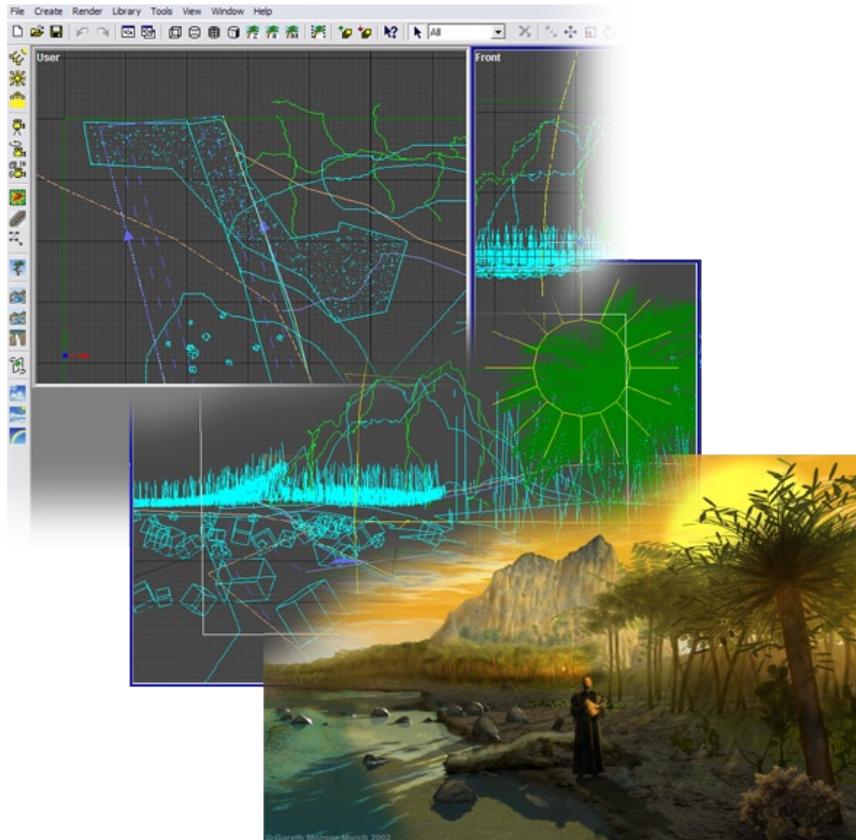# Black Island Graphics

World Builder Tutorial

Using World Builder to generate Spherical 360º Sky maps for use in Photoshop and other 3D Software.

Please note, these tutorials assume you are familiar with the basics of World Builder and image editing software such as Photoshop. The idea here, is to build upon the basic knowledge and delve into subjects that are (hopefully) useful but not obvious to new users. Throughout the tutorial, World Builder version used is 3.2 and Photoshop is my image editor of choice.

World Builder is produced by Digital Element, visit the web site at www.digi-element.com

Introduction

This tutorial will explain how World Builder can be used as a tool to generate full 360º spherical image texture maps of the World Builder sky that can be used as a sky texture to map on to a "Sky Dome" in other 3D applications, or as the basis for new sky texture creation using Photoshop. It is very simple and easy to achieve, and takes just the time required to set up a nice sky in World Builder, and combined with World Builders sky variation wizard, unlimited spherical sky texture map creation awaits.

Just in case any one new to 3D is reading this, I will briefly outline what a sky dome is. In other 3D applications, a quick, but effective way to generate a nice looking sky, is to map a texture of a sky on to a sphere (using spherical mapping) as in this image on the right. For the best results, the software that generates this sky map creates a full panorama of 360º of the sky or landscape, so when you view the created sky map texture it looks distorted as in the below image.
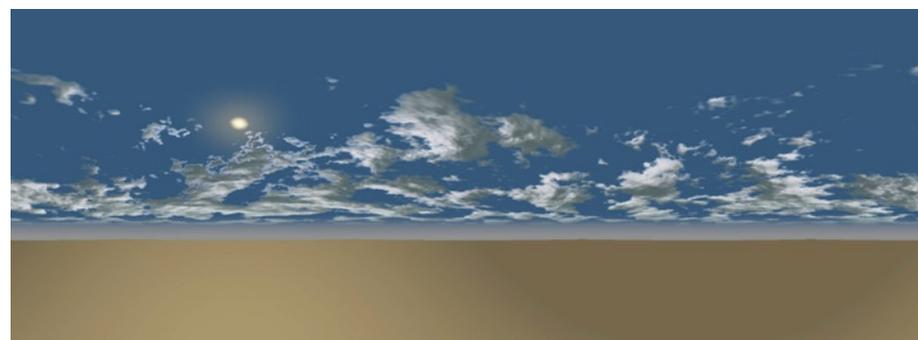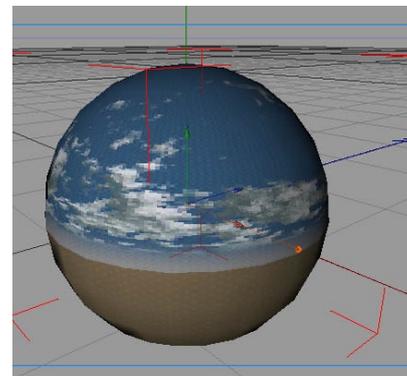
A World Builder generated sky map.

This stretched looking image, is then mapped onto a sphere in your other 3D software, with mapping type normally set to spherical. The sphere is then made large enough to enclose the other objects in your scene. This provides a quick method of a good looking sky, and as the sphere encompasses the entire scene, the sky dome texture will show in all models that require reflections. The sphere or camera can then be rotated to show different parts of the sky, with no visible seams.

The below image shows the above World Builder generated sky map textured onto a sky dome (sphere) in Cinema 4D XL7.
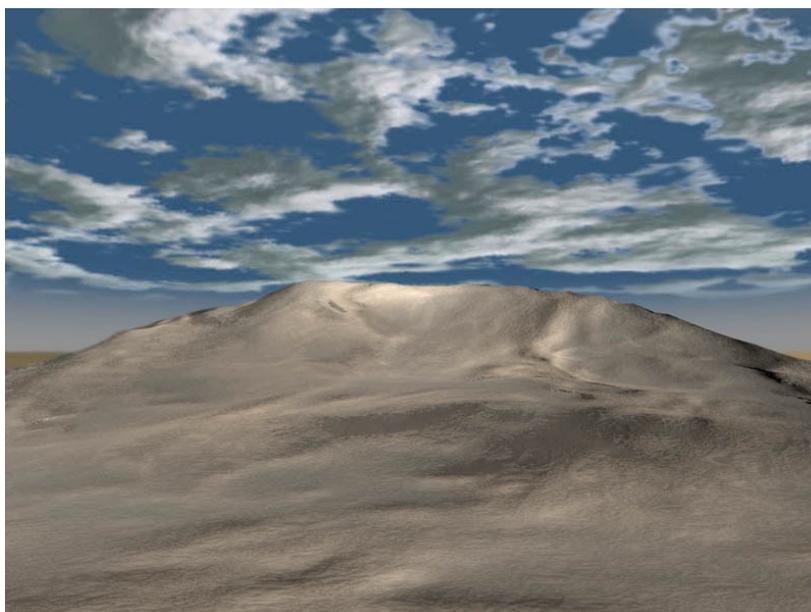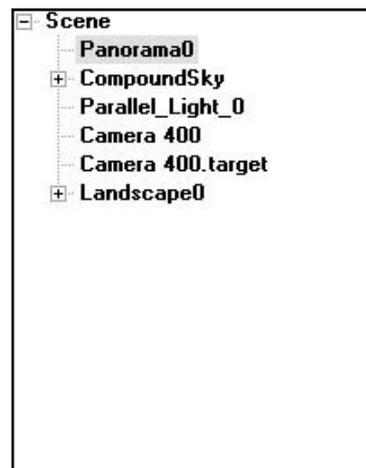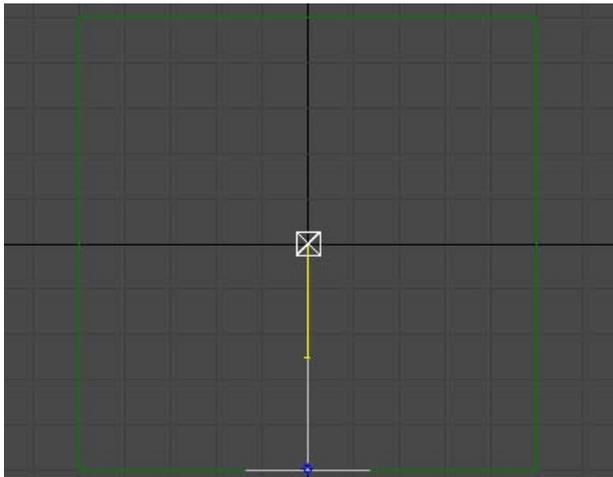
Step 1 - Create the Panorama Camera

- Start World Builder. For the purpose of this tutorial we will use the default sky.

- click on the _____ icon in the creation tool bar on left of screen. This has created the Panorama camera. This Panorama camera will now show in your view ports and the object tree, as in below images.
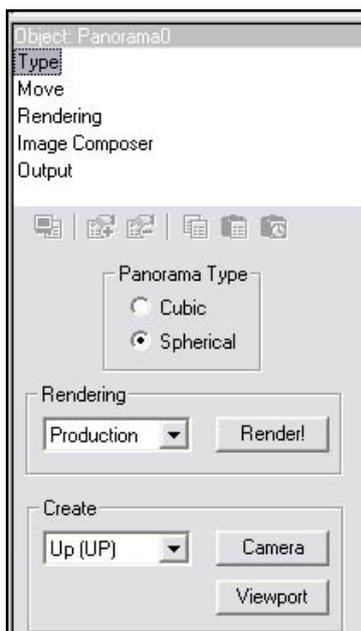

- We will now look at the various settings of the Panorama camera.

- In the property editor we have the following options
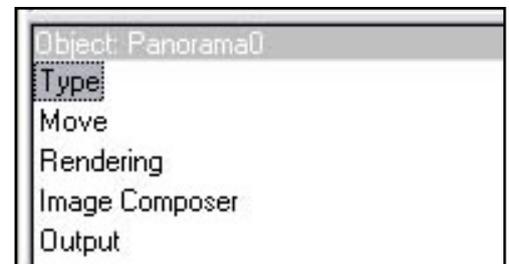

Type settings

Set Panorama Type to Spherical. Set Rendering to production. The create button allows you to view a camera or viewport of the portion of the sky to be generated. You do not need to worry about this now, play later if you like.

A possible note of interest for someone out there:

The cubic map type generates and saves 6 separate images of the landscape that can be loaded into the World Builder Panorama viewer. Play with this later if you wish. Or go for a pint down the pub. Choose File, Open Panorama and select one of the 6 saved images. This Panorama viewer is fully documented in the WB help section.
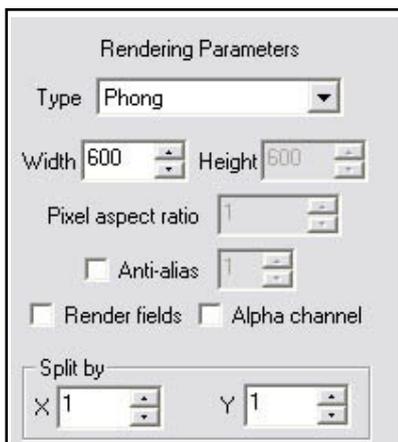
More Panorama Camera settings
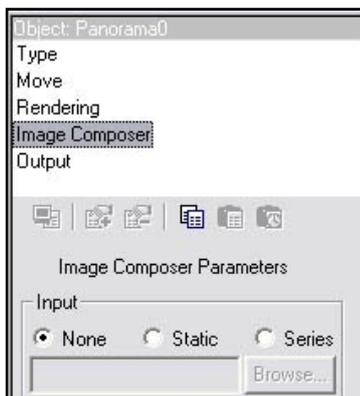
Move settings
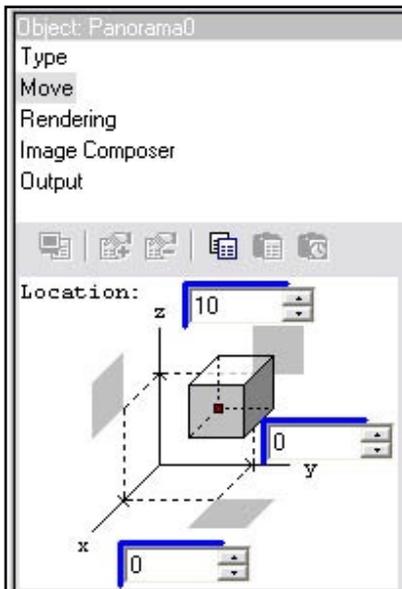
The Panorama camera has been placed in the middle of the landscape. These options control its location. I have found best results are to just change the z (Height), enter 10 here. Play with this later to see results of different z values on the final image.

Rendering Settings

World Builder creates the final spherical Panorama image by combining six separate renders in to one final image. In the width box, the value you enter here is for the width in pixels of ONE segment only, not your entire image. So if you enter the value 600, your final image size created by World Builder will be 2400 x 1200. For the purpose of this tutorial, enter a small value of 200 or 300, as this should give you a fairly quick render. Obviously, for useable higher res image maps, higher values will be required. The height value is greyed out, as the segment is square.
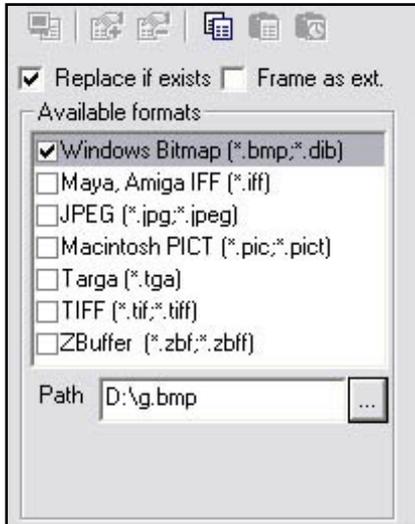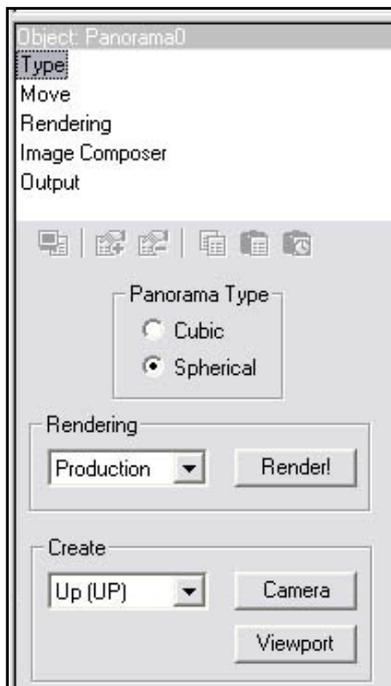
Image Composer settings

Input should be set to none.

Output Settings

Here you choose your final output format. Choose bmp. Enter a file name and path. The output file name should be a single letter. World Builder may (or possibly not) append direction info to that name.

### Now we Render the final Panorama Camera Image

Now all settings have been entered, click on "Type" and click on the render button. World Builder will now display six boxes on screen, each set to the width size you typed in to "Rendering". It will then proceed to render each segment and then save this as one final image that you can load into Photoshop.

Its here there appears to be a bug, so be careful of this situation. If you hit the Esc key to cancel a render, World builder stops the current segment it is rendering, but will merrily carry on and render the rest, with World Builder appearing to be stuck. Cntrl+alt+del seems to be the only way out of this. That's why its best to choose small width values for initial test renders. If you let them all render, WB appears to return to normal.

Final images and Closing Comments

This is the final Panorama Camera image render of the default World Builder sky and Landscape as viewed in Photoshop.
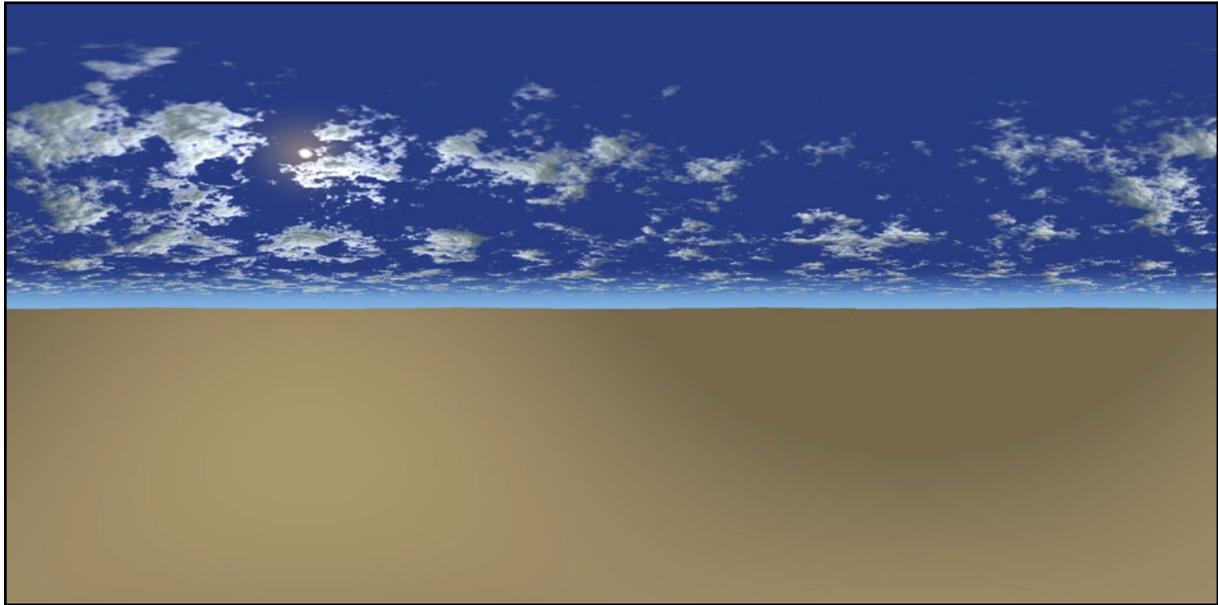
One thing you will notice, when viewing these images, is that they are not perfect, and will probably need some Photoshop work to smooth things out, possibly add a new sun, more cloud effects etc., but its here, for me anyway, that the fun begins. Using the methods in this tutorial, World Builder has provided a nice spherical image map that I can use in Photoshop as the basis for all manner of artistic skies and textures in other 3D and 2D software.

Regards to all

Gareth Morgan

The same image with some extra cloud/haze Photoshop work, ready for mapping onto a sky dome sphere.