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## cadalyst labs review

# StudioTools 11 & ImageStudio 1

Alias adds easy-to-use rendering tool to its industrial design line.

By Bill Fane



MANY CADALYST READERS WORK in the engineering or the drafting side of the business, where your primary interests lie in working out a detailed design solution and producing finished working drawings. You tend to use software such as Autodesk Inventor, AutoCAD, and SolidWorks. StudioTools is a product of Alias Systems (formerly Alias|Wavefront)—the folks who brought the dinosaurs to life in *Jurassic Park* and provided the core animation software for all three *Lord of the Rings* films. They happen to know a little bit about graphic software, as you might guess.

StudioTools is intended for industrial designers to use in a design studio, not for product engineers and drafters in an engineering office. I reviewed StudioTools 10 in the October 2002 *Cadalyst*, and the company recently released StudioTools 11 and a new companion product called ImageStudio.

As I pointed out in my earlier review, StudioTools includes a great many 2D and 3D sketching and design tools. A pencil-and-paper graphics artist would feel right at home with this software. You don't just set lineweight and draw a line, for example. Instead, you select a 2H, 4H, or HB pencil. When you use the software with a Wacom digitizer, the harder you press on the stylus, the darker the line. You can use your 2D sketches as the basis for producing 3D surface models. Sketching tools can also be used to quickly sketch details and project them onto 3D models before taking the time to model them.

StudioTools supports a wide range of import and export formats. For example, engineering can pass the models of internal components over to industrial design. Industrial design can then style the outer

### STUDIOTOOLS 11

#### Industrial Design

**star rating:** 5 stars out of 5  
**pros:** Powerful 2D conceptualization tools; excellent 3D surface modeling; available for several different operating systems.

**cons:** User interface not always 100% Windows because it works with other operating systems.

**price:** starts at \$7,500

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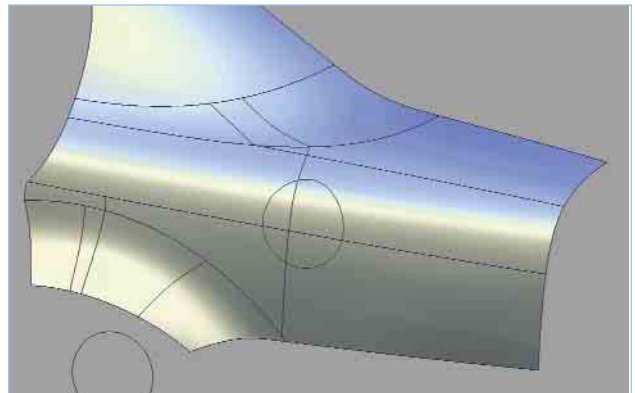


Figure 1. Start with a plain hole in a curved surface.

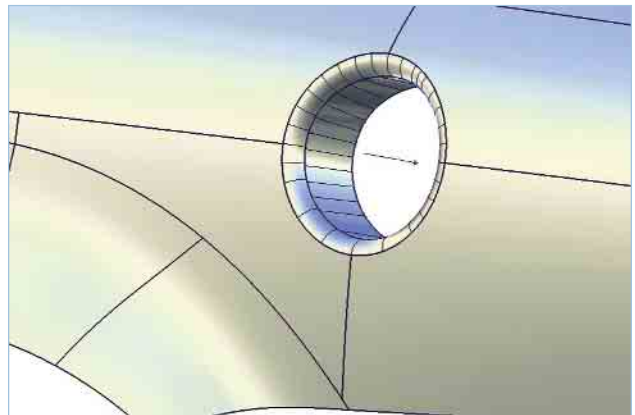


Figure 2. Then use a new feature in Alias Studio Tools 11 to add a tubular flange to the hole.



Figure 3. The tube flange feature puts a rolled edge on any surface.

casing and then pass it back to engineering for final production design of the casing parts.

## New Features

StudioTools 11 includes a number of new features. Operational enhancements affect capabilities such as object selection.

The major functional additions aid in detailing surface models. Figures 1 and 2 show how you can use a tube flange feature to put a radiused edge on an opening in a sheet-metal part and simultaneously extend it as a tube.

As usual in StudioTools, this is all associative. You can grab the hole with your mouse and drag it to a new location, and the rolled edge and flange update properly. This same tool is not limited to holes. You can put a rolled edge on any surface edge (figure 3).

Tubular Offset tools quickly and easily add realism to surface models. Figures 4–6 (p. 22) show how you can cut a section out of a surface and leave a gap that represents real-world edge gaps.

You can use this tool for things such as automotive door and window cutouts. In addition, it's used to represent parting lines, excellent for creating consumer products.

## Image Rendering Tools

StudioTools 11 includes a number of enhancements to image rendering, such as color balance and image deformation tools. With the color balance tools, you can play with the color applied to specific regions without negatively affecting other regions.

The image deformation tools let you drag the corners of a 2D image to deform it, perhaps to change or emphasize perspective effects. The colored regions follow along properly.

## Licensing

StudioTools is copy-protected. It runs from a network license manager, or you can license it to run with the serial number of a particular Ethernet network card. You can also license it to a hardware dongle if you want to take your office authorization home for the weekend.

You can order a training version

Figure 4 (right). Surface with the outline of another part.

Figure 5 (below). A tubular offset cut into the surface.



from [www.alias.com](http://www.alias.com) for \$20. This version isn't crippled, except that every file displays a watermark that says it can't be used for commercial purposes.

## Alias ImageStudio 1

Many software packages today can produce shaded and rendered images. Even generic AutoCAD is capable of some surprisingly powerful rendering effects (see "The Learning Curve," January and March 2002 ([www.cadalyst.com/solutions](http://www.cadalyst.com/solutions))). The downside is that power usually results in complexity.

Alias ImageStudio is created specifically to be a simple, quick-to-learn, but powerful rendering package. I watched the four one-minute tutorial movie clips and then played with the software for about half an hour. The result is shown in figure 7.

Why is Alias ImageStudio so quick to learn and easy to use? There are several reasons, and they revolve around preset conditions.

With rendering packages, beginners usually have the most trouble with lighting. The problem is not with the software—the problem is that setting up and configuring lighting is an art form in its own right. This is as true in the real world as it is in software. One of the finest examples in the world of lighting as an art form is Carlsbad Cavern in New Mexico. The lighting system was designed by a top Hollywood set-lighting expert, and it shows.

To assist beginners, Alias ImageStudio predefines a number of lighting and background setups. This soft-

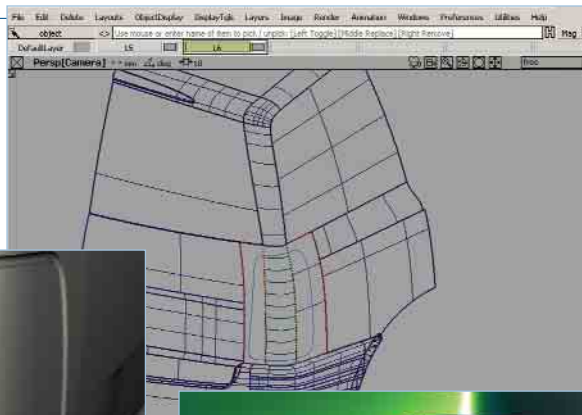


Figure 6. The cutout part with a realistic edge gap.

ware is aimed at industrial designers, so the setups are typical of what would be used in a photo studio when shooting consumer products. They don't include subtleties such as latitude, longitude, time, and date sunlight setups that an architect would use, but they do allow a beginner to produce professional-looking renderings of items such as computer mice, coffee makers, hair dryers, and cars.

You can customize the setups, but the supplied ones get you well on your way. For figure 7, I used a stock setup with a provision to attach an image as the background.

Alias ImageStudio also includes an asset library of color, material, and texture definitions. The menu separates them into categories such as wood, plastic, glass, rubber (including tire tread), and automotive paint. You can easily modify them to change properties such as color, brightness, reflectance, and refraction.

Automotive paint is an interesting category. There are two sets of customizable parameters—one set for the base coat and one for the clear coat. You can paint your car pretty much any way you want. Alias ImageStudio works with StudioTools. The latter product has a full range of extremely powerful rendering and visualization tools, including full animations, but they can be intimidating

to occasional users. Alias ImageStudio is designed to provide a quick and simple solution that covers most rendering needs.

Alias ImageStudio opens StudioTools files directly and retains their layers and component structures. You can then apply rendering properties to everything on specified layers, to entire model objects, or to sub-features within a model. Why have a plain old mouse when you can have the one in figure 8?

You can import additional objects into your current scene to build up more complex pictures. In addition, the files are associative. If you change the design in StudioTools, you don't need to re-specify everything in Alias ImageStudio. Simply click the Reload button, and the scene shows the new geometry.

The only other file formats supported by Alias ImageStudio are Maya (Alias' high-end animation and special-effect software) and IGES, but this is not really an issue. It opens StudioTools files, and StudioTools in turn supports a great many file formats.

The propeller used in figure 7 was created with Autodesk Inventor and then exported in STEP format. I opened the STEP file in StudioTools and saved it in StudioTools' native wire format, which I then opened in Alias ImageStudio. This process also

**Figure 7. A rendering I easily created with Alias ImageStudio. The wild man in the background is yours truly.**



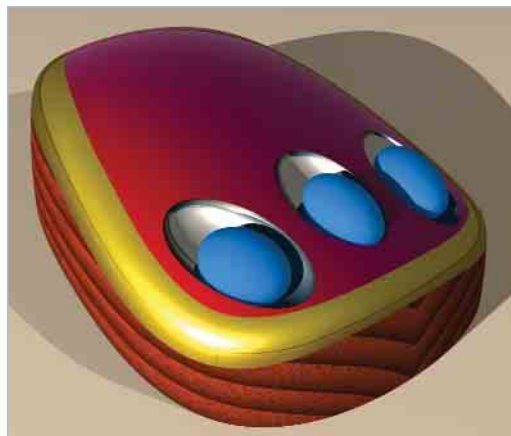
helped to show the compatibility with other formats.

### See as You Go

Alias ImageStudio normally operates in a shaded mode, which gives you a quick idea of what is going on. As you experiment with different settings, you can switch to a quick test render mode to see how things look. When everything looks right, you can then do a slower final render.

Like all renderers, Alias ImageStudio must do a lot of number crunching, so the words quick and slow are relative. A quick test render can take several minutes even for a moderately simple scene, whereas a slower final render of a complex scene can take hours.

Alias ImageStudio has a function that can speed rendering time. Normally when you perform a rendering, the program is dedicated to that one rendering operation and isn't available for other work. With this program, you can delegate rendering operations to a rendering queue. It asks you for a filename, a start time, and your login name and password. You can then go home for the weekend. At the appointed time, RENDERQUEUE.EXE logs itself in, performs the specified renderings, and logs out. You can also tell the render queue to start now, and it quietly churns away in the background, free-



**Figure 8. Alias ImageStudio lets you apply different finishes to different regions of a rendering.**

ing up the program for other work.

### ID Tools

StudioTools 11 and Alias ImageStudio 1 should be of great interest to any industrial design studio because of their 2D, 3D, and rendering capabilities. They should also be of interest to the engineering office because of their abilities to handle many file formats. **Highly Recommended.** ■

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## ALIAS IMAGESTUDIO

### Renderer

**star rating:** 5 stars out of 5  
**pros:** Compared with most renderers, relatively simple for beginners.

**cons:** Input file format limited to StudioTools, Maya, and IGES.

**price:** \$3,999

**Alias**  
800.447.2542  
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