Using David's Clouds and more

There are 4 cloudscapes from David Brinnen and – of course – I have got them all. They are marvellous. The idea is that you open one of them and create your own landscape scene below the sky.

But what if you have a scene already and want to add the clouds? Well, you copy the cloud slab and paste it in your scene. You might not get the result you are after. The sun is not at the same position, and what if you want to light your scene by IBL? The few tricks you need to know are shown in this video.

First, let's have a look at the camera. The settings I recommend are not mandatory but make life easier.

With all rotation angles at 0, the trackballs for the sun, stars and IBL all show 0° azimuth right in front of the camera.

Get a start sky from the library if you have not loaded one with your default.br7 file in the Bryce folder. We use Lazy Afternoon and set Ambience to white and Skydome to black. The clouds will need ambience, and we can do very nicely without a skydome light, which is essentially only a radial in the zenith which doesn't cast shadows.

Set the sun to 90° Azimuth and 20° Altitude. The sun shines from the right. Open the Cloud Cover tab and deselect the stratus clouds. Before you deselect the Cumulus, you might want to adjust the cloud height – because this is a control for haze. Set View in Scene.

Next, we create a terrain in a way so simple you might have never thought of doing it that way. Press the ctrl key when you click on the mountain thumbnail in Create. This gives you a default grey terrain. Otherwise, you will get a terrain with a randomly generated material – which can be nice sometimes. Click on [E] to get to the TE.

Click on New to get rid of the mountain. Select the lowest resolution 16-very coarse. Then click once or twice on Spikes and once on Mounds. With the left mouse button down, move Erosion a bit sideways. Then increase resolution by one step and move Fractal a bit left or right. Repeat until the resolution is at 1024, then click on Smooth a few times. That's your terrain.

Make it 1000, 250, 1000 and move it a bit away so you can see it. Also move camera up and rotate terrain until it looks good for you. Give it a material. Here we use Thawing Snow from the Terrains – Snowy library. Make sure the material has the Ambience channel at 0 otherwise you get washed out shadows.

I've prepared a scene as shown already. It looks a bit different but it is essentially the same.

Adjust the sun Intensity until the scene is lit to your liking. Save the scene and open the one from David with the clouds – I used B7_0_1_26_ p2_s7_v1, select the slab and ctrl-c it.

To give you an idea about the Cloudscape scene, I created a QTVR panorama from it.

Then re-load your scene and ctrl-v the slab. Go to the overhead view and place the slab so that you can see it in your scene.

The clouds cast shadows, the sun is behind clouds and there is no sunlight in the scene. I've rendered the scene already so we do not have to wait.

We'll have to move either sun or clouds so the sun is not obscured by the clouds. First make the sun visible in the wire frame by ctrl-alt-double-click on the sun roller ball, then click in the wire frame. In the Sky Lab, move the sun back to 90/20.
Now move the camera Y to 90 and you see the yellow sun in the wire frame. Render. With knowing where exactly the sun is, you can now move the clouds so that there is an opening for the sun. Or you click in an opening in the clouds and thus move the sun.

If you move the clouds, select the slab and go into the Mat Lab. Open the Transformation tool and move X and/or Y a bit and check what happened with the clouds. You can also rotate the texture until an opening appears in the clouds for the sun.

Go back to camera view and there is light. Of course, the clouds have changed. If you're not happy with the result, find another opening. You can also experiment with Density.

You want to light the scene with IBL so we load an HDRI with a sun in it. There are some in the Content folder, we will use Furka which has the sun at 0° azimuth and 42° altitude. We want the sun from the HDRI at the same position as the Bryce sun. So we rotate the HDRI X to 90° and tilt it to 68°. This because the sun in the HDRI is at altitude 42° when Y is at 90 but we want the sun at 20° so we are 22° too high. 90-22=68. We render the HDRI as background.

Do not forget to put Haze back on

Now position the camera again to Y=90. The yellow mark of the Bryce sun is still there. Render and look where the sun in the HDRI is. We might have to adjust Z a bit to bring it right over the sun mark. Once set, disable render as background, and adjust HDRI Effect to get the light you wish.

It is also helpful to look in the preview of the Sky Lab and switch on and off Sun/Moon Visible.

So far, we lit the scene with either sun or HDRI. We may also use both together. Just switch the sun back on and adjust sun Diffusion and HDRI-Effect to balance the lights.

We have sun and IBL shadow intensity at maximum and those parts in the shadow that are not brightened by the haze are almost or fully black. We can lower shadow

intensity – or we can use the sun for the main light and use the HDRI to brighten up the shadows.

In this case, we set the HDRI with the bright sun opposite of the Bryce sun, i.e. to 270/30. The light from the HDRI is here to make the shadows less deep. The shadows are cast by the sun; the HDRI must not cast shadows too, and from the wrong side – unless we are on a planet with two suns opposite each other; disabling the shadows for the HDRI speeds up the render considerably, besides.

By the way, you cannot do it the other way around, lighting the scene with the sun in the HDRI and have the Bryce sun brightening the shadows because if sun shadows are off, there are no shadows at all.

The previous two renders needed 1 ¼ hours to render, the last one without HDRI shadows only

Here are some examples of scenes I rendered featuring David's clouds which I did using the method discussed.

The left two pictures are my renders, the right one shows the Cloudscape from which the clouds were taken.

Here again two renders with the Cloudscape used.

And a third example with the scene we know quite well now.

I hope I could show you how to use the cloud slabs in David's Cloudscapes in your scenes to your advantage and also that there are more cloud patterns than are obvious in the Cloudscape.