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

Using VRE Binaries

1. Download the pre-built plugin here for your engine version here.
2. Unzip it then copy the unzipped file.
3. Open your project's folder. In the "Plugins" folder (which you may need to create), paste the unzipped plugin file.

Building From Source

1. Convert your project to C++. Here is a quickstart guide.
2. Visit the GitHub project page and perform Option 2 in the instructions.

> I have run into crashes when the plugin stack grows, e.g. MetaXR plugin, VR Expansion Plugin, etc. IF YOU HAVE these crashes, set the RHI to DirectX11 by searching for RHI in Project Settings.

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!

> Please take into account new engine features and enhancements. Tutorials should be a guide.

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Guides

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

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

Additional VRE Tutorial Videos

https://www.youtube.com/embed/qHrpC72oYfU?si=qpjFIdhz32gl-XQe

Dials

https://www.youtube.com/embed/P5xu78bkIs0?si=EJluZBkwL1addlTq

Buttons

> **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.

Documentation & More Guides

https://vreue4.com/documentation

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