

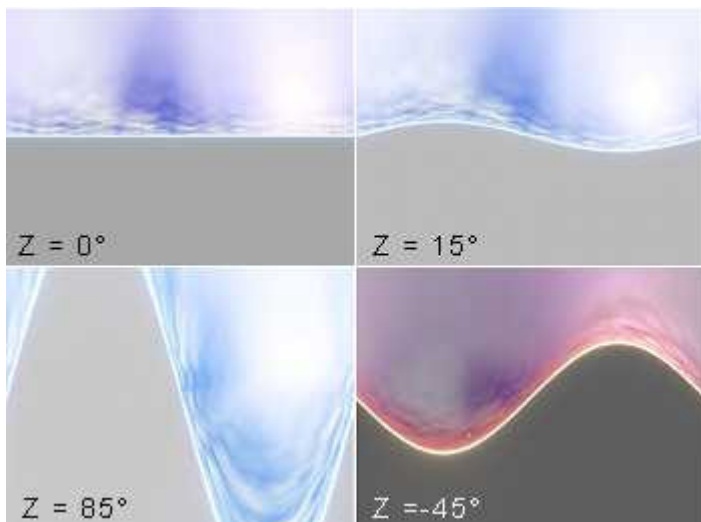
BRYCE 5 Mini Tutorial

Abstract Panoramics

by **David Brinnen**
March 2005

HTML Version
by **Hans-Rudolf Wernli**

Blotchy Splashes of Colour >



If you have photographed a panorama with your camera once, you know that the camera must be aligned horizontal on the tripod, otherwise you have at one time a lot of sky on the picture and at another none at all.

Bryce can do panoramas as well. Instead of rendering it as a QTVR movie, it can also be rendered as a flat image. If the camera is tilted, sinusoidal distortions appear that might come in handy for an abstract project. The picture at left shows different panorama renders with the camera rotated in the Z-axis.

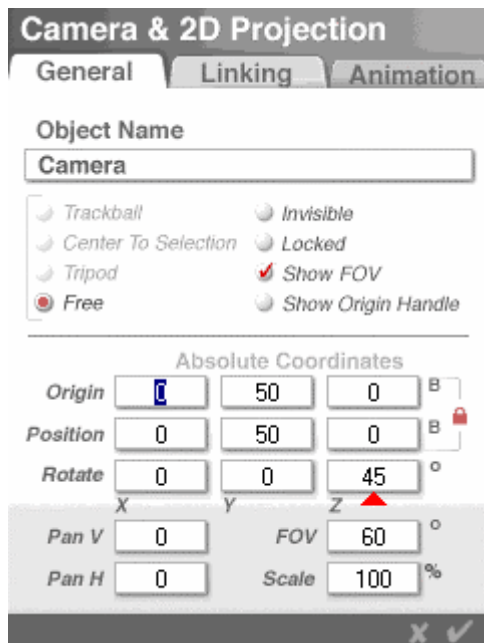


Here, four panoramas are shown. For the first, the camera is horizontal, for the last vertical. Below, the same settings are rendered as QTVR (QuickTime Virtual Reality) movies. If you cannot see those movies, the QuickTime Plug-in 4.1 is not installed in your browser. You can download it for free from <http://www.apple.com/quicktime/>.



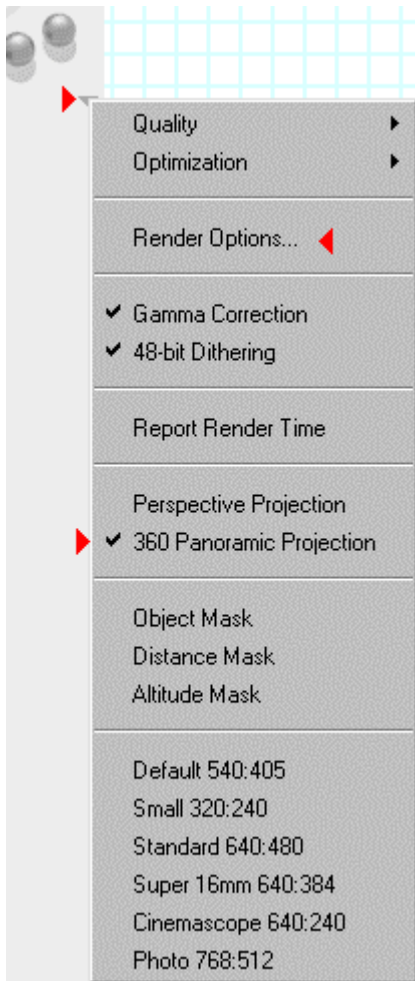
If 4 pictures are shown above, move the mouse pointer into any of them. Zoom out: push [Ctrl] key; zoom in: push [Shift] key. Turn: press left mouse key and move mouse inside the picture. In the last picture, the camera moves over the sky ($Z = 90^\circ$).

Note: In the PDF version, only the pictures are shown, the movies could not be embedded. You may download them separately [here](#) (174 KB).

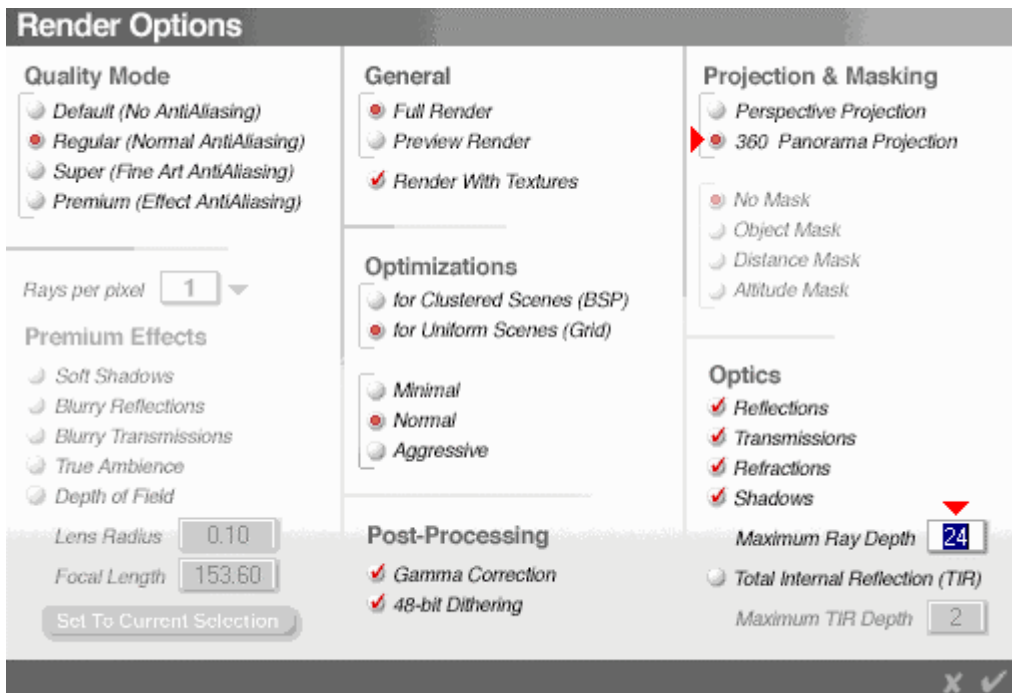


— After these introductory words, we start with the serious work. —

It does not matter where the camera is located. The settings shown position it in the middle. The important part is to tilt the Z-axis of the camera to 45° .



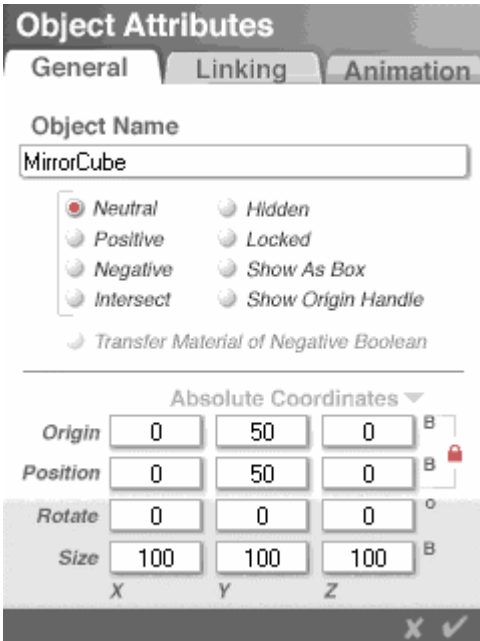
What we are going to do here, it should be rendered as a 360° panorama. The picture size does not matter. For this tutorial, we keep the default aspect ratio of 4 : 3.



A click on «Render Options...» (above) opens this window. «360° Panorama Projection» was selected already. Now, the «Maximum Ray Depth» is changed from the default 6 to 24. This parameter determines, how many times a ray is reflected when rendering the picture (mirror in mirror).



Create a cube.



The cube is enlarged and placed in such a way, that the camera will be in its centre. The numbers given assure this. Generally, you're free to resize the cube to your desires as long as the camera is kept in its centre.

The surfaces of the cube must be reflecting. In the Materials Lab the default grey is converted to a perfect mirror (next picture).



With these settings you get a perfect mirror.

Now, we create a sphere. Instead of getting the sphere from the «Create» menu, scale and place it by entering the appropriate values in the «Object Attributes» dialogue as we have done for the cube, we do a short cut that creates the sphere, scales it and places it at the desired position.

The cube is still selected. With the key combination [Ctrl][c] the cube is being copied into the clip board and with [Ctrl][v] inserted at the same position as the cube.



Move mouse to double sided arrow, press and hold left mouse key, move mouse to sphere and let go mouse key.

This transforms the copied cube into a sphere. The sphere is now selected and has the mirror material applied. This has to be changed now.

We will assemble the material for the sphere. This will get us acquainted with the Materials Lab, the Deep Texture Editor (DTE) — so many seem to dread — and the Textures Library.

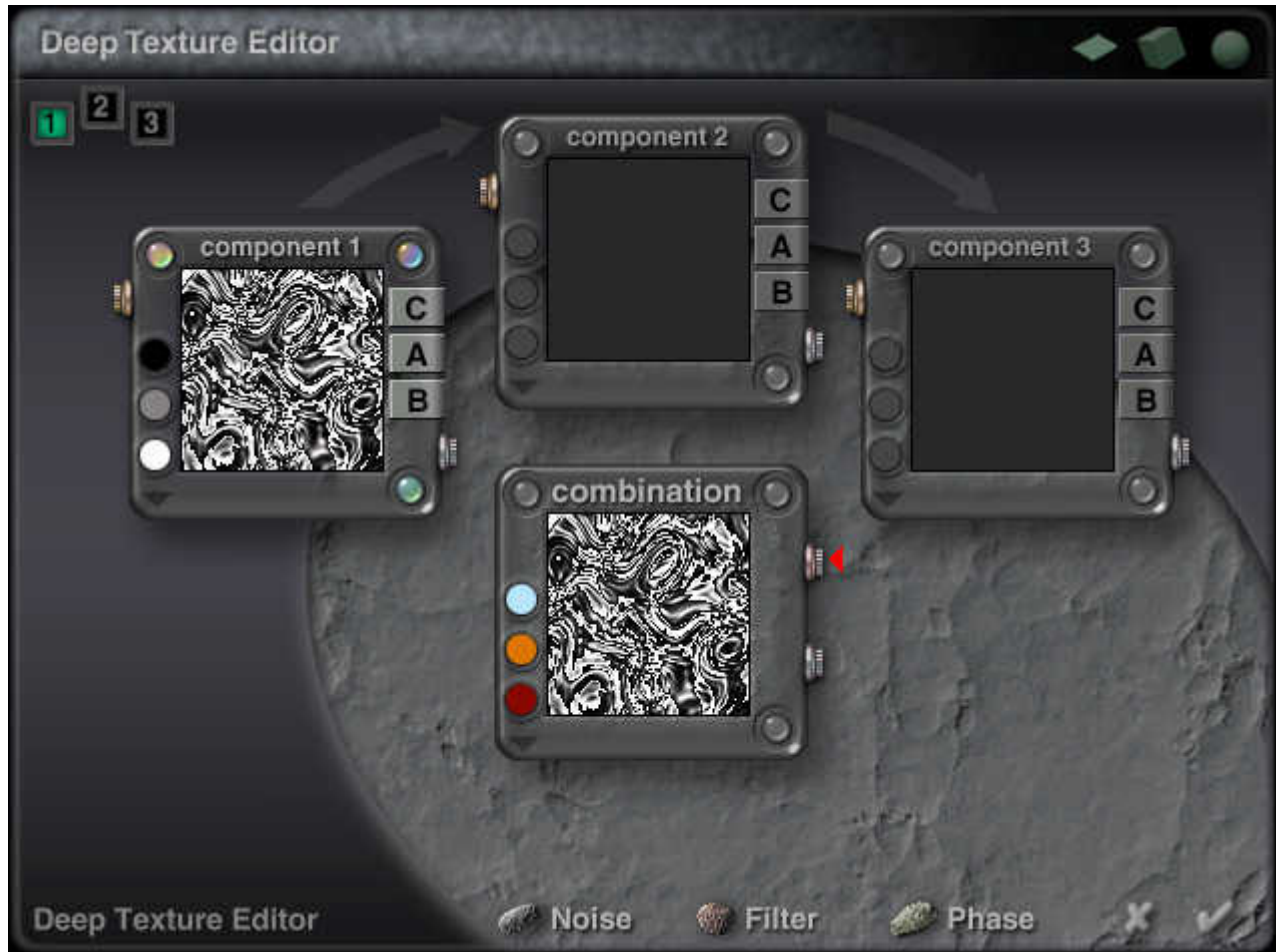


Click on **a** while you hold the [Ctrl] key in order to place the three knobs in a row. Three randomly selected textures will appear. To have both knobs set at **b**, the [Ctrl] key must be hold as well.

Click on the knob **1** at the lower right corner of each texture and select the co-ordinates system (space) from the drop down that opens. It doesn't matter at this point that the textures are not the

same as shown on the picture above. It does matter, however, that the co-ordinate system is set as shown in the picture (text left of the lower right button).

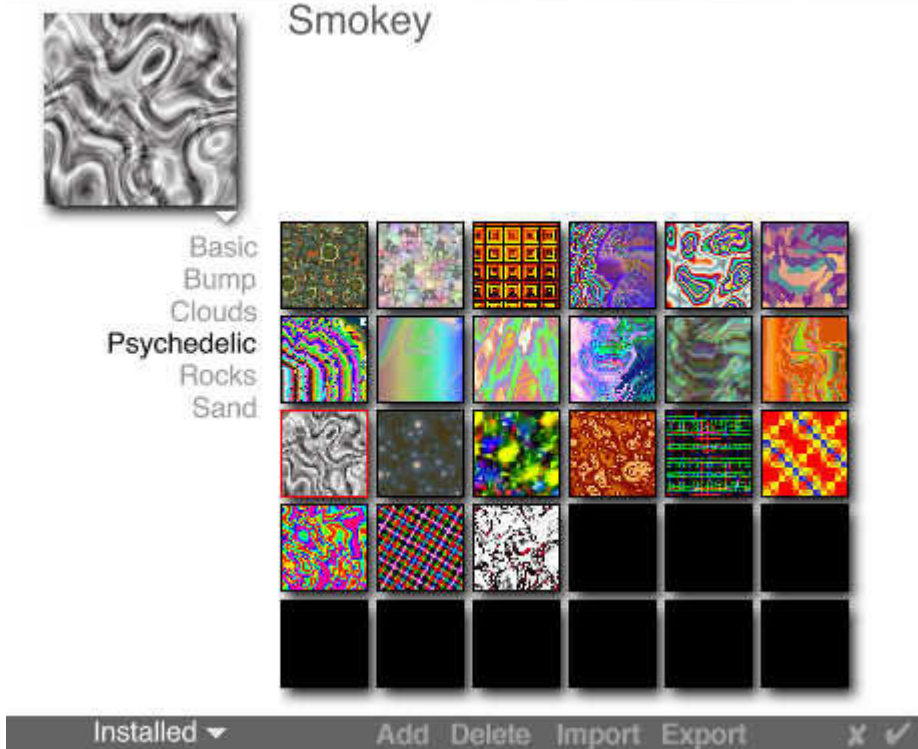
Click on the second knob on top left of the first texture **2** to open the DTE.



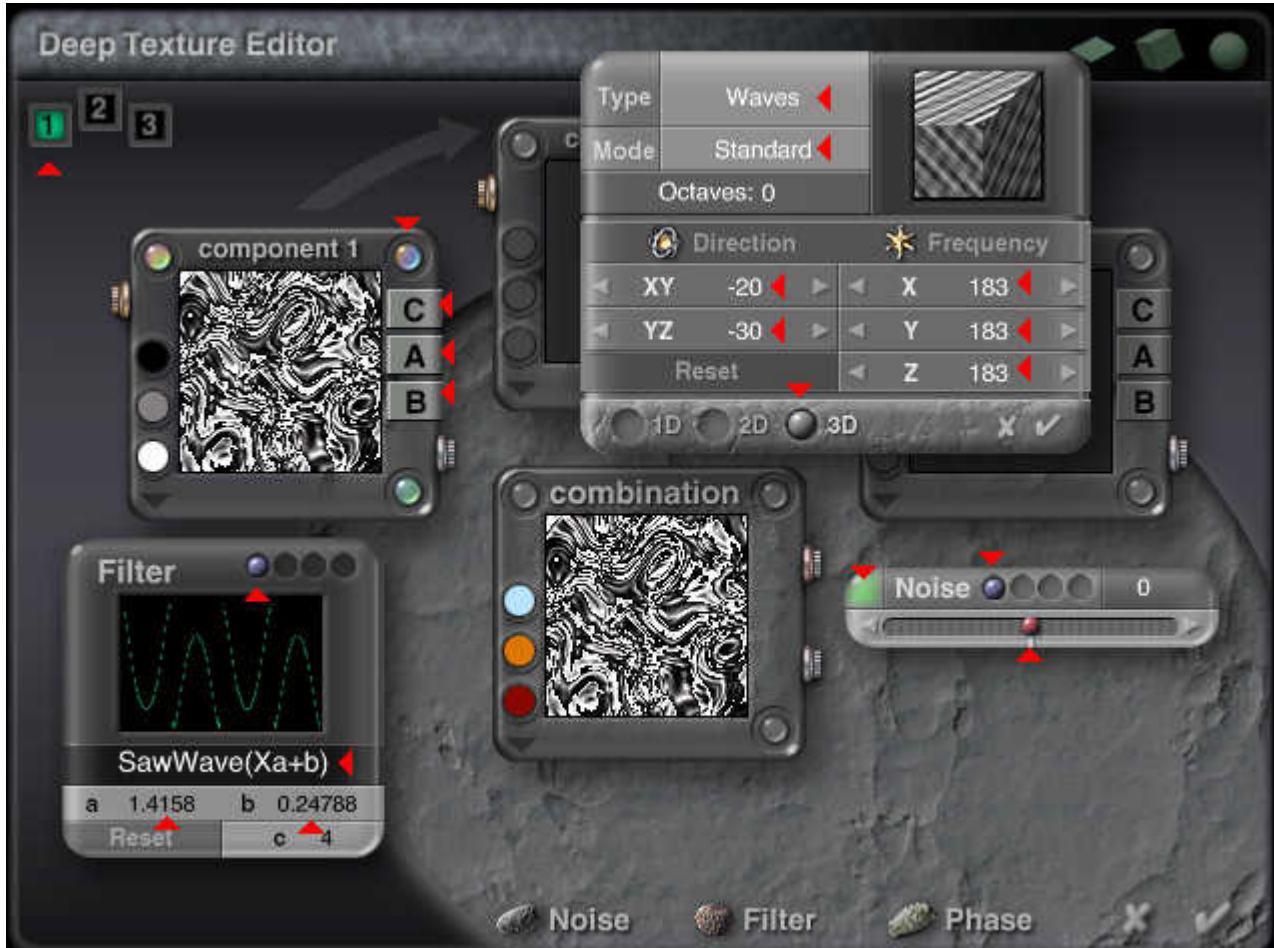
In the DTE, click on the upper right button of the Combination picture to open the Texture Library.
Note: At this time you will see a different picture.

Textures

Select «Smokey» from «Psychedelic» in the Textures Library and close it.



Set all parameters approximately to the indicated values



Of course, you may set the values and switches differently, if you wish. The first texture is now done.



Open the DTE for the second texture and from there the Texture Library. Select the texture shown.

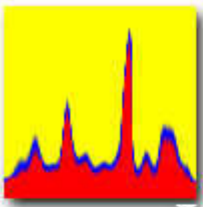
Set all parameters and switches approximately to the values shown.



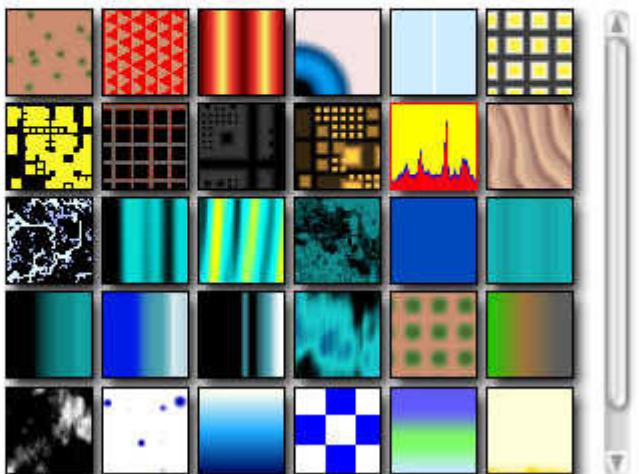
When all controls are set to the correct values and positions, the second texture is done.

Textures

Basic altitude



Basic
Bump
Clouds
Psychedelic
Rocks
Sand



Installed ▾

Add Delete Import Export



You might have guessed it: open the DTE for the third texture and from there the Texture Library. Select the texture shown.

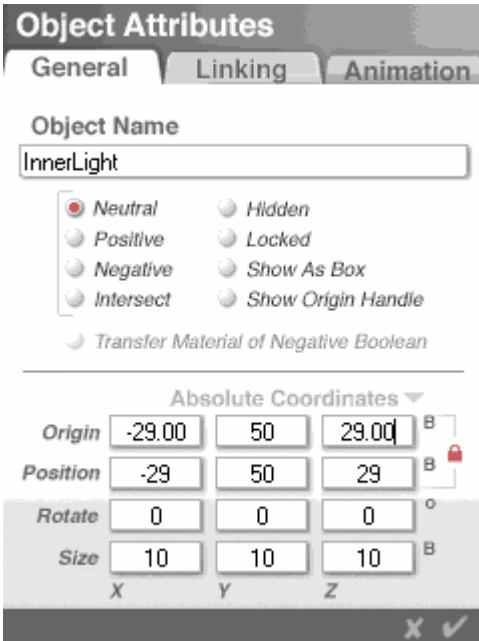
This texture is accepted without any tweaking and as soon as it is selected, quit the DTE.

This texture controls how the first and the second blend over depending on the height of the object they are applied to and how one texture takes over the surface from the other.

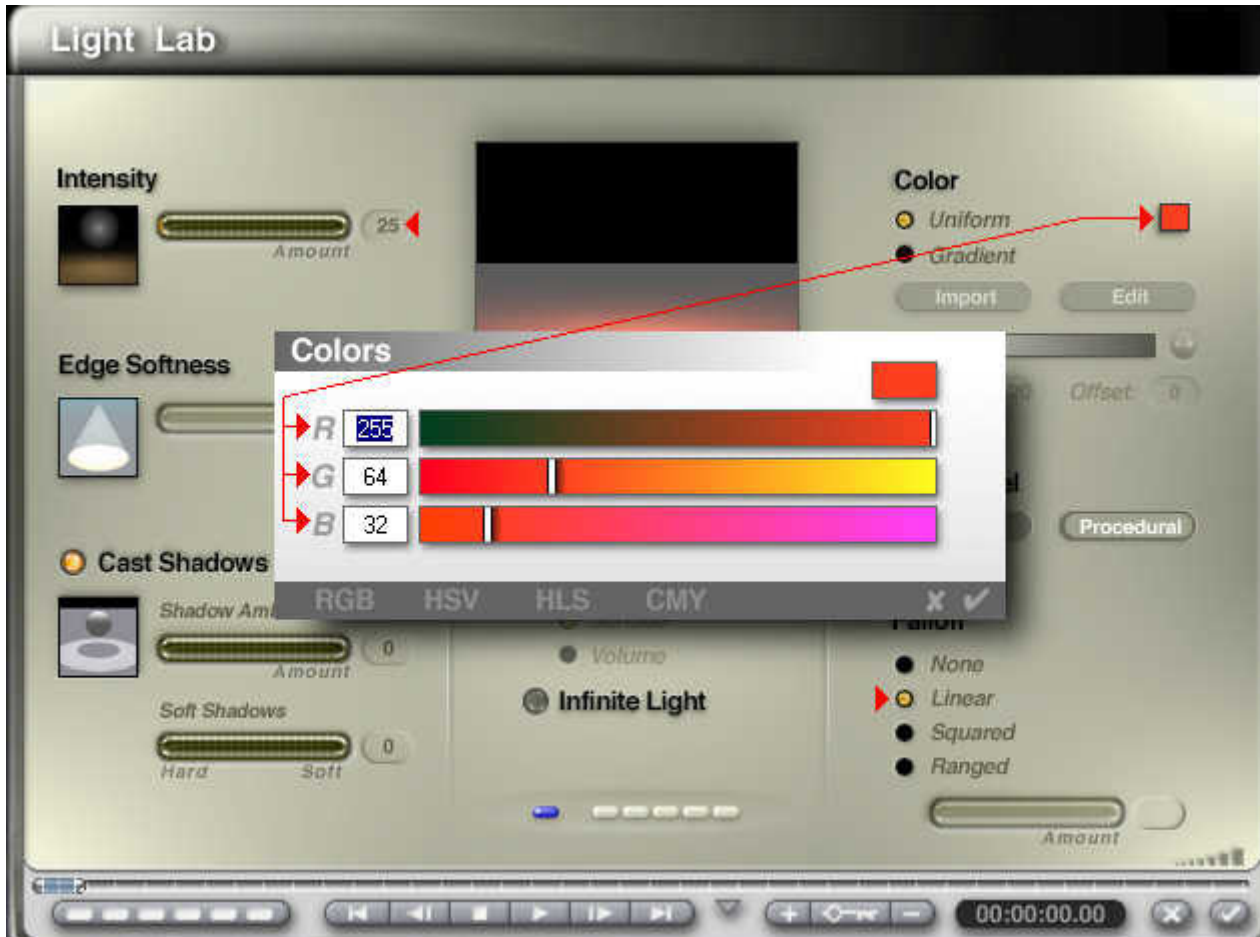
With this, the material for the sphere is complete and we can continue building up our scenery.



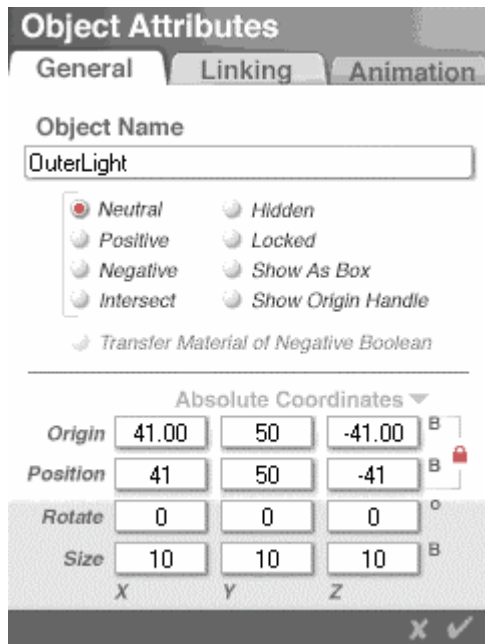
Now, create a Radial Light.



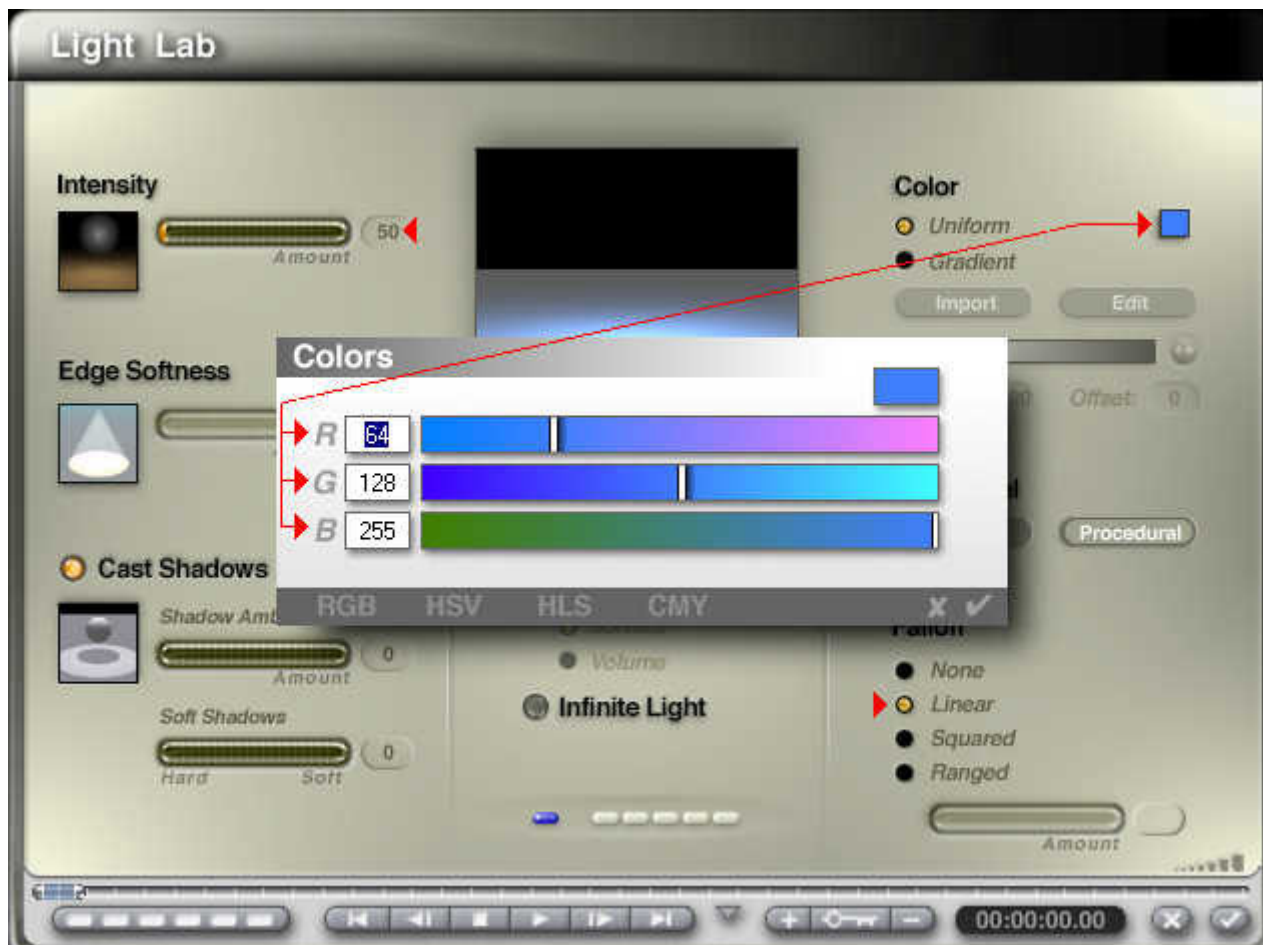
The Radial Light is set into the sphere. The picture from the Object Attributes dialogue shows how it has to be scaled and placed.



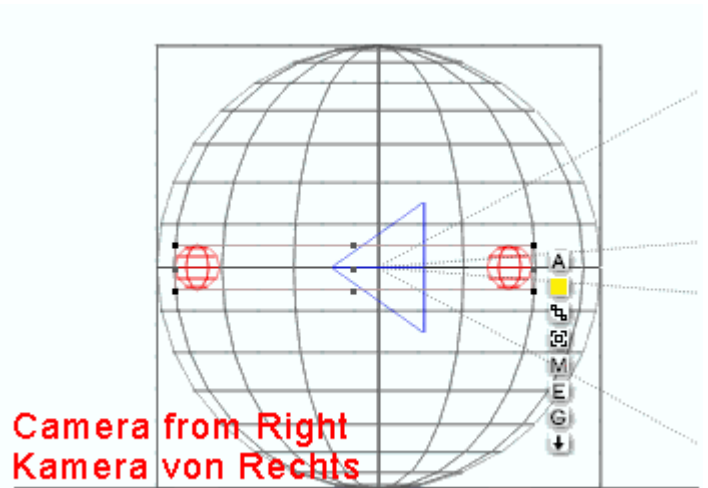
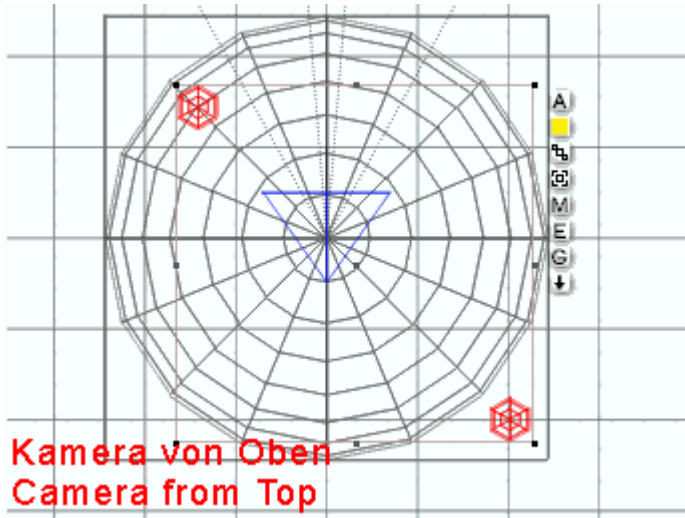
With the selected Radial Light, click on the **E** to open the Light Lab. Adjust Intensity to 25. Clicking on the colour field while holding down the [Ctrl] key opens the colour control dialogue. Adjust the colour for the Radial Light within the sphere as shown.



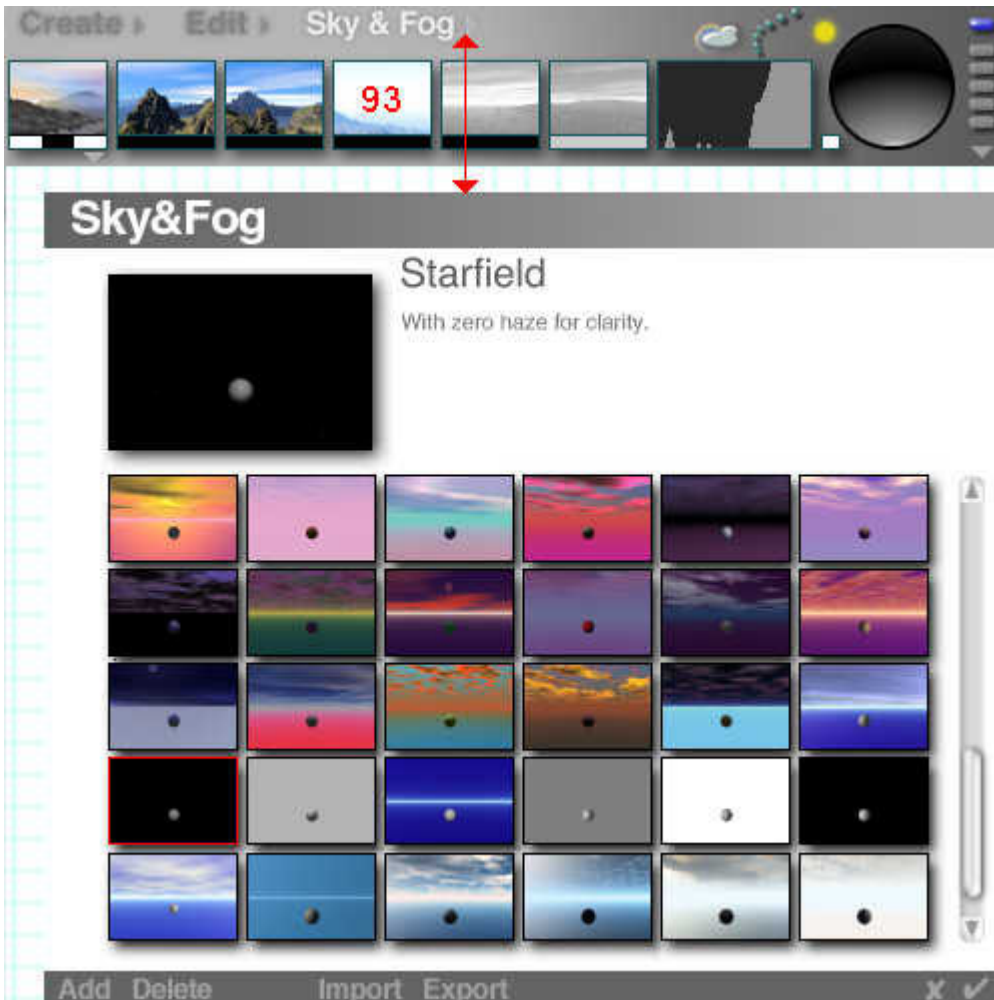
Create a second Radial Light. It will be positioned outside the sphere — but still inside the cube. The picture from the Object Attributes dialogue shows how it has got to be scaled and placed.



With the selected Radial Light, click on the **E** to open the Light Lab. Adjust Intensity to 50. and the colour for the Radial Light between the sphere and the cube as shown.



The scene we have built up looks as shown in the picture above. What is yet missing are some adjustments to the sky.



From the Sky Library, select «Starfield». Then, adjust the Haze by moving the mouse sideways in the picture while holding the left mouse key until the number 93 appears at the bottom left of the screen.

To adjust this value is a bit nit-picking. The influence of this parameter is very small with the size chosen for the objects. However, if you use objects with a much larger size, the effect becomes noticeable.



The picture at the beginning of this tutorial was rendered with the settings covered here. The ground plane reflects some blue light into the cube and sphere. If you move the ground plane lower or delete it, you will get the picture shown at left.

With the method shown, many different abstracts can be created within a few minutes. Rendering them takes quite a while, though. To render this picture in this very size used up more than a third of an hour already.

Idea: David Brinnen.
Tutorial: Hans-Rudolf Wernli.