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How to quickly render a photo real image

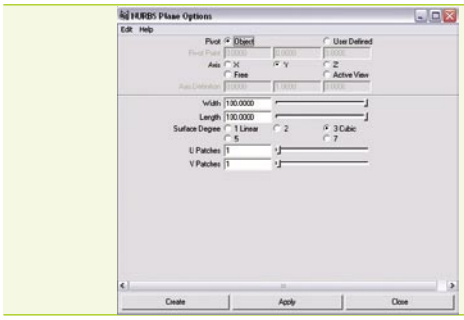
In this tutorial, I'll show the reader how to use RenderMan's global illumination techniques to create highly realistic lighting with minimal setup. Keep in mind… copy. You can achieve drastically different looks by simply rotating the RenderMan Environment Light and trying different HDR images. You can also try changing the Environment Light Shadowing attributes to Color bleeding and experimenting with different shadow bias, gain and light intensity. I ve used tools: Maya and RenderMan for Maya. Support Gear: BOXX Technologies 7400 Dual Opteron Model 270, 4GB Ram, NVIDIA Quadro FX 1400, Windows XP Professional x64 Edition.

Step 1

The acronym HDRI stands for *High Dynamic Range Image*. There are many commercial sources to purchase all types of High Dynamic Range Images. However there are a few free ones floating around the net. A great place to learn more about HDRI is Paul Debevec's site and he has several HDRI images available for download. Go to *http://www.debevec.org/Probes/* and download a few of the Light Probe Images in the *.hdr format*.

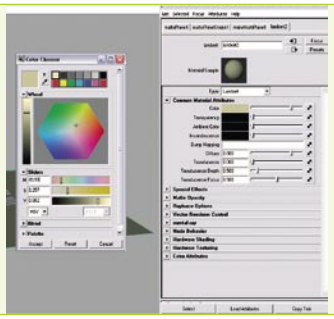
Step 2

Open the Plug-in Manager: *Window>Settings|Preferences>Plug-in* Manager and Find the RenderMan for Maya plug-in. Check *loaded*. This will load RenderMan for Maya. Close the Plug-in Manager and Click *Window>Rendering Editors>Render Settings*. *Chose RenderMan* from the *Render Using* drop down menu. Choose a resolution of 640 X 712 and under render options uncheck *Enable Default Light.*



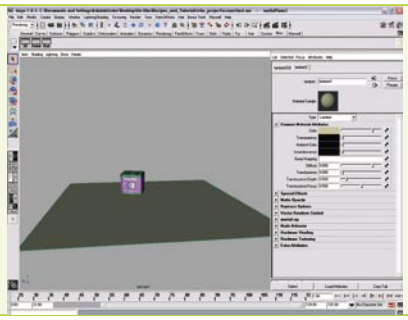
Step 3

Create a ground plane, click *Create>NURBS Primitives>Plane Options Box*. Set the Axis to Y and 100 for both the Width and Length and click create. Select the NURBS plane and choose *Lighting|Shading>Assign New Material>Lambert*.



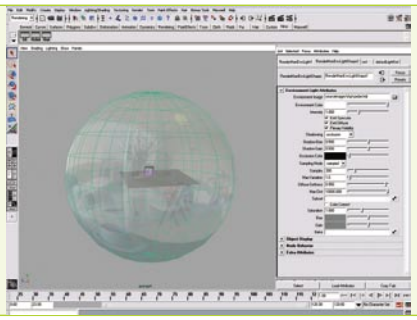
Step 4

Click on the color box and choose a tan color as shown.



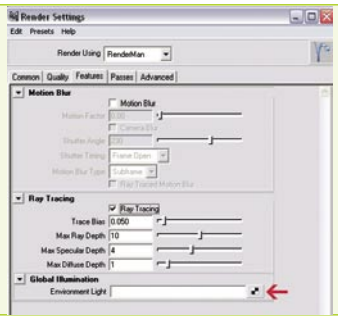
Step 5

Import your model or create a primitive shape and assign a Blinn material to it. Use the keyboard shortcut 6 to display the smooth shaded view.



Step 8

In the Environment Light Attributes click on the folder icon next to Environment Image and choose one of the HDR images you downloaded, I am using the Apt-probe.hdr image for my render. Change the sampling mode from filtered to sampled, increase the number of samples from 64 to 300 and the max variation from 10 to 1. Now we can see that a RenderMan Environment Light has been added to the Maya scene. The RenderMan Env Light is a master control to anything related to Global Illumination in RenderMan for Maya.

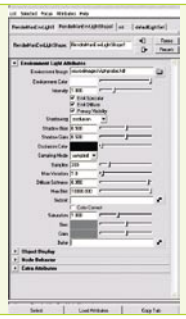


Step 6

Setup your Render Global settings and create a RenderMan Env Light.

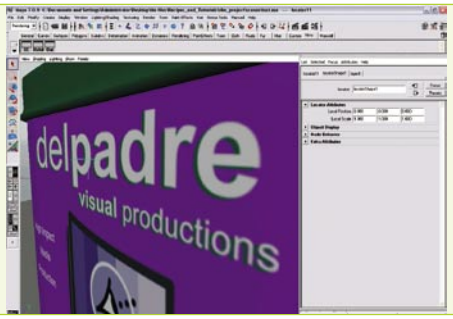
Step 9

Frame your shot and enable Depth of Field. Now select *View>Camera Settings>Resolution Gate*. This will assist you in positioning the camera. Move the camera to frame your shot. Depth of field is the amount of distance between the nearest and farthest objects that appear in acceptably sharp focus in a photograph and is one of the more important elements in making CG images look Photoreal.



Step 7

Open the render Globals and in the Common tab and Switch to the *Features* tab and Enable the *Ray Tracing* check box. Click on the motion blur check box and change the motion factor to 0 then, uncheck the Motion Blur box. Change the trace Bias to *.050* and change the Max Specular Depth to 4. Under *Global Illumination* create an *Environment Light*.

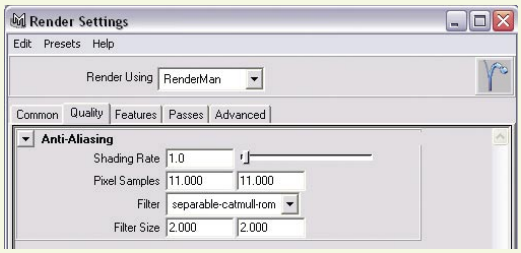


Step 10

One of RenderMan's many strengths is its high quality Depth of field. So let's create a locator to use as our focal point as we will be using a shallow depth of field. Go to *Create>Locator and position* in the area you want to be in focus. In this case I want the words Del Padre to be the focus point. Lets turn on *Display>Heads Up Display>Object Details*. Now Select your locator and make note of its distance from Camera in my case it has a value of 35.661.

Step 11

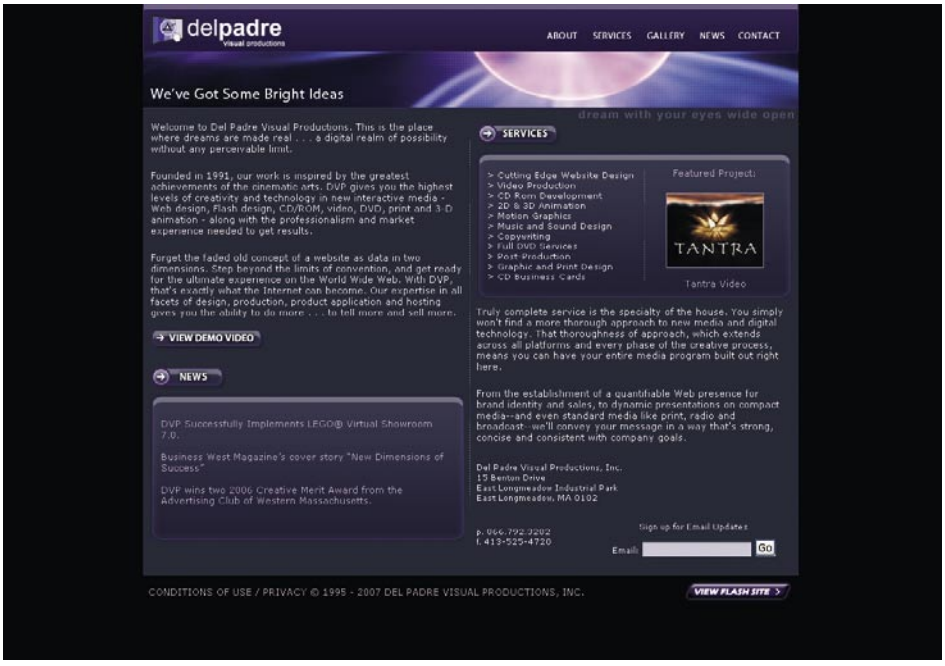
Now enable Depth Of Field, chose *View>Select Camera* and expand the arrow next to Depth of field and click the check-box, in the focus distance we will use our locators distance from camera 35.661 leave the F Stop at 5 and leave the focus scale at 1.



Set 12

Set the Render Quality. For RenderMan, Pixel Samples is the most important quality setting for depth of field. We can increase Pixel Samples by opening the Render Globals and selecting the Quality tab. Increase the Pixel Samples to 11x11 (which will cause RenderMan to sample each pixel many more times). Shading Rate is the main global quality control for Pixar's RenderMan. Set the shading rate to 1, a typical Shading Rate for final rendering. Choose *Render>Render Current Frame and wait.*

About Agency

Nino Del Padre is the President and Founder of Del Padre Visual Productions, Inc. Founded in 1991, DVP's work is inspired by the greatest achievements of the cinematic arts. Specializing in Flash website design, HD video production, motion graphics, 3-D animation and interactive CD-ROM applications for a myriad of companies including LEGO America, BAE Systems, NASA, and many others, DVP's work has earned extensive industry acclaim.

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