

Amazon Sumerian

VR Asset Pack

Documentation

Overview

The new VR Asset Pack is a suite of experimental scripts and UI elements that make it easier to author cross-platform interactive scenes using Amazon Sumerian. The pack automatically detects supported controllers, and allows developers to customize button input colors and animation. It also provides an easy way to add functionality such as teleporting and emitting custom messages that trigger state-machine behaviors.

Requirements

The following VR Platforms are supported by Amazon Sumerian:

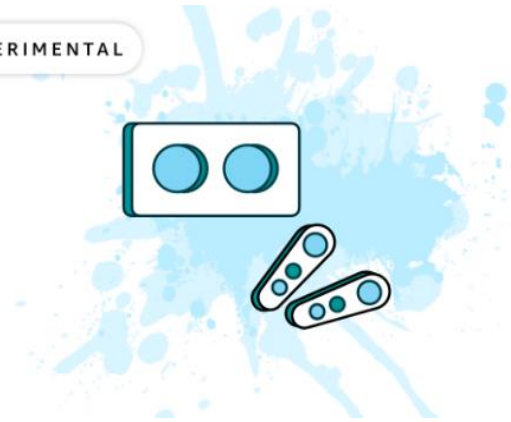
- *Oculus Rift*
- *Oculus Go*
- *HTC Vive*
- *HTC Vive Pro*
- *Lenovo Mirage Solo*
- *Samsung Gear VR*
- *Google Daydream*

Pointer functionality requires at least one VR controller is connected to the above devices before the scene begins.

Importing the VR Asset Pack

The VR Asset Pack may be imported into your scene by taking the following steps:

1. *At the top of the editor, click on Import Assets and then selecting VR Asset Pack.*
2. *Once the asset pack's content has been loaded into the Assets window, drag the entity labeled VRCameraRig into the Entities window.*



3. With *VRCameraRig* selected in the Entities window, expand the *VRCameraRig* component, and make sure that *LoadGamePads* and *CurrentVRCamera rig* are both checked.

VR Pointers

VR Pointers manage interactions between the controllers and the scene. By default, pointers have the ability to grab, teleport and activate objects in a scene.

*The primary pointer represents the controller that's in the guest's dominant hand. By default this is set to Right. This may be changed to Left by selecting *VRCameraRig > vr_pointer_settings* in the Entities window, and changing the *Primary Hand* variable in the script component.*

Pointer Settings

*Pointer settings may be changed by selecting *VRCameraRig > vr_pointer_settings > vr_pointer_primary/secondary* in the Entities window. The settings are located in *vr_pointer_settns* in the Script Component.*

Pointer Action Button - *The action button drives pointer functionality. It may be assigned to any button. However, changing this may result in some VR platforms not being supported.*

Pointer Action Button Alt - *An alternative action button to drive pointer actions.*

Pointer Line Mesh – *Points to the beam UI that emits from the controller*

Pointer Default UI Attach - *A node that represents where the default pointer UI is attached (changing this is not recommended)*

Pointer Default UI Icon – *Points to the default pointer icon.*

Pointer Hover Attach - *A node that represents where the hovering UI is attached (changing this is not recommended)*

Pointer Hover Icon – *The default icon used when hovering over entities.*

Pointer Hover Size - *The size of icons when hovering over an entity.*

Max Target Distance – *How far the pointer will detect entities.*

Color Default – *The default color pointer UI.*

Color Hover - *The color of the pointer UI when hovering over an object.*

Color Activate – *The color of the pointer UI when the action button is pressed on a valid entity.*

Pointer Functionality

Pointer functionality such as grab, teleport, and activate (state machine) are enabled by default. You can remove this functionality by disabling or removing the pointer scripts. Entities in your scene interact with your pointer by simply by dragging the following scripts from the asset window on an Entity's script component:

- `vr_action_object_activate`
- `vr_action_object_grab`
- `vr_action_object_teleport`

Entities must have a collider component to be detected by the pointer. To simplify this process, we've included an `AutoAddCollider` flag on the scripts which will create a collider for you based on the entity's bounding box. If you added your own custom collider, it will override the auto collider. This is recommended if you want a collider other than a box (sphere, cylinder, etc.).



Teleport

Allows guests to move themselves throughout a scene. This is enabled by dragging the script labeled `vr_action_object_teleport` from the Asset window to an entity's script component.



Activate

When triggered, the entity will emit a message that may be heard by a state machine behavior. This is enabled by dragging the script labeled `vr_action_object_activate` from the Asset window to an entity's script component. To learn about how to construct a listen action on a state machine behavior, please see the following tutorial: <https://docs.sumerian.amazonaws.com/tutorials/create/beginner/events/>

Activate Pointer Settings

Drop Velocity Time Span – When a rigidbody is dropped, the amount of time used to calculate acceleration.

Drop Velocity Multiplier - When a rigidbody is dropped, this is used to determine how fast the velocity of the object will be. The higher the number, the stronger your guest will seem.

Activate Object Settings

Input Message – *The pointer behavior that triggers the message to be emitted.*

Emit Message – *A message that is emitted. All scripts and state machine behaviors may listen to this message.*