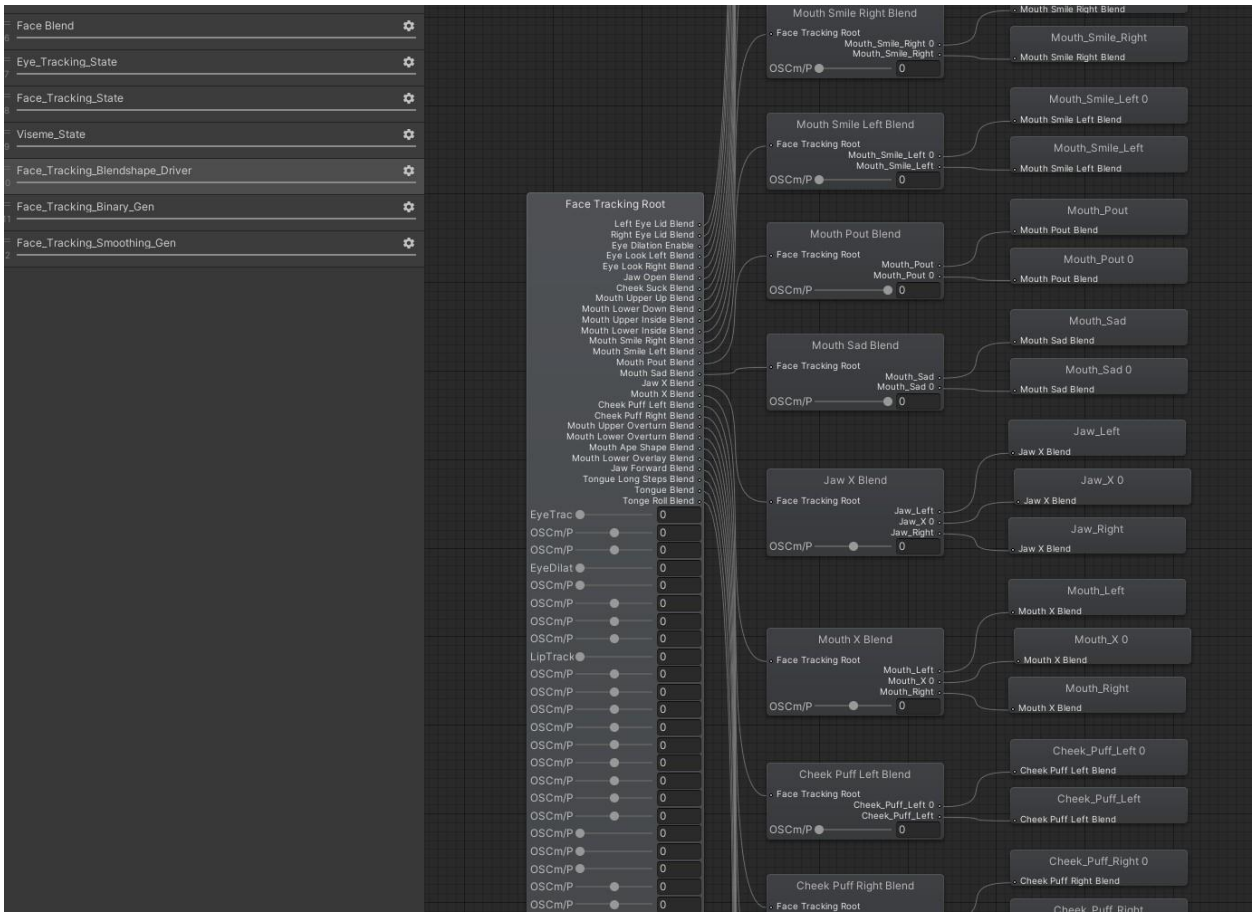
平滑参数位于 OSCmooth_Local 和 OSCmooth_Remote 的第二混合树中。



Driver Layer 驱动层

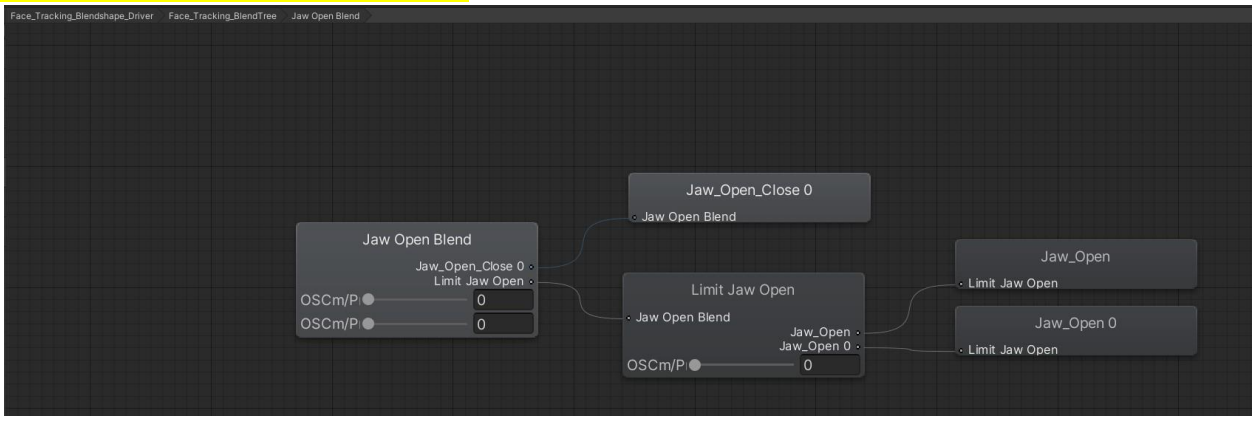
This layer is used to drive the animation for each of the face tracking parameters. Each child has an off state and a blend tree.

此层用于驱动每个面部追踪参数的动画。每个子项都有一个关闭状态和一个混合树。



Double clicking the blend state will go into blend tree settings.

双击混合状态可以进入混合树设置。

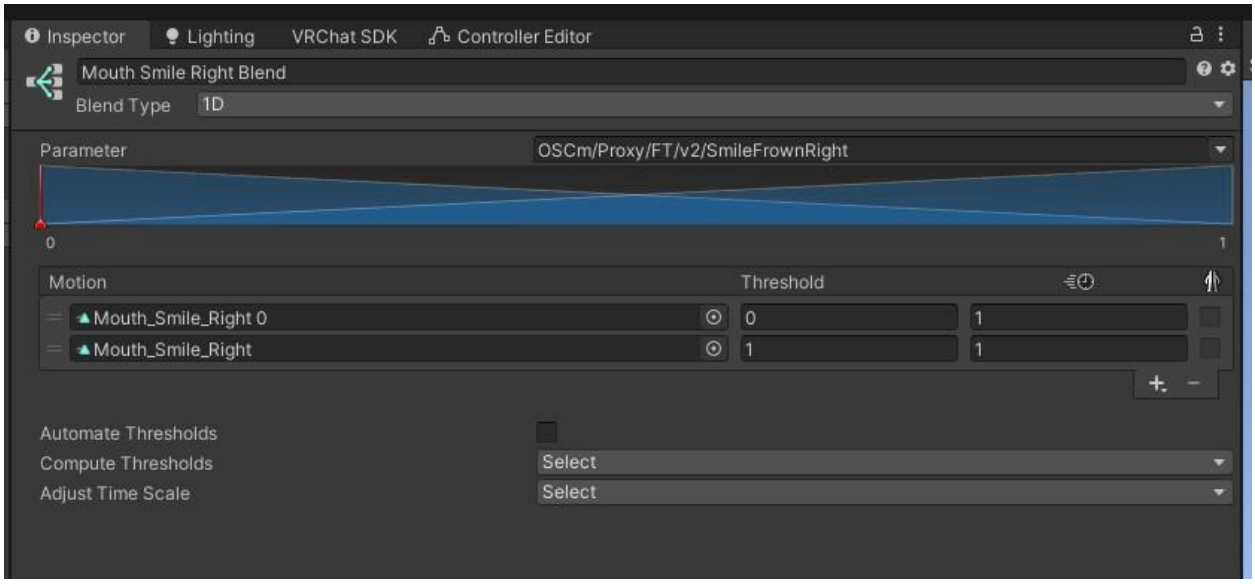


In the inspector for the blend tree you will see settings being used in the template. The OSCm/Proxy/ parameter is coming from the smoother layer. The thresholds can be changed as desired in these blend trees to change the sensitivity. Reducing the max threshold increases the sensitivity and adding dead zones decreases the sensitivity.

在检查器中查看混合树时，您将看到模板中使用的设置。OSCm/Proxy/ 参数来自平滑层。

这些混合树中的阈值可以根据需要进行更改以调整灵敏度。减少最大阈值会提高灵敏度，

而添加死区会降低灵敏度。



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编排来自好奇猫 a

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