VR Expansion Plugin

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What is the VR Expansion Plugin?

VR Expansion Plugin

If you are new to this page, I have assumed you have gone through the basics such as setting up a VR rig, basic teleport, and picking up objects. If you have not it is highly recommended you do so before proceeding with this plugin!

This plugin adds a variety of features to quickly build for VR and has extremely high customization. It is different than other tool kits, such as the VR Interaction Toolkit in Unity because there are little constraints in how developers can create interactions.

Some notable example features:

- Multiplayer (out of the box)
- Grab and drop with advanced physics
- Sliders
- Levers
- Dials
- Buttons
- Gesture recognition and recording
- Encapsulation

Unity developers may notice this plugin does not come with continuous movement. Most locomotion systems are already built into Unreal by default and the VR Expansion Plugin simply builds off of these feature sets.

An Important Consideration

I have noticed when creating interactions that the author of the plugin sets default values when adding components/actors. Sometimes, these values have collisions turned off, or physics enabled in one or the other. There is a detailed explanation for this reason but the big lesson is that is important to always be testing!

From the website

The VR Expansion Plugin (VRE) was created to help facilitate advanced Virtual Reality interactions and gameplay elements in UE4/UE5. It is an MIT licensed and open source overhaul of many of the engines elements to better accommodate VR.

Installation

Download the pre-built plugin here: https://vreue4.com/binaries

Unzip it then copy the unzipped file.

Open your project's folder. In the "Plugins" folder (which you may need to create), paste the unzipped plugin file.

Full installation documentation: https://vreue4.com/documentation?section=installation

Getting Started

Prerequisites

It is important you have gone through basics, such as setting up an XR Rig, teleport locomotion, and basic grab. These blueprints will be replaced with VRE blueprints. One important reason for going through the previous guides here in the wiki is I cover the new **Enhanced Input System**, which the official tutorials below cover the OLD input system!

> You must take into account new engine features and enhancements and not simply "blindly" follow a tutorial.

Guides

https://www.youtube.com/embed/6Evz6oDFEI8?si=ZVQrVmBqxE31tHdg

https://www.youtube.com/embed/KRuDhABU8Lo?si=IrCSIL5V8TpHI19F

Additional VRE Tutorial Videos

Visit the link here. It should open in a separate tab, but return here. From the list:

1. can be watched and it covers a lot of conceptual info on the plugin. You shouldn't need to reproduce anything here if you already installed the plugin.

2. Skip (outdated)

3. Although I have my own videos for setup, check this out for basic objects to grab.

4. Movement modes: The author of the YouTube channel covers his implementation of Smooth and Teleport locomotion. It's worth a look to see how other developers accomplish this task, however, SCiL generally uses implementations from other resources. The crouching and climbing work well

though from students who have followed those guides in the past.

5. If you followed item 3 above, you should be set to start creating interactions and these guides go deeper into how to use these components.

> **Something is wrong!** In YouTube tutorials, comments are your friend! Other users tend to update the "changes" in the comments since the video was created.

Where do I go from here?

The YouTuber, **VR Playground**, is one of my favorite Unreal channels. He dives into a lot of interesting VR interactions, even beyond the expansion plugin!

https://www.youtube.com/@VRPlayground/videos