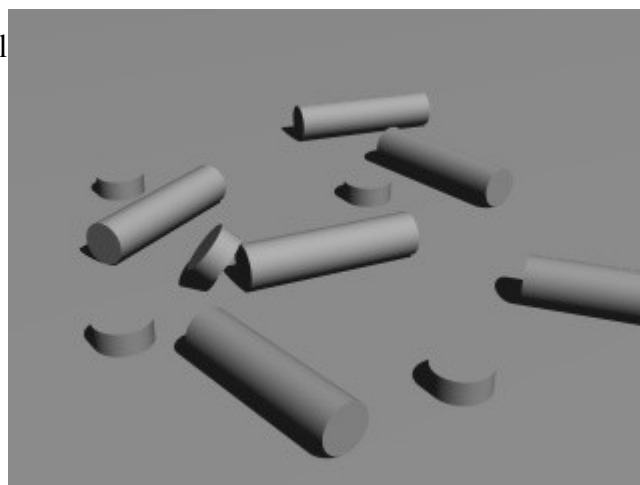


4 tips to improve a simple POV-Ray scene

by Warp (<http://warp.povusers.org/povtips/>)

I have developed during the years certain simple little tricks which I often use to enhance the visual quality of simple images like the one on the right when rendering with POV-Ray. While these tricks are in no way innovative or revolutionary, knowing them is a good way to enhance your images.

In the image on the right there's simply a plane as a floor and some simple objects. Its source code can be viewed [here](#). The objective of this little tutorial is to greatly enhance the visual quality of this simple scene without changing the shape of these objects nor adding any new objects, just using the ones that are there already.

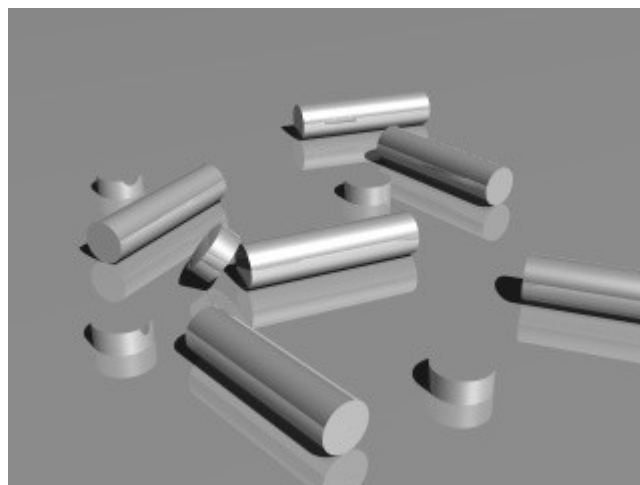


Tip 1: Textures

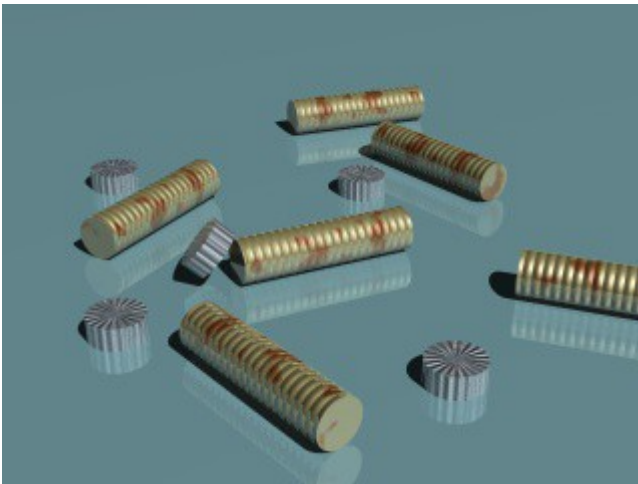
Perhaps the most important part of any scene is the texturing of the objects. You can have the most complex and carefully designed objects in your scenes, but if their textures look bad, the entire image will look bad. On the other hand, carefully created textures can make even the simplest objects look considerably better.

Here are some tips for the texturing:

- Unless your object is a polished smooth object, always try to develop an interesting `normal` definition for it. Normal perturbation, when used right, greatly enhances the looks of the object because it introduces fine details to it.
- If you use normal perturbation, seriously consider developing a good `slope_map` for it. Slope maps can be used to greatly enhance the quality of normal perturbation.
- Always use a `finish` block, even with very matte textures. Objects without a finish tend to look very dull and boring. Finish elements can make dull surfaces look vivid and lively.



The image on the right demonstrates the last point in the above list. Just by adding a simple finish (specular highlights, reflection) to the objects makes them already look a lot better than the original.



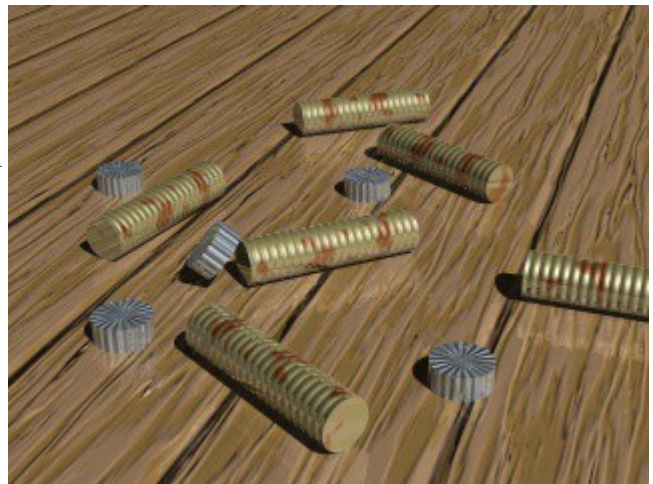
In the image on the left a pigment and normal block has been added to the objects. Neither of them is very complicated, but even simple ones like these add a lot to the image.

As seen in the image, it's not always necessary to add new geometry to the objects in order to add details to them. Sometimes just using a clever normal block can make the objects look more complex than they really are. Even though the objects seem to have ridges, they still are just simple cylinders, as in the original images above.

The modified scene file can be seen [here](#).

Flat-colored or textured floor?

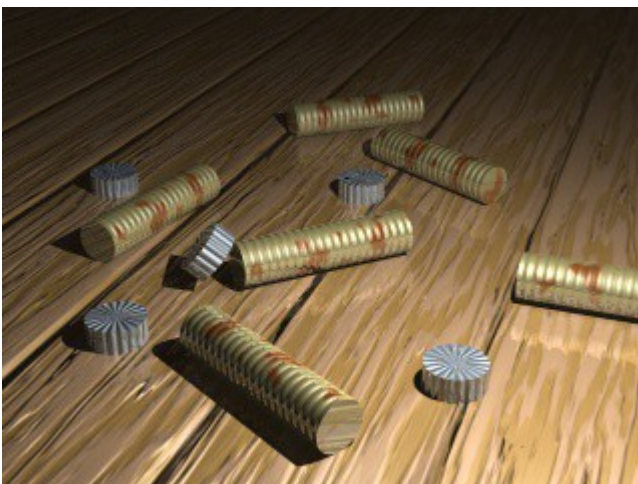
In the previous example a flat-colored floor was used. Another alternative is to create an elaborated texture for the floor, as in the image on the right. Which one is more suited for the image in question depends. A rich floor texture like this one adds a lot of detail to the image, visual noise so to speak, and this slightly robs attention from the objects themselves. A flat-colored floor enhances the objects. In the end, which one is better depends on the author's artistical eye.



Notice how the floor now seems to be composed of wooden planks, even though it's still just a plane and nothing more. Another cool trick that can be achieved with normal perturbation.

The scene with the enhanced floor can be seen [here](#).

Tip 2: Enhancing the lighting



There's a very simple but great trick to considerably enhance the lighting of a simple scene like this one: Put the light source close to the scene and make it a fading light. Always use fade power 2 for this. The impacting effect of this simple trick can be seen in the image on the right.

The idea is simple, but the results are surprisingly effective. Just the location of the light source makes the scale of the scene change in appearance.



And of course the second great trick and mandatory enhancement for such a closeup light source is to make it an area light, as seen in the image on the right. Just the change in the shadows makes the light source feel to have a volume, it makes it more tangible.

The scene with the enhanced lighting can be seen [here](#).

Tip 3: Try several light sources

One thing to try is to use multiple light sources. These should usually be colored differently from the main light, and perhaps be slightly dimmer. They should also usually be quite close to the scene and fading area lights.

One cool effect can be achieved by putting one of the light sources as a backlight so that it causes a strong specular highlight on the floor. The finish of the floor should be fine-tuned to enhance this highlight.

Using several light sources also kind of replaces the need to use radiosity to enhance the scene. Radiosity is quite hard to get looking right, and usually needs additional scenery around in order to have any significant effect. Using multiple light sources instead is often a good alternative.



The scene with two more light sources can be seen [here](#).



Tip 4: Focal blur

Focal blur makes the scene look like it has been photographed with a macro lens, which is often

a rather cool effect which enhances realism. In this kind of image it makes the scene look small-scale, photographed from close distance.

The final scene can be seen [here](#).

And a final, bigger rendering of the scene:

