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SimVisuals 2

Configuring Prepar3D for Multi-Camera / Frustum using Real-World Mapping

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1 Introduction

SimVisuals 2 Advanced includes Real World mapping which allows you to project multiple cameras blended into one geometrically correct view without any distortions.

These instructions will cover how to configure Prepar3D, and where to get calculated Real World information from the SimVisuals 2 interface.

This article is also available as a video here: Configuring Prepar3D for Multi-Camera/Frustum Video

Note: *We will be using a spanned desktop (Nvidia Surround/Mosaic or AMD Eyefinity) on a single PC in this tutorial.*

First place SimVisuals 2 into 2D mode if not already. This will make it far easier to work with the menus.

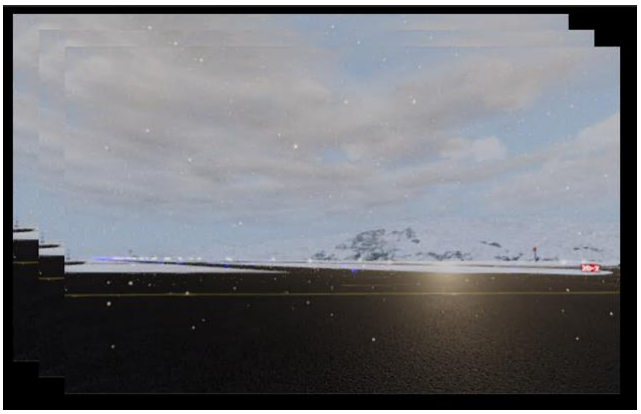
Open a Prepar3d scenario that you would like to use on the simulator screen.

2 Setting up the Windows

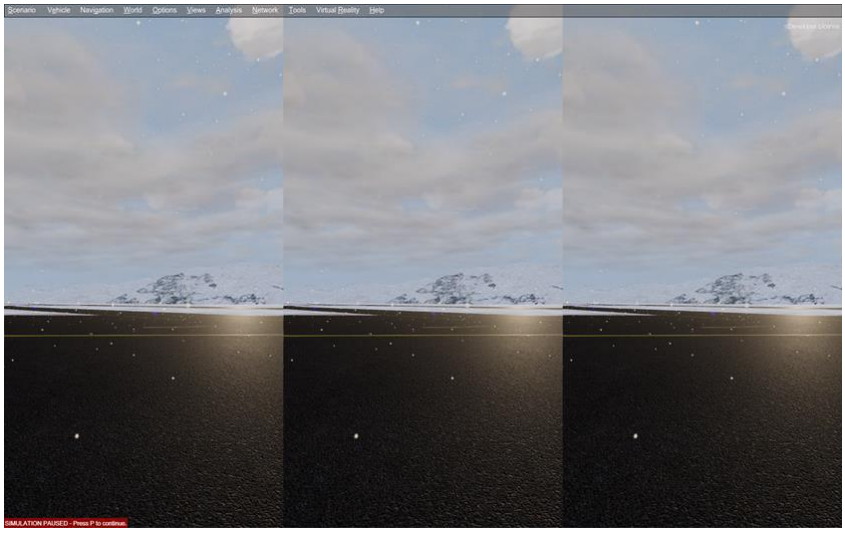
Press the **ALT** key on the keyboard to bring up the menu, then click **Views** > **Panel Only View**. This will close the current view.

Click **Views > New View > Cockpit > Cockpit**

Do this three times to open three windows (Open as many windows as you have projectors)

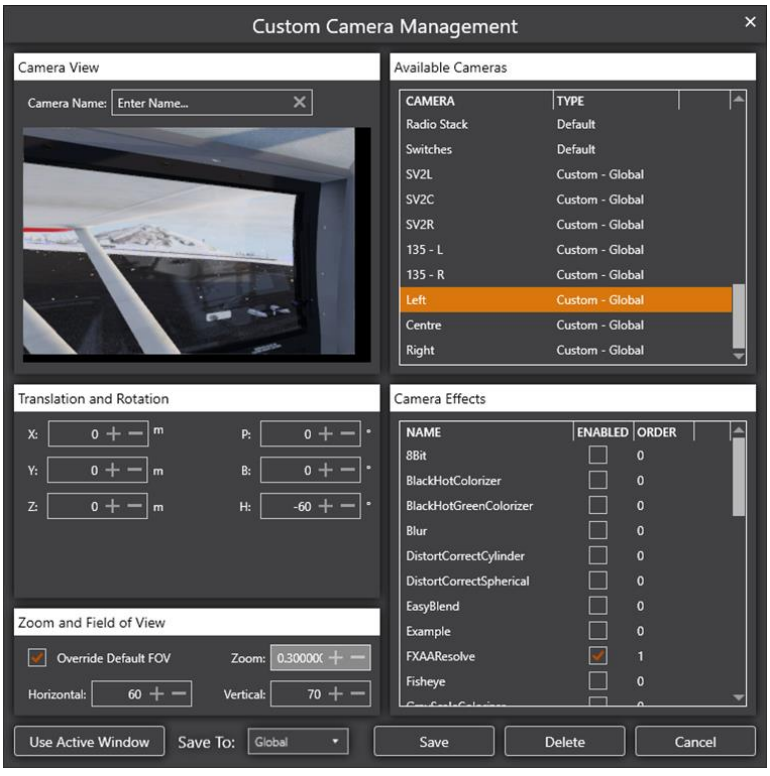


Arrange the windows side by side, and stretch them to take up 1/3 of the screen each



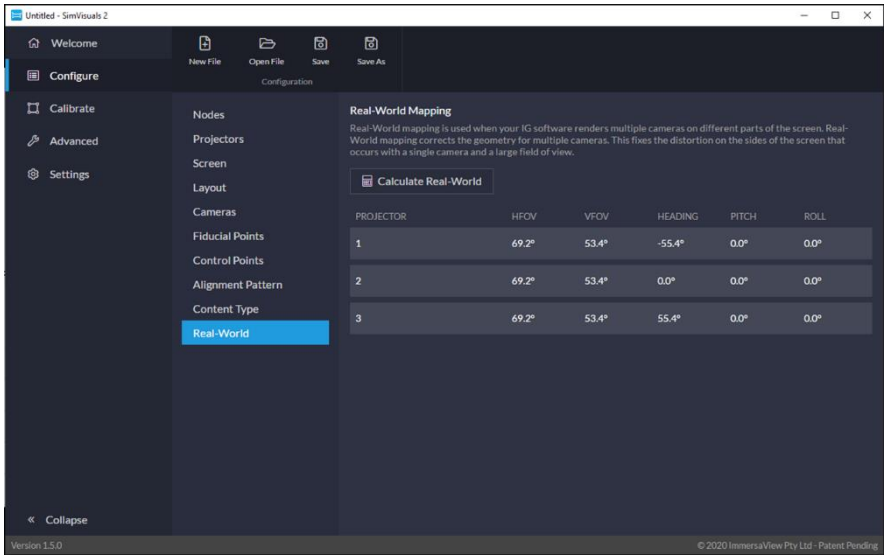
3 Setting up the Cameras

Right-click in the centre window, then click **Manage Cameras**



Enter a **Camera Name** eg. Left

Open SimVisuals 2 and Click **Configure > Real-World**



Note down the FOV, and Heading, Pitch, Roll (Bank) information of each of the cameras.

Switch back to Prepar3d, ensure **Override Default FOV** is checked, then enter the FOV, and Heading, Pitch, Bank (Roll) details from SimVisuals 2.

Click **Save.**

Repeat for the remaining cameras by changing the **Camera Name** for the second camera, and adjust the necessary details, in a grid setup, you may only need to change one value. In our case, only the heading is changing.

Once you have entered the details and saved each of the cameras, click **Cancel**.

4 Assigning the Cameras to your Windows

Then **Right-click** on each window, click **Cockpit** then the name of your camera.

Now we will save the scenario, click **Scenario > Save**, then enter a **Name** then click **OK.**

Quit Prepar3d by pressing **ESC** on the keyboard, and clicking **Exit Prepar3d**

5 Disabling Dynamic Head Movement

Next, we need to disable Dynamic Head Movement, which visualises head moments during acceleration pitch and banking manoeuvres, this will cause the multicamera setup to move independently, and the overlaps will not blend during this motion.

Open the following configuration file

C:\Users\[username]\AppData\Roaming\Lockheed Martin\Prepar3D v5\Prepar3D.cfg

Replace **[username]** with the current user name logged in on the PC.

Find the following lines and change them to match the below.

```
[DynamicHeadMovement]
LonAccelOnHeadLon=-0.000000
LonAccelOnHeadPitch=-0.000000
RollAccelOnHeadLat=0.000000
YawAccelOnHeadLat=-0.000000
RollAccelOnHeadRoll=0.000000
MaxHeadAngle=5.000000
MaxHeadOffset=0.300000
HeadMoveTimeConstant=1.000000
```

6 Testing

Put SimVisuals 2 into 3D mode by clicking **Configure > Content-Type**, Select **3D Simulation** from the dropdown. Click **Calibrate > Pattern** Then press **Escape** on the keyboard, then press Apply.

Open up Prepar3D and load your saved scenario.

Enjoy the blended multi-frustum display.