DOWNLOAD PDF LIGHTWAVE V9 LIGHTING (WORDWARE GAME AND GRAPHICS LIBRARY)

Chapter 1 : Nicholas Boughen | LibraryThing

*LIGHTWAVE V9 LIGHTING (W/CD) (Wordware Game and Graphics Library) [Nicholas Boughen] on theinnatdunvilla.com *FREE* shipping on qualifying offers. Companion CD included with day demo of LightWave v9! The process of creating accurate and pleasing lighting in CG environments demands both an understanding of the fundamentals of light and knowledge of.*

In my latest feature project, I employed expressions to make the light cone angle automatically change to keep the light cone just large enough to cover the CG element. This way, when the lights were moved to set up a scene, the artist did not have to go through every light to optimize the cone angle. It was done automatically. Fill lights are so-named because they fill in the spaces where the key light does not illuminate. When there is sunlight in the sky or moonlight for that matter , the most readily available fill light source is usually the sky. During the daytime, this often means a bright blue sky. The main thing to understand about skylight is that it is, by nature, omnidirectional and soft. In other words, the shadows, if any, are very soft. This is because the entire sky is one big illumination source, so you have light approaching from all directions, wrapping around objects and causing very soft, sometimes imperceptible shadows. Using Ambient Intensity By far the easiest, cheapest method of creating any fill light is by throw - ing in a little ambient intensity. Ambient intensity is something that only exists in the CG world. LightWave just adds whatever percentage of illumination you choose to every surface in the scene. The net effect of high ambient intensity is that objects tend to look flat and fake. The problem, of course, is that since ambient intensity has no shadow provi- sion, it does not produce the soft shadows with which skylight is associated. It is subtle but provides some illumination in areas that were otherwise black and completely unlit. This low-level ambient intensity suggests that there is another light source somewhere without providing any clues such as shadows and therefore directionality to its position. Once again, this is a cheap, inaccurate solution, but it can work, especially in shots with a great deal of motion blur. But where ambient intensity is omnidirectional with no source, this option allows you to define the posi - tion and direction of the light source. The benefit to this over ambient intensity is that object self-shadowing still creates shadows on the polygons facing away from the light source. This technique is lightning fast because there are no shadows for the new fill light to trace, but a nice fill illumination is added, brightening up the darker areas of the floor and adding some intensity to the top of the object. Of course, since the distant light is directional, it is only illuminating sur - faces that are facing it. The underside of the object remains unlit. Also, to be really accurate, there would be soft shadows beneath the object. But because the distant light has its shadows turned off, there will be no shadows beneath the object. Remember, there is only one sun in the sky at any given time on this planet in the current eon. You can use any light type you choose for this very simple and quick option. Point lights, spotlights, even area lights â€” they all work pretty much the same with shadows off. The only thing that changes is the direction that the light beams go. Linear and area lights act like arrays of point lights. Fid - dle with them if you wish. They all work for this trick. Using an Area Light Before global illumination came along, using an area light for a skylight fill was the only way to get a really accurate-looking soft shadow. All those techniques go some distance in creating the look by cheating, faking, and working around technology limitations, but, in my opinion, none of them quite reach it. Area lights have long been my lighting tool of choice for just about everything. Smaller area lights render very quickly, and you can also change the quality setting to improve render times. If you want to get really tricky, and you are lucky enough to have G2 from Worley Labs, you can improve area light quality by improving the settings within G2. G2 uses its own rendering engine to calculate area light shadows. This adds a little extra time to the render but also seriously improves the shading quality. To recap, we now have a spotlight as our key and an area light as our fill light. Once you have switched the distant light to an area light, hit the F9 button and take a look. OK, that looks wrong! Well, take a look at the light size. The default area light is 1 meter square, and remember that we moved the light high up above the object. So the area light is a small light

pretty far away from the subject. We know that the sky is much larger than 1 meter. We need to make our area light much larger to match. Remember, this area light should be pointing directly downward or have a pitch of 90 degrees. You could also make the pitch â€”90 degrees. Area lights work equally well in both directions. This frame took 1: But look at the beautiful soft shadows we are starting to get beneath the bongos. Higher quality settings will reduce this noise, but you should always have Shading Noise Reduction enabled in the Global Illumination panel if you are using one of these light types. Shading Noise Reduction works by blurring the diffuse channel of objects. Keep this in mind when using diffuse maps; they will become softer. It adds only a few seconds to each pass of the render but really improves shadow quality by removing noise. If you closely compare this image with the previous one, you will find that the fuzzi - ness of the shadow map is also softer and more pleasing. But there are times when you need a sky fill that is shaped more like the sky. You add two, three, four, five, or however many area lights you want in an inverted bowl shape to light your scene from more than one plane. Remember, the sky wraps around like an inverted bowl so this is more like a real sky than a single area light pointing downward. Bear in mind that as you add more area lights, your rendering times may increase dramatically, so try to get away with as few area lights as possible. The shadows are beauti - ful and soft. And really, a render time under six minutes is not exactly outrageous. Obviously, the more area lights you add, the softer and more pleasing the soft shadows will be. Since smaller area lights render more quickly than large ones, you might try adding an array of smaller area lights without too much of an increase from this time. But smaller area lights become more directional, creating harder shadows, so be careful. The nice thing is that you would have a more natural hemisphere shape instead of the blocky shape produced by the five-light setup. Looks like a job for luxigons! Make all your polygons in Modeler in the positions where you want lights. Import them into Layout and convert luxigons. First, open up a fresh Modeler. More area lights than that are really not necessary since each area light already behaves like an array of point lights. As long as the coverage is even, the soft shadows will be very nice indeed. I start by creating a ball using the Numeric panel. I make the ball have six sides and four segments. An important consideration when creating a luxigon array is the direc - tion of the polygon normals. The initial rotation of the light will be whatever the direction of the normal is. We want all our lights pointing Figure Now there are a couple of ways to define what the light settings will be. The first is done in Modeler, but the second method, done in Layout, allows you to include many more settings not available in Modeler. For the Modeler method, simply go to the Construct panel, click the Additional drop-down, and select the plug-in Add Luxigons. You will see the following panel appear. If you are using a spotlight, you will also get the option to use either ray-traced shadows or shadow maps. The second method of defining the light properties is to already have one light in Layout before loading in the luxigon object. If you have ever looked at two mirrors that are facing each other, you have likely noticed how the image and therefore the light reflected from the surface bounced back and forth into infinity or until the light diffused enough that it became invisible This is radiosity in action Although LightWave makes a distinction between reflected images and reflected If you want some real- istic-looking sky lighting, including variations in blue and white from clouds and atmospheric changes or perhaps reds and oranges from sun - sets and. Athlon XP 0.

Chapter 2 : Account Suspended

Email to friends Share on Facebook - opens in a new window or tab Share on Twitter - opens in a new window or tab Share on Pinterest - opens in a new window or tab.

That way, networked machines could access the information the same way networked machines access Particle FX solutions from a sin - gle file for particle renders. The truth is, it is very difficult to fake that kind of quality, but there are many situa - tions in which that level of quality is not necessary because there may be heavy motion blur in the shot or perhaps any soft shadows are not forefront in frame. If you come across a situation where the soft shadows are unimportant enough to fake, you should do it. There are literally doz- ens of way to fake soft shadows. Here are a couple of my favorite tricks. The first rule with area lights is to keep them as small as possible. The larger the area light, the more render time is required. Second, try to reduce Area Light Quality to 3 instead of the default 4. I have never been able to get away with less than 3 for a final render, although I have never had to go above 4 either. The maximum quality for area lights is 5. Getting a soft shadow out of an area light is easy. Place it, turn up the intensity, and render. The larger the area light, the softer your shad - ows will be. I like to do this by using the Light View. Or, if you need the light to illuminate other things in your scene but only need the shadow for your object, make Shadow Map Angle smaller than the cone angle of your light, and make sure the object is contained within the square representing the shadow map angle. Now render it out and take a look at those soft shad- ows. Compare them with the shadows from the area light. As you make your shadow softer, you will start to notice that the shadow stands away from the object casting it, giv - ing the impression that the object is floating above the surface. This is a nor - mal side effect of very fuzzy shadow maps. This sometimes makes it appear that the shadow is not contacting the object. Dave came up with it back in the mists of time when LightWave 3 was released. Once you figure out how it works you will probably scratch your head and wonder how the dickens it was conceived in the first place. It is a good trick for creating fairly accurate soft shadows in LightWave. Before area lights existed in LightWave, the spinning light trick was the only way of creating fairly accurate soft shadows in LightWave, since all the other light types are cheap approximations of real-world lights. LightWave calculates motion blur by interpolating motion from the previous frame to the current frame multiplied by the Blur Length set- ting in the Camera Properties panel. For example, if you have low antialiasing on, LightWave will render the frame five times. For each of the five render passes, any objects in motion will be moved one-fifth of the Blur Length percentage further along in position from where the objects were in the previous frame to where they are in the current frame. All five render passes are then sandwiched together and the edges appear as though they are blurred. If the motion is high enough, you can actually see the stepped edges of each render pass. Naturally, since a moving object is motion blurred, and therefore has stepped antialiasing passes, its shadows must also be motion blurred and have stepped antialiasing passes. This is where we get into the territory of the spinning light trick. The second thing we have to understand is how soft shadows work. We understand that even the softest shadows are hardest near the object casting them and softest farthest away. So if we have a whole bunch of lights pointing inward toward an object, we will get this soft shadow effect. That is, after all, essentially what the sky is â€” a huge array of lights all pointing inward toward the object. The spinning light trick puts these concepts together. Start by opening up a fresh Layout and loading in a ground plane and some object to cast shadows onto the plane. In my scene, I position the default distant light over the object so you can see it. In reality, the position of a distant light is irrelevant since its rays are all parallel. Only the direction of the light will make any difference. Now clone the distant light five times, and rotate four of them so that the rotations are evenly spaced. We end up with an array of distant lights all in one spot, all facing different directions. Since the position of distant lights is irrele - vant, we can argue that this is just the same as placing a bunch of lights all around the perimeter of our scene pointing inward. LightWave light intensities are additive. There are five distinct shadows. Open your Camera Properties panel to set the antialiasing level.

Now, set a keyframe for the distant light at frame 0. Set a second keyframe for the light at frame 1. Set Post Behavior to Repeat. This means that for every frame, the distant light will rotate exactly once. If we set the antialiasing level to Low or Enhanced Low, then we expect there to be five distinct shad - ows beneath the object, just as there were when we had the five separate lights. That change will double our number of passes. Now we could continue to smooth out the shadow by increasing the antialiasing level, but each level higher we go doubles the render time. So we can add more lights instead. Clone the dis - tant light twice and parent both clones to the original light, but remove the motion keys from the clones. Run a test render. Adding the two extra lights will add a little time as LightWave now has to calculate ray tracing for three lights, but you get triple the number of shadows for just a little more render time. Obviously, you can fur - ther improve the shadow softness by increasing either the number of lights or the number of antialiasing passes. Remember, though, as you add more lights, you need to proportionately reduce the intensity level of all the lights. There are many variations on the spinning light trick. We often use this for cheap soft edges. Another good one is to offset a light from a null a bit, target it to an object or another null, then spin the first null degrees and repeat. This way you get a focused light at the target point and increased softness out from there. You have the spinning light, the moving light, the wiggling light, and a million other vari - ations to soften hard shadows. Faking Volumetrics Volumetric lighting is that light you see in a smoky room. In other words, volumetric lighting is simply light rays that are illuminating particulate matter in the air. This fake volumetrics technique is the last trick in this chapter. This is one of the easiest and most obvious tricks in the LightWave arsenal. If you need a volumetric spotlight, just create a cone in Modeler, stick it in front of the light, and add some illumination and a nice transparency falloff to the cone. Now select the point at the top of the cone and create a weight map named Volumetric. Once in Layout, change the default distant light to a spotlight, then parent the cone to the light. Open up the Luminosity Texture Editor. Set Layer Type to Gradient and proceed to set up the values shown in Figure Sunny Day This is a very common lighting scenario and a very good place to start since the lighting setup is very simple If you find yourself in a situation where you must create a lighting setup for an exterior sunny, clear day, the first thing you should do is examine that environment and decide exactly how many light sources exist and what their position, angle, color, and size are Typically, exterior If you need a volumetric spotlight, just create a cone in Modeler, stick it in front of the light, and add some illumination and a nice. The purpose of this is to demonstrate the flexibility of LightWave s lighting toolkit and. Maps This is a favorite of mine because spotlights with shadow maps render very quickly and because spotlights with shadow-mapped shadows are the only light in LightWave other than area lights that.

Chapter 3 : LightWave 3D 8 Lighting Wordware game and graphics library phá°§n 9 pot

Lightwave V9 Lighting W Cd Wordware Game And Graphics Library Books Pdf Free Download hosted by Abbey Mason on October 06 It is a file download of Lightwave V9 Lighting W Cd Wordware Game And Graphics Library that you could be grabbed this with no registration on theinnatdunvilla.com

Chapter 4 : Read LightWave V9 Lighting (Wordware Game and Graphics Library) PDF - FreddyJae

A FURTHER FIVE OF A KIND: All 5 of the Inspector Bruce Mysteries - 2nd Series (THE INSPECTOR BRUCE MYSTERIES SERIES Book 6) PDF Download.

Chapter 5 : - LightWave v9 Texturing (Wordware Game and Graphics Library) by Angel Nieves

Additional info for LightWave v9 Texturing (Wordware Game and Graphics Library) Example text The diffuse value (not to be confused with "diffusion") determines how much light is being reflected by the surface.

DOWNLOAD PDF LIGHTWAVE V9 LIGHTING (WORDWARE GAME AND GRAPHICS LIBRARY)

Chapter 6 : LightWave 3D 8 Lighting Wordware game and graphics library phá°§n 8 pdf

If you are looking for a book LightWave 3D Lighting (Wordware Game and Graphics Library) by Nicholas Boughen in pdf format, then you've come to the correct website.

Chapter 7 : LightWave v9 texturing / | Arlington Public Library

Additional info for LightWave v9 Texturing (Wordware Game and Graphics Library) Example text. Refer to the section "Diffuse Value and Reflection" later in this chapter for more information on this phenomenon.