

Corel Bryce 5

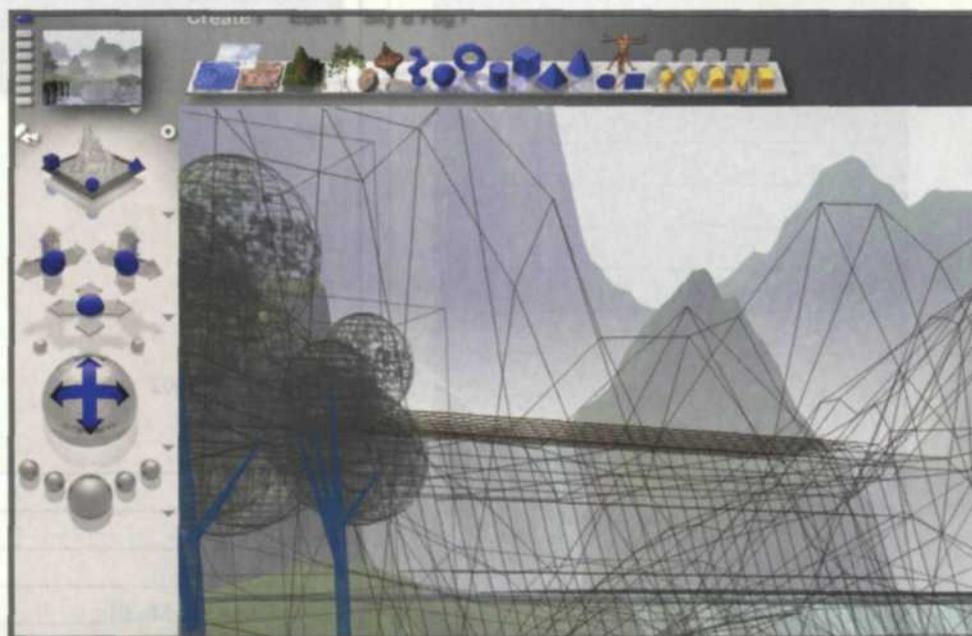
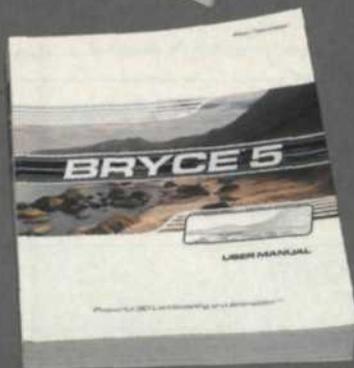
Create 3D worlds
from your 2D photos

by Jack and Sue Drafafl

Once a camera shutter is pressed, a moment in time is captured on a flat, two-dimensional piece of film. When you view the resulting photographic image, you can only see what the camera lens projected onto the film or digital camera CCD chip. You can load the image into your computer and try some editing tricks, but creative manipulation is limited to whatever was captured in time. Or is it? Bryce 5, from Corel Corporation, takes image manipulation to another level by combining the power of 3D editing with real-world 2D images.

To fully realize the potential of a 3D program, you first need to understand 2D. Two-dimensional programs use an x and y axis which yields an image that is flat, and lacks depth. Although many of the more powerful 2D programs give the appearance of 3D, in reality, they are still x y programs. Bryce goes a step or two further to give you two additional dimensions.

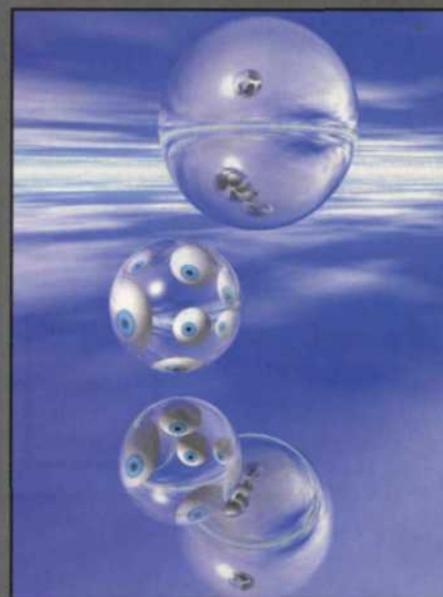
The third dimension is the z axis, which provides the 3D effect. Each object can be rotated, scaled, stretched, or moved within the scene. You can also construct objects from scratch by loading in basic shapes such as circles, cubes or cones and mixing them together to make some very complex and unique objects. It is even possible to coat the objects with hundreds of realistic materials such as metal, plastic, water, rock and mountain terrain.



Icons on left are for navigation, and icons on top are to create, edit, and manipulate 3D objects. Nano preview is in upper left.



Left: The skylab is used to create and adjust the components of the sky. The sun, moon, clouds, rainbows, stars, and comets can all be added and adjusted.



Right top: Image created with multiple spheres and material coating of eyes.
Right below: Spheres were coated with maps of earth and moon, and placed in scene with sun and stars.



The fourth dimension is time itself.

Objects in a scene can now be moved along a timeline, or moved within the scene to create the passage of time. You can move the camera along a path, move objects in the scene, or migrate the sun across the sky to achieve time travel. Wow!

When you first look at the Bryce editing screen, it looks pretty simple with just a few icons at the top and sides. What you don't realize is that the program is full of very powerful and sophisticated layered menus that allow you to create just about any type of photo you can imagine. We couldn't even begin to cover all the features here, so we'll look at groups of features and their general applications.

The Create menu allows you to import a wide variety of 3D objects like water, clouds, mountains, trees, rocks, 3D objects created in other programs, as well as your 2D photographic images.

This new version 5 features the Tree Lab for creating trees and controlling trunk size, frequency of branches or foliage. Also new to Bryce are Meatballs, or spheres that blend into each other to form innovative new shapes.

When each object is imported, it is represented by a wireframe image. If you want to see what it will look like in the final state, you simply render the image. You can also toggle the preview so that you can see either the wireframe, the rendered image, or both at the same time.

The Editing group of menus allows you to size, rotate, and coat the object with hundreds of different materials. Since you are working in three dimensions, you can move objects left, right, up, down, near or far. The effects are very realistic—glass refracts like glass and water reflects like water. The new Light Lab provides tools for creating realistic lights and shadows. If you have never worked in 3D before, it may take a little practice to get the hang of it, so don't be discouraged.

The Sky and Fog menu controls the environment in your scene and has adjustments for the sun, moon, planets, stars, fog, haze, volume lights, wind, or cloud control. There is a tendency to overuse



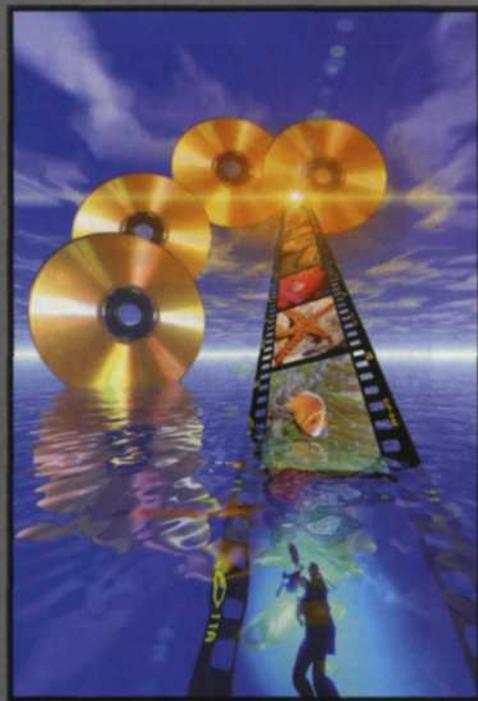
The images below were created by importing 2D images into Bryce. The surface of each object was then converted to 3D using the mountain editor.



Main edit screen in render mode.



2D image of leaf was imported and converted to 3D image using the mountain editor. Dew drops were created from spheres, flattened and changed to water with material editor.



Above: Book cover created in Bryce was used for Jack and Sue Drafahl's new book *Digital Imaging for the Underwater Photographer*. CDs and film were imported as 2D objects into scene.

these controls, so make sure you preview the image before you save to file.

The Navigation menus are located on the left side of the editing screen. As you edit, you have a small preview screen which features a very small fully rendered final image. The navigation controls allow you to view a scene from the top, side, front, back, and from the camera's point of view. You can zoom in and out with each view, and even save view positions for later review.

Each object in a scene can be edited directly by selecting the object, and then using a floating toolbox to edit the object. This toolbox allows you to size, rotate, coat, and position each object. You can combine objects to create one single object, or use one to subtract parts from the first. As an example, you can create crystal glassware, break it, and place the broken piece next to the cracked glass.

The Materials menu is one of the most creative aspects of the program. With this menu, you can import 2D pictures and layer them on 3D objects, or use them to create a new 3D object and then coat the object with the material. You can use the material editor to fine-tune preset Bryce materials, or import your own and edit them as new Bryce materials.

Up to now, we have been talking about 3D editing with Bryce. The program has a fourth dimension, or time. Once you have created your 3D scene, you can setup a specific

time frame, and move cameras or objects as time passes.

The Animation control menus are located at the bottom of the screen, and allow you to move from the beginning to the last frame in the wireframe mode to see the effect. You can even manipulate the position of the sun and clouds as the objects move throughout a scene.

Also new to Bryce 5 is Network Rendering. This allows multiple computers to share the job of rendering the final series of animation images or divide the task of rendering tiles in a single frame. Thanks, Corel, for this fabulous timesaving feature!

The challenge of 3D editing has become very popular so you will find that Bryce has a strong following on the Web—www.brycetech.com. The Bryce ring lists all Bryce sites, features samples, tutorials beyond the manual and even free downloads.

Although the world of 3D editing may seem very complicated at first, Bryce provides plenty of help. There are a series of tutorials on the second CD that provide step-by-step instructions on how to perform some of the more-difficult 3D image manipulations. Bryce 5 is available for Macintosh, Power Macintosh, Mac OS X and Windows 98, Windows 2000, or Windows NT (Service Pack 6 or higher) or Windows Me for \$299 or upgrade for \$149. Check out www.corel.com to learn more about Bryce 5 and other fine software programs from the Corel Corporation. ■