

# PHOTO LAB MANAGEMENT

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FLYING FONTS



# DIGITAL DIRECTIONS

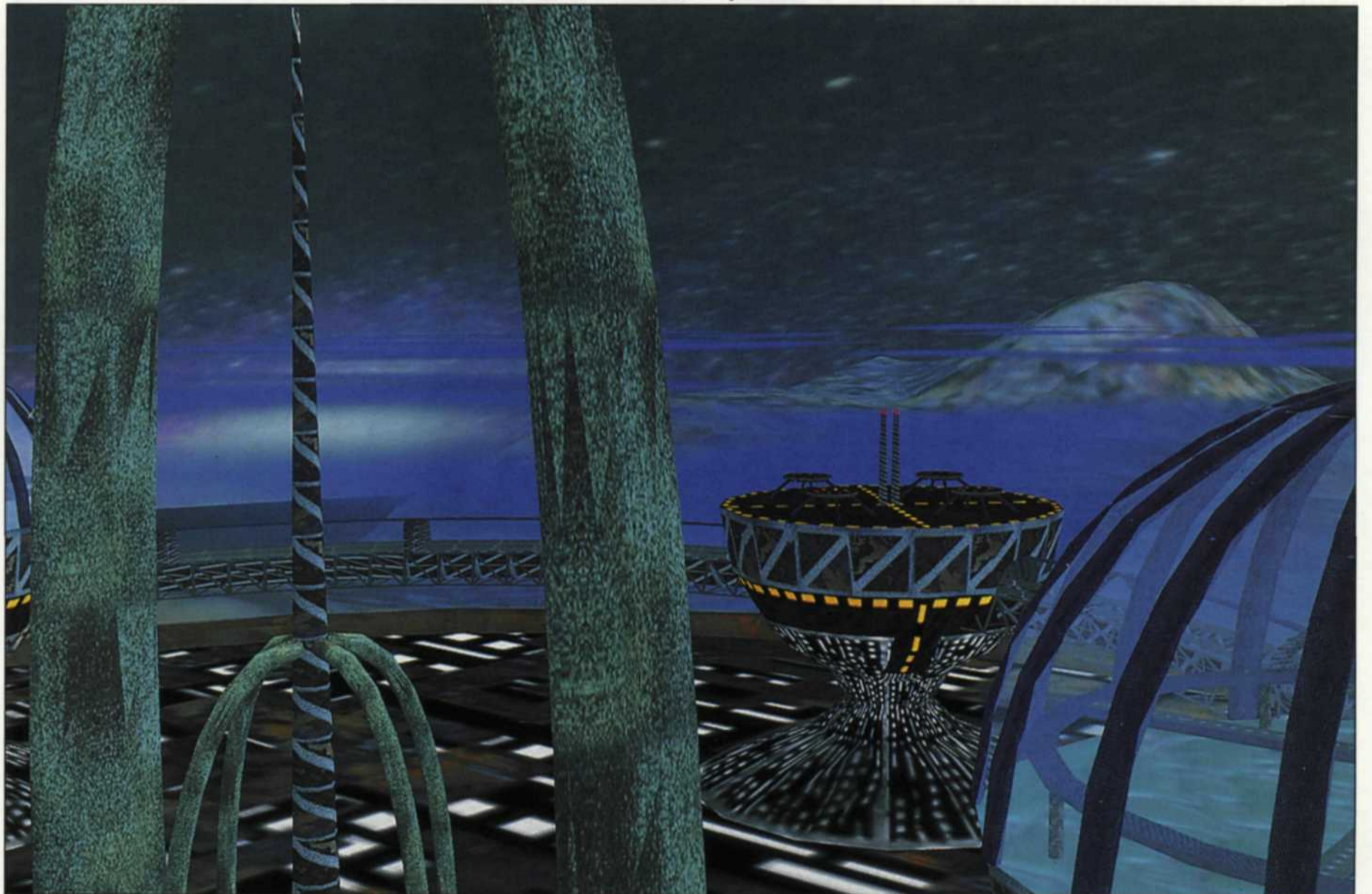


RayDream



Flying Fonts

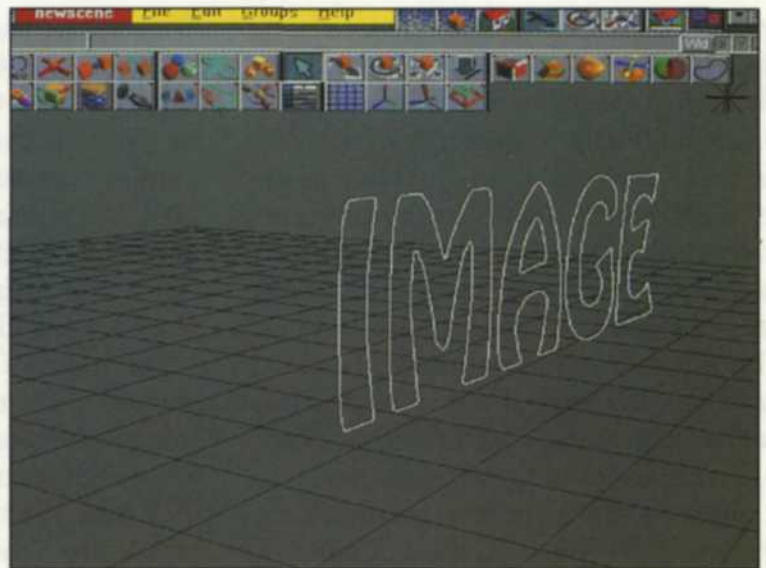
Visual Reality



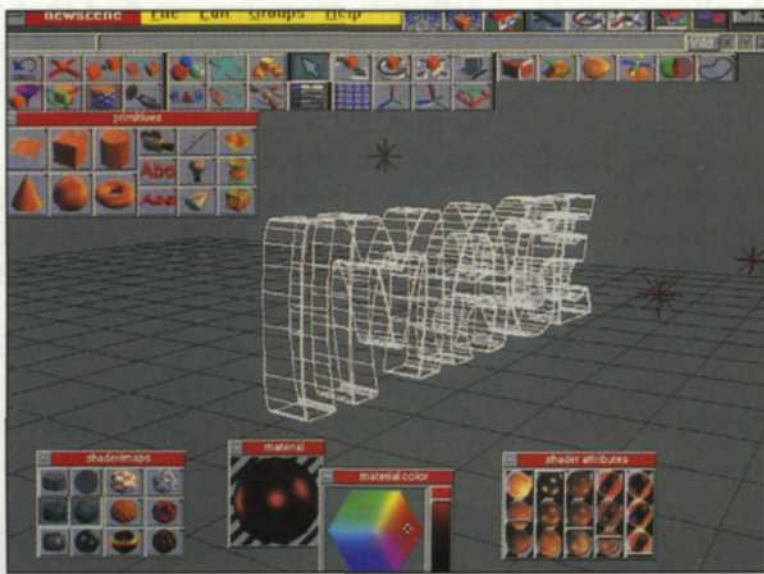
# 3D Digital Text Effects for Labs



Text typed into trueSpace edit screen



Text rotated



Text expanded into 3D



Color added to 3D text



trueSpace2

### Jack & Sue Drafahl

**I**N PREVIOUS articles, we have encouraged you to incorporate digital photography into the photo lab as an added service, not as a replacement for traditional

services. Well, there are some exceptions to that guideline! Digital photography is constantly improving, resulting in better image processing times, and it is becoming

more and more economical. Computer generated special effects used in text slides have been improved so much that they are actually replacing traditional methods in

many of the progressive photo labs.

Computer generated special effects slides have been around for years, but were limited to basic effects. When more complex effects were attempted on the older computers, they became time consuming and expensive. With today's faster computers and complex software, just about anything that *was* done in the traditional lab can now be done on the computer. In fact, many of the 3D text slides designed on computer are more cost-effective than those done in the traditional photo lab.

So, where did all these special effects programs come from? Actually, most of the 3D software programs today are molded after the text effects you see on your television screen. You know, the ones where you fly over the words, or the text revolves in space and then zooms pass you—the kind of effects that make you ask, "How did they do that?"

Before we look at these new and exciting 3D text programs, we need to back up and take a look at computer requirements. These programs are complex and need all the speed you can get out of your computer. In the PC world you will need a 486-66 or better to make your service cost effective.

We tried all the programs in this article on a 486-66, and they all worked. Some of the images had to be processed at night because of the lengthy time needed for image processing. We then tried a Pentium 100, and the imaging times dropped from hours to minutes. The speed of your computer will definitely factor into how much money you will make, since time is money.

For most of the applications we tried, we had to have 64 MB of RAM to keep the image processing restricted to memory. We did find an effect that required 90 MB of RAM. Fortunately, the software lets you know when you don't have enough RAM. It is also fortunate that the price of RAM in the last few months has taken drastic reductions, which allows you to have more memory for your buck.

The actual computer and RAM requirements that we recommend are more than the software manufacturer requires, but if you go with the minimum, your processing times will translate into lost dollars. Since the end product from these programs is a bitmap, you will need from 8-34 MB for each image, assuming you don't use image compression in your lab.

In preparation for this review, we visited

some large computer stores in our area, and then let our fingers do the walking through several computer magazines to see just what software packages seemed to be the latest and greatest. We narrowed our choice to four software programs that seemed to show up everywhere. We decided to give these programs a few assignments to see how they performed.

The first order of business was to study the technical manuals and then try a few tutorials. We found that the programs had many features in common. The main difference was in the presentation of the edit screen, and the additional features each program possessed.

If we look at the common features of the software programs, we find that they all allow you to type in text and select a wide variety of font types. At this point the text is in a 2D format, namely X and Y axis. You then extrude the text into the Z plane so that it now is 3D. From there you can rotate it on any or all of the X, Y, and Z axis. This enables you to look at the side, top, or bottom of the extruded text. The rotated text can be colored, or covered with a texture or bitmap. Lights are then added so that the text has a lighting ratio, shadows,

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and a photographic look.

If you plan to use the image in an animated sequence, you can add a path for the text to follow so that it can fly through the scene. The finished file is then rendered to a file for imaging on a film recorder or printer, or presented as an animation on the computer screen.

This all may sound pretty simple, but if you plan to jump right in and make 3D text slides as soon as you install the program, stop right there. We have found that since most people who work on computers have been working in 2D, it takes time to learn to work in a 3D environment. If you plan to use these programs in your lab, build in at least a full day of self-instruction before you turn someone loose with the program. It will be time well spent.

Following is a description of each of the four programs we used for this article. We will not compare the programs to each other, because each has a slightly different audience, application, and price range.

"Flying Fonts" from CrystalGraphics, Inc. is a 3D special effects program designed mainly for text manipulation. When you first start the program, a black screen is opened as the edit area. You select the text icon, and type the text directly on the screen. You can then change the font style, color, and any text attributes associated with that font. You can then select the extrusion or "bevel" button and pick one of 16 types of bevels and their extruded depths. When you select the rotate button, an X, Y, and Z axis appears on the text. To rotate the text, grab one of the letters, and move it. The text will follow your movement until you stop.

When you select the "materials" button, you will be presented with five submenus. Each submenu has 16 choices, each with several hundred variations. The main groups of materials include wood, marble, glass, metal, and effects. The first four groups mentioned add a color or texture to the text. "Effects" allows you to have light beams glowing from the text along with several other neat effects.

Different types of lights can be added to the scene, using the "light" button. Bare bulb or spotlights can be used to light the 3D text from different sides. You could light the front with a white spotlight and the top and one side with a red spotlight. A special viewer allows you to back off from the scene or to look down from the top so that alignment of the lights becomes easier.

Up to this point the text on the screen is in what is called a "wireframe" mode. This allows everything to be drawn on the

screen quickly in order to make fast changes. To see what the final image really looks like, you can select "render to screen," and a quick render of the image takes place. If you like the image, you would then set the final image size and resolution and render the image to file, usually a TIFF or TARGA file.

If you are creating a special effect for an AV presentation, or computer animation

sequence, you can select the "path" button, and a menu with 16 paths are presented. Combinations of paths can be used and individual letters can move independently in their own direction. When you render this image and path to disk, the program will ask you how many seconds you want the effect to last and how many images you want per second. For example, if your client has a six-

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projector-slide setup and wants a specific effect to last 4 seconds, you could type in 6 per second for 4 seconds for a total of 24 images. The program will then make 24 registered images in TIFF or TARGA format, ready to output to a film recorder.

*Ray Dream Designer* was recently acquired by Fractal Design Corporation. It comes in two basic versions: The full blown CD package contains the main 3D edit software, an animation program, a library of 3D images, and an extensions portfolio for cross platform 3D applications. A smaller version also comes with CorelDraw 6, and is used to enhance the Corel Vector/Raster illustration software package for Windows 95. *Ray Dream* not only does 3D text manipulation but also works with all kinds of 3D objects and 3D illustrations.

The text function is selected via an icon, and a subscreen appears. On this screen you can select bevel type, fonts and all its attributes, and depth of the extrusion. When this is done, the 3D text is placed on the main edit scene. The main edit screen is made up of a grid system for the X,Y, and Z axis. When the text is moved to this

edit screen, a low resolution render is made so that you can quickly make any necessary changes. You can rotate the text on the X,Y, and Z axis with the "rotate" button, and then add color or bitmap patterns with a menu called "shaders."

The "lights" function is very sophisticated and allows you control of the light's intensity, angle of coverage, distance of fall-off, and even adjustment to the edge of light beam. After each adjustment, you can do a quick render to see how you are doing. The final image size and type is selected and rendered to disk for final output to inkjet printer or film recorder. If the final destination is animation, click into the animation menu, and set up a path, number of images and how long the effect will take. Once all this is selected, this series of images can then be output to disk.

*trueSpace2*, from Caligari Corporation, is also a full blown 3D edit package that will edit text, objects, and 3D illustrations. The edit screen is a grid floor stretching out into the Z plane. Text edit is selected via one of the many dozen icons located around the edit screen. The extrusion of the text is done directly on the screen, using the

mouse and dragging the text to the desired length. You can then select the front or back of the extrusion and enlarge or reduce the front or back of the 3D text. You can select individual letters, or points on each letter, and edit a half dozen different line attributes. Lights and texture can be added with several different icons.

When you select a specific function via an icon, all related functions open as more icons. For example, if you select the lights function, icons for intensity, reflectance, refraction, bitmap patterns, falloff, and bevel accuracy all appear. If you select one of these icons, a submenu appears. When you add lights, views from 3/4, top, side, and bottom allow you to align the lights with the text.

The most impressive part of this program is all its bells and whistles that allow you to do anything to the text. When you press the "render" button, several choices become available. You can render to screen, render part of a scene, view in wireframe, or render in any resolution up to 8K resolution images (more than 128 MB). Once you have the text looking the way you like it, you can then



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add animation if you desire. Here you have two choices: You can have the text move in the scene, or you can move through the scene. You can fly toward the text and fly right through the hole in a letter and swing back around to your original position. A wireframe preview of the animation is available to save time on editing. Both still images and animation images can then be rendered to disk.


Visual Software's program, *Visual Reality*, offers an approach to the rendering steps that is a little different from the first three software programs. It uses the basic steps discussed earlier, but operates out of several module programs that copy data from one another during the process. For example, to create 3D text, you would start by opening the "Visual Font" utility. All the attributes of the 3D text would be made at this time, and then copied to the "Live Renderize" utility. Here the text would be rotated, texture added, illuminated with lights, and rendered to disk. If you need to add a 3D object to the scene, you would open "Object Designer" and it would be copied to "Live Renderize." If you want to use animation, you would then start up the

"Animation" utility and apply animation to any part of the scene.

The edit screens in "Renderize Live" are layered so that as you move through the various steps, the related edit screen will appear and then disappear when that step is done. These edit screens include: lights, objects, materials, backgrounds/bitmaps, and the overall 3D scene. The final image or animation is then rendered to several file formats. "Visual Catalog" is a small program that allows you to look at any or all part of a 3D scene. These parts can then be copied to any of the other programs for editing.

A smaller version of Visual Reality is called "Simply 3D Super Pack" and comes with two additional programs called "WinBlob and DoubleVision." This 3D program also has an interface with Corel-Draw, which allows images to transfer from one another.

We enjoyed working with all four programs, and only scratched the surface of what they can do. These programs are more complex than most graphics programs, and you may get frustrated at first. If you read the manuals, and try some of the tutorials, you're going to love

the results. It will definitely be worth the time invested to get them online. Once your lab has mastered them, you can offer a showpiece service that will make your lab look like a million bucks. Hopefully it will make that much for you too! 

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