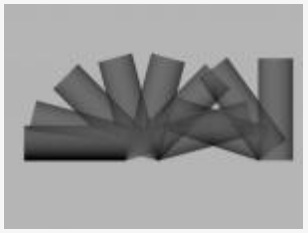

**Come Fare Per Scrivere Un Tutorial**


**Breve Panoramica Su Processing**

**Sedia Form Di Piero Lissoni**



**Pivot Point Dinamico**

**Rig In 5 Parti...quinta Parte**



## Interior Lighting In Mental Ray, Tutorial 1: GI + FG



Messaggio #1

**dagon**

Jul 6 2005, 10:49 PM

treddizzofrenico

Account Gratuito

Messaggi: 6.538
Iscritto il: 25-August 04
Da: Milano

**Professione**: Geometra

**Eseguo lavori con:**

- Link alla versione italiana:
http://www.treddi.com/forum/index.php?showtopic=4858

Immagine ridotta: 80% della dimensione originale [ 800 x 580 ]


English Translation by Gtsix http://www.pixeloverdrive.com

This tutorial comes from the experience gained by me and other **treddi.com** members during the last months of tests made for reaching good quality interior renderings with Mental Ray.
So I want to begin thanking all those who have contributed to the tests and shared his/her own experiences and settings. Particularly, I wish to thank Stefano (gtsix) for the English translation and Alessando (Pantich78), that has been the first one to read the draft of this tutorial and provided interesting cues that allowed me to deepen some aspects of the topic.

The tutorial can easily be followed by whoever uses mental ray (on maya/3d max/xsi/hudini and others)

What I will illustrate is just one of the many possible methods for achieving this kind of illumination, and should be considered as a starting point to begin your own experimentations with mental ray, from many people around the world considered one of the most difficult rendering engine to use for this type of task.

Some of the steps you'll find on this tutorial will seem to be repetitive or unmeaningful, but I decided to keep all of them in order to give the reader all the info he/she needs in the clearest way possible. After reading and understanding this tutorial, he/she'll be able to optimize his/her own personal method, skipping some steps or mixing others. It's just a matter of experience! ;-)

This is a wide subject, so I have chosen to describe the method in a very general way and to try to touch a bit of all of the correlated topics.
If anyone should need some help, just write me (obviously it could be possible that I won't have a ready-to-use answer, but I will try to help you anyway ).
In this tutorial I will assume that the reader has a basic knowledge of Maya and Mental Ray.

These are the tutorials sections:



**1. Basic lighting system**

Before writing this tutorial I have done many tests using various types of lights and settings. You'll find them here
The lights that I'm going to use in this tutorial are those that I think are more effective in this kind of rendering, in terms of quality/speed and in terms of matching an ideal photorealistic lighting system.
I'll use of two types of lights, the first one simulates the direct light and the other one will simulate the "diffuse" light.

**1.1 Light choosing and positioning**

First of all you have to download the tutorial scene. It's available in these formats:
.obj
.mb
.3ds

Open the file. It's japan-style room (already famous over the www.treddi.com forum ). Set the scene units to centimeters. Remember that after importing a 3ds or .obj model into Maya you will have the settings *"Visible in reflection" e "Visible in refraction"* disabled, so you will have to turn them on manually under the *"Render Stats"*

Now we can put the lights in our scene.

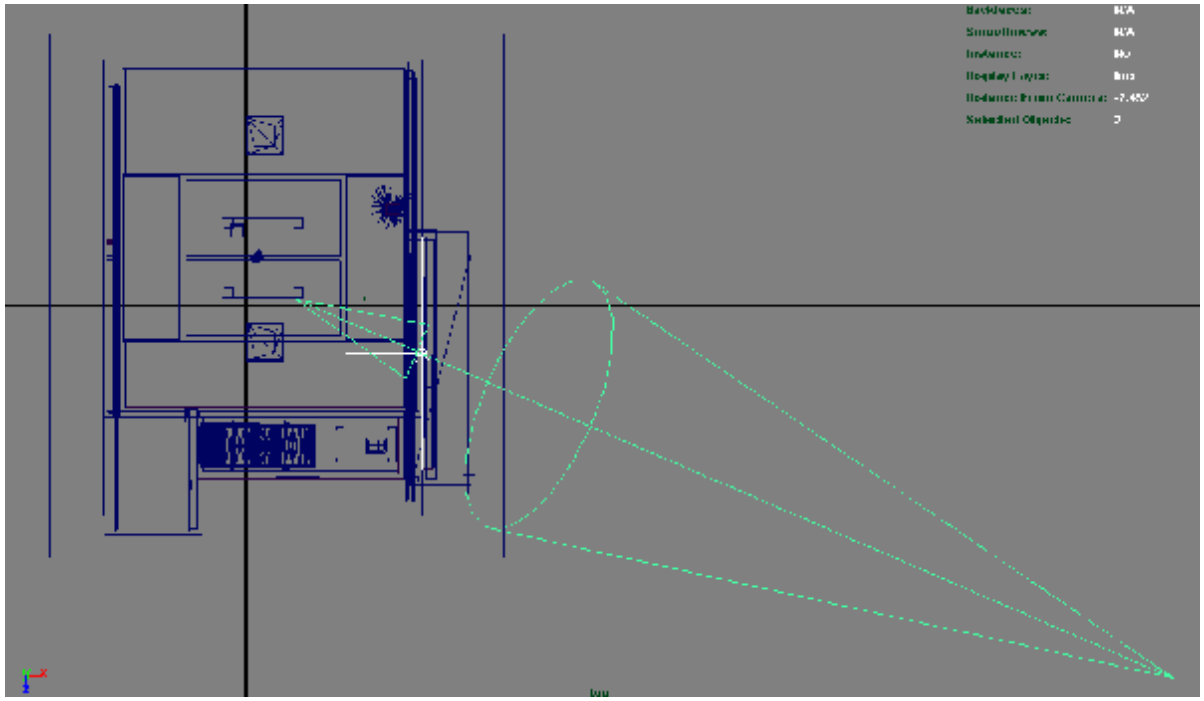
*a. Sunlight*

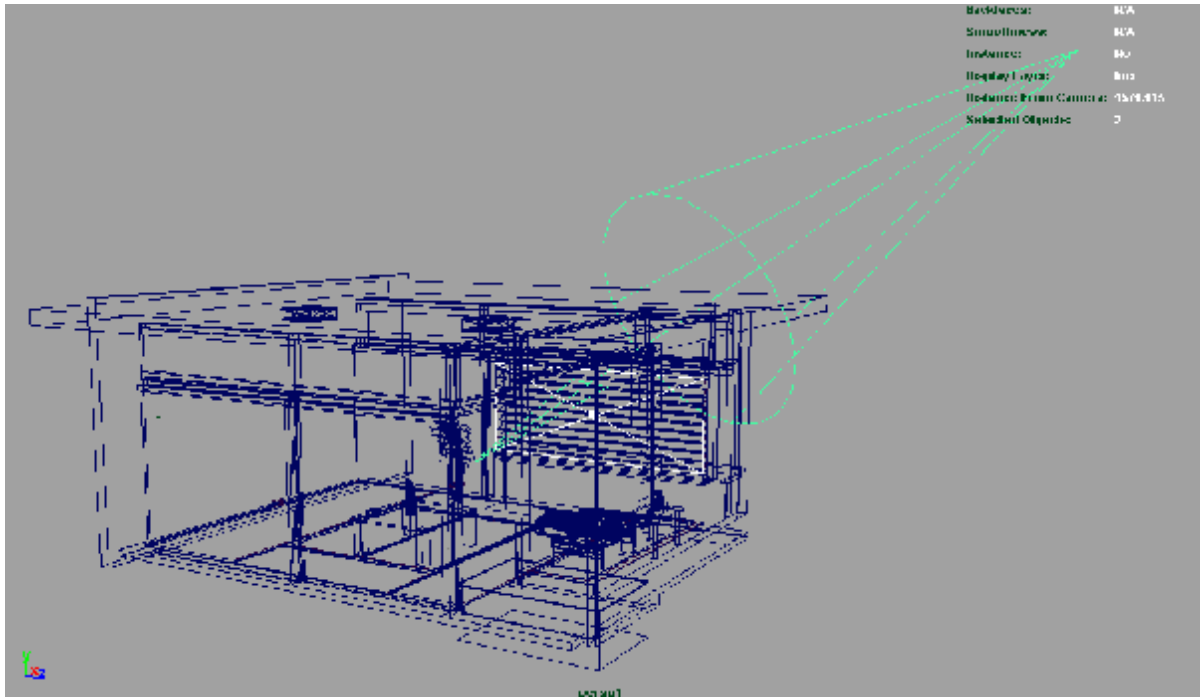
With the first light you will simule the sunlight. Considering the several possibilites I decided to use a spotlight, later on we will see the alternatives.
Position one spot far enough from the room, so you can use a little opening angle (20° approximately) remember that the spot does not have parallel beams, so using a little angle will allow you to simulate better the ideal sunlight.

*b. "Diffuse" light*

Create a point light and open the light's attributes. Under the mental ray section turn on the *"Area Light"* option. Move the light until it's lined up with the window and scale its radius so that the edges approaches the opening-width of the window (you can eventually reduce it a bit to prevents problems with overexposed areas on the walls near the window)

In the following images you can see how I positioned the lights.





**1.2 Lights settings**

In order to understand the behavior of the lights, I suggest you to begin the tests with only one light turned on.

Assign a white shader (I suggest a Lambert or DGS without glossy and specular) to your model.

**1.2.1 Sunlight**

Select the point light and disable it (deselect the following options: *"Illuminates by Default", "Emit Diffuse", "Emit Specular"*)

Select the spot light and edit its attributes: turn on the raytraced shadows with the default options (you can give a slight angle variation to the beams if you want)

Open the *"Renderglobal"* > *"Quality Presets"* menu and select *"Preview"*
to get a quick render of your first test.
If you followed the instructions correctly you should get something like this:

Change the light intensity until the illumination level of the visible areas seems good to you.

-Now activate the GI in the *"Renderglobal"* menu and set the *"Global Illum Accuracy"* to 512, keeping the *"Global Illum Radius"* to 0 (default).
-Change the settings of the i]"Raytracing"[/i] (4-4-8 should go well)
-Also turn on *"Emit Photons"* in the attributes of the spotlight and perform a test render to examine the illumination levels of the parts of the room which are not directly lit by the spotlight.

Remember that the amount of the light that will effect your model is also directly related to the distance from the object.

The further from the model your light is, the higher you will have to set the intensity of the photons. For example I reached 185.000.000 to get this result:

Now increase the number of the photons to 500.000 and your render will look something like this:

I suggest you to activate the *"Progressive Messages" ("Renderglobal" > "Translation" > "Progressive messages")* , so you can monitor the rendering times of the different tests.

**1.2.2 "Diffuse" light**

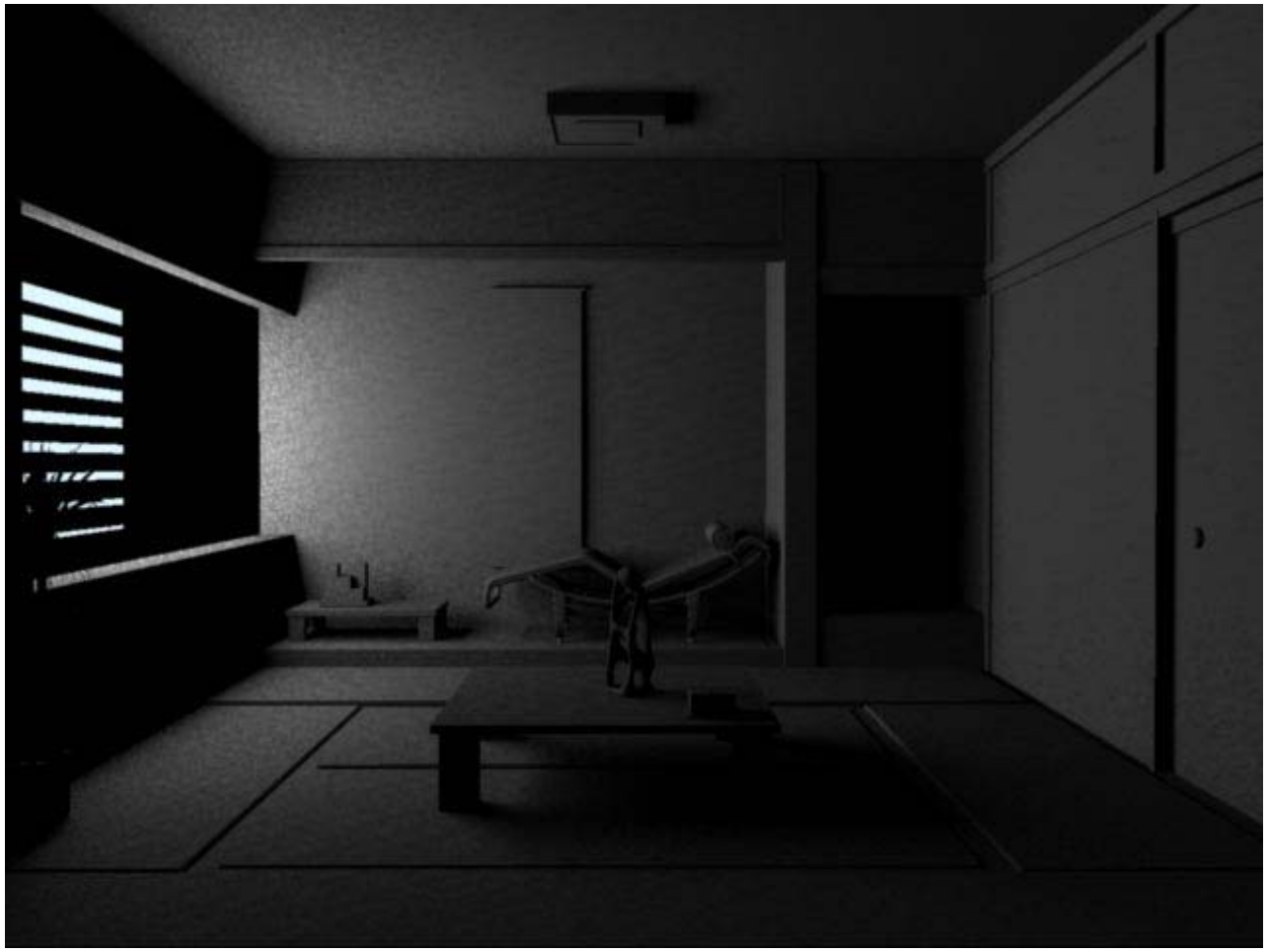
Now we will perform the same steps for our point light (that we have previously transformed in a Mental Ray Area Light, see chapter

- Disable the Spotlight (remember you have to check-off *"Emit Photons"*)
- Activate the raytrace shadows of the point light; I suggest you to use a *"Decay linear"*

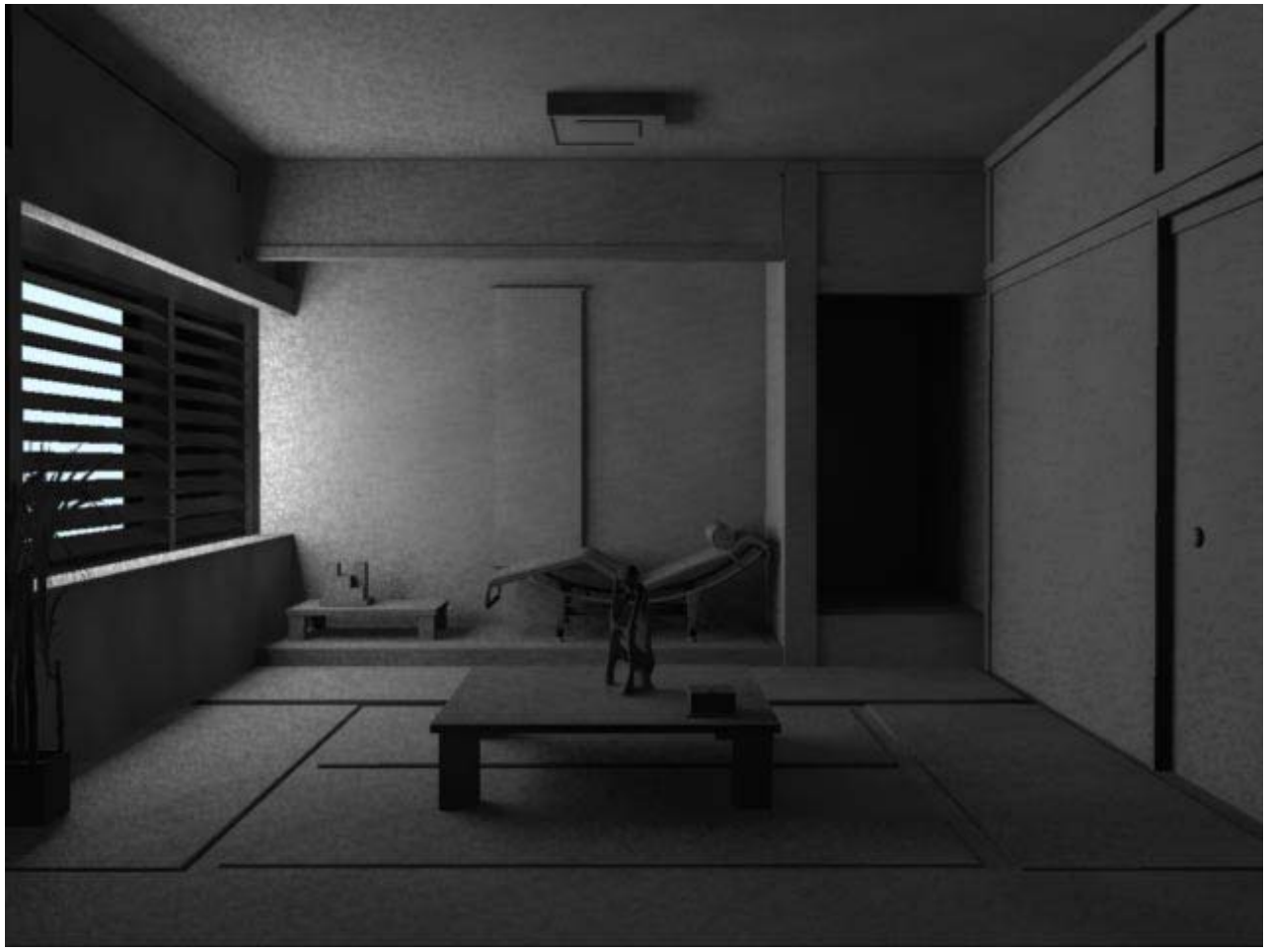
- As for your Photon settings, use the same photon settings you used in your spotlight except for the intensity, which should be very small (in this case I'm using 100.000) .
- Perform the same render as done for the spotlight.

Only direct light:

(Don't worry about the graininess of the shadows, we will tweak it later adjusting the settings for the final render)



direct light + photons



**1.3 How to “balance” the lights in the scene**

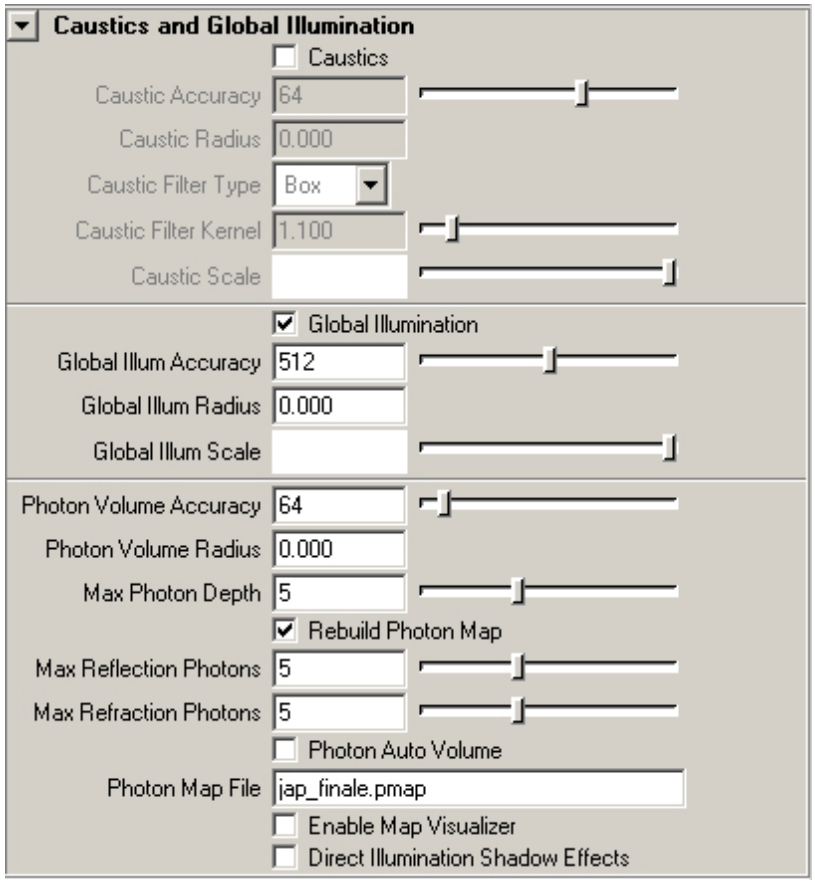
Activate both the lights and perform another render.
If you are lucky you’ll get the correct lighting and illumination, but more likely you’ll have to tweak your light settings to get the result you have in mind.
Obviously the changes your’re going to do will vary depending on the lighting effect you want to reach for your render!

Here's my test:

Don’t worry if some of the areas are overexposed, when we’ll activate the final gather the problem will be almost fixed. Anyway, if you want you can do a small test: do a region render of the most significant areas of your scene, simply activating the final gather with the following settings: “rays”: 100 “min max radius”: 0/0 and “rebuild photon map” turned off. This is my result:

If you still have problems with over-exposed ares or getting weird artifacts I suggest you to slightly decrease the photons intensity of the spotlight and also slightly decrease the intensity of the point light (mostly if the over-exposed areas are those directly affected by the area light).

Now that the light seems more balanced we'll start optimizing the GI.
This is the Maya *"Caustic and Global illumination"* panel.




Here you are some short descriptions of the main GI settings:
- *"Global Illum Accuracy"*: this value, that we have already set to 512, represents the quality of the photon map.

- *"Global Illum Radius"*: we'll set it later. As for now just remember that the default value is 0: with this value mental ray calculates the best setting for the render (in 90% of cases you can keep this setting). Anyway, to optimize our rendering times we'll hand-calculate it.

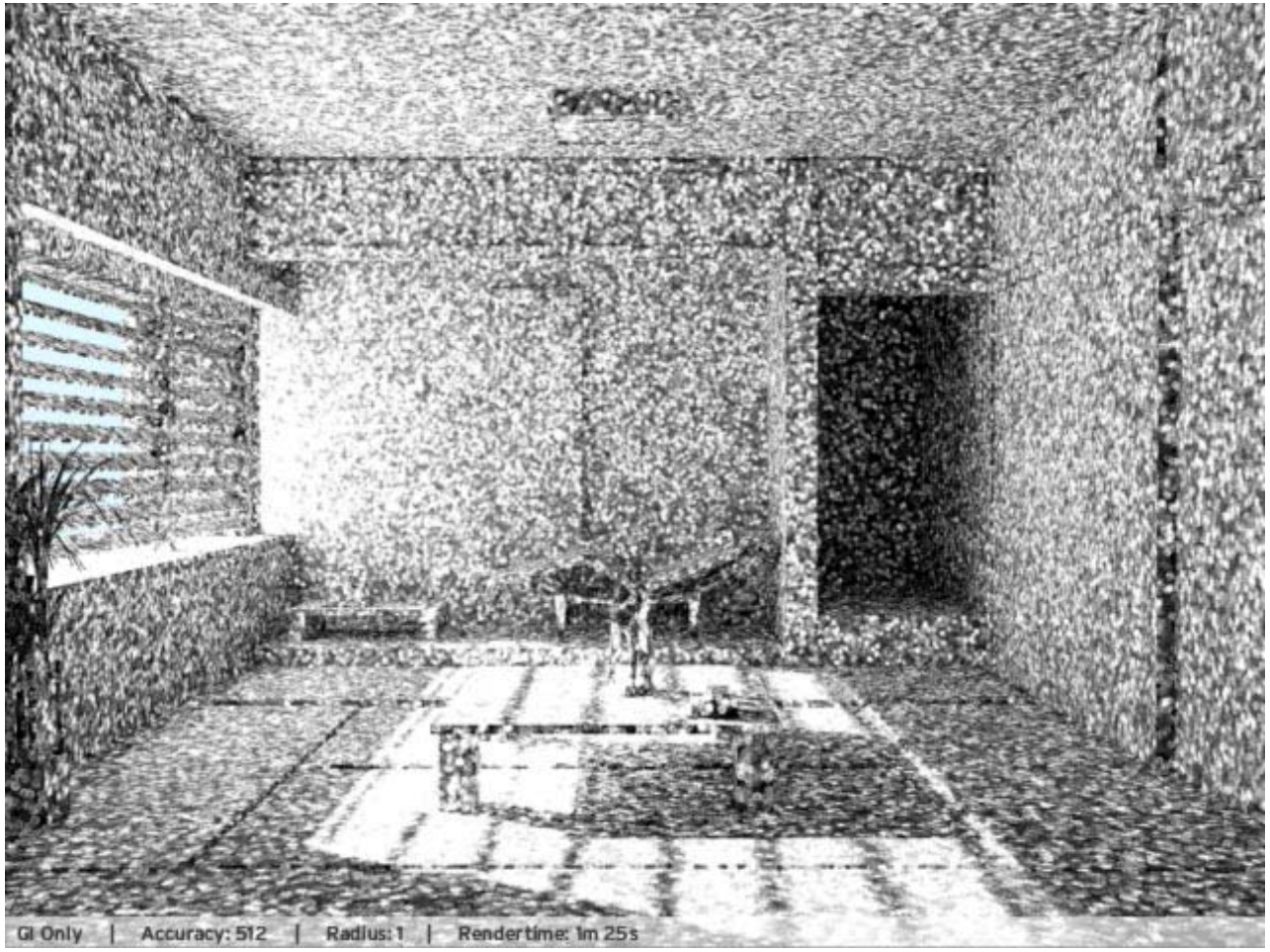
- *"Max Photon Depth", "Max Reflection Photons" e "Max Refraction Photons"*, are the settings of the well-known photon bounces. They set the number of bounces that our photons will perform before they stop.
The first value indicates the maximum amount of bounces.

Now we have to choose the Photon Volume Radius and the Max Photon Depth. Talking about Depth, I'm getting good results using the default settings (5-5-5).
Remember that higher depth values means more light in the dark areas of your render, but it will also increase your render times.
As I said before, changing the Photon Volume Radius will allow us to optimize our render speed.
You can test it performing a render (GI only) with the Photon Volume Radius set to 0 (best quality).
Have a look at the render times: 50 seconds (on my workstation off course)


Do your experiments increasing the radius value and see how your render-time changes (obviously along with the image quality)

You can start with very low radiuses (1 for example) and increase the value until you get a result similar to the first render (with radius 0), but with lower render-times. Remember that the radius is expressed in local scene units.
When performing these tests turn off “rebuild photon map”, in order to speed up the test renders.
Remember that in this phase even the smaller time gap between your tests could lead to considerably different rendering speeds when working on the final render. So, every second counts!

Here you will see my radius-changing tests:




GI Only | Accuracy: 512 | Radius: 10 | Rendertime: 32s

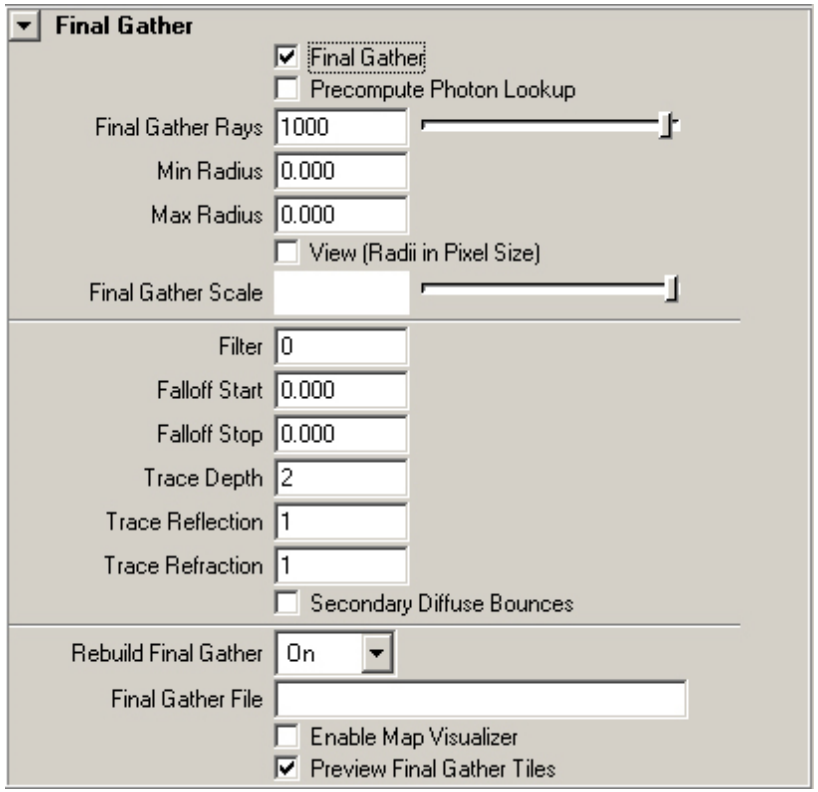

GI Only | Accuracy: 512 | Radius: 15 | Rendertime: 43s


I chose radius = 15

**1.4 Final Gather**

We finally arrived to the quite controversial Final Gather.
For these tests, if you don't have to change the lights settings or scene materials, you can leave the *"Rebuild Photon Map"* checkbox disabled.

Here's the Maya panel:




To get an idea of the final gather options I suggest you to check out this link:
http://www.lamrug.org/presentations/jun2003/img0.html

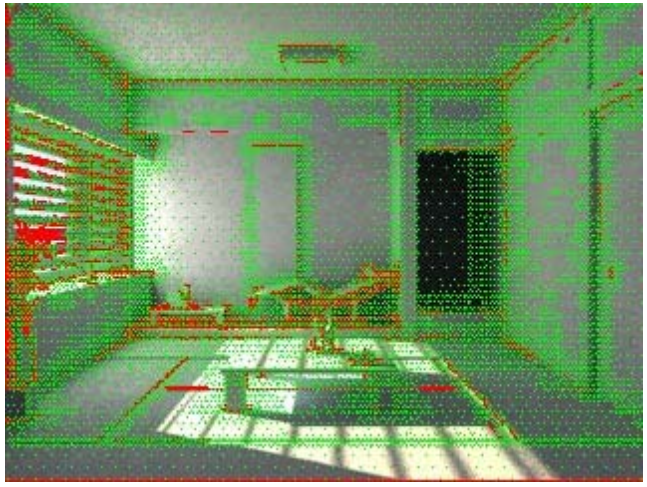
I will try to make you a short resume of how it works.
Anyway, take this resume just like a “Final Gather for Dummies”, because it’s a very complex subject and (as for now) I don’t have the necessary knowledge to do a full in-deep explanation of every aspect of it.

If you’re not too much interested in the theoretical description of the Final Gather, you can jump to the **1.4.1** section.
Substantially the Final Gather allows you to calculate and save the irradiance informations in a local map. The final gather calculation is made of two phases:

*1- precomputation*
during this first phase the image is subdivided in an hexagonal/triangular grid; for each point of the grid a ray is sent from the camera to the scene; when a ray “collides” with a scene object, an hemispheric set of FG rays is emitted from that intersection point; those FG rays will allow the calculation and storage of the local irradiance informations.

*2- extra computatio & interpolation*
the second phase happens during the rendering (or, partially, before, if you activate the “Precompute Photon Lookup” tag). The previously saved map is re-used and the results are interpolated using the min/max radius.
This means that for each point previously calculated, the local irradiance results are interpolated between the min/max radius range.
If the max radius should be too small to cover every part of the scene, the FG will automatically emit other rays in order to succesfully complete the scene computation.

To see how the final gather effects our scene, just activate the Diagnostic option under *“Renderglobal”* > *“Diagnostics”* > *“Diagnose Finalgather”*
The green points are those calculated in the first phase (precalculation) while the red ones are those generated during the rendering process.



Well, after this short resume, I can start explaining the parameters you’ll find in the RenderGlobal Menu.
*“Min/Max Radius”* As said before, these are the values used by the Final Gather to interpolate the local irradiance results. Lower values will provide higher details and higher render-times.
*“Min/Max Radius”* can be expressed in real world units (cm in this case) or in pixel; Mental Ray 3.4 users can activate this setting simply checking the *“View (Radii in pixel size)”* option. For previous Mental Ray versions you can check the LAmrUG web site at this link: LAmrUG.

Working in pixel units gives us a big advantage: is a lot easier to find the needed interpolation values watching our raster render instead of thinking about the real-world units of our scene.

The *"Final Gather Rays"* are those rays hemispherically emitted from each calculated Final Gather point:
increasing the number of emitted rays means a better accuracy of the local irradiance calculations. For the overall calculation accuracy also mind the min/max radius values!
The Radius value has nothing to do with the rays length, since this one is setted by the *"Falloff start/stop"* parameter.
Another important parameter we must handle is **"filter"**, wich eliminates eventual weird local irradiance spots (usually overbright dots) evaluating near irradiance values. Using this filter will affect both the Final Gather quality and the rendering speed.
Other important parameters are *"Trace Depth", "Trace Reflection" e "Trace Refraction"*. Conceptually they work like the bounce depth controls for the primary GI calculations.
The last *"Secondary Diffuse Bounces"* checkbox activates the famous "multibounce" (you'll find it only on Mental Ray 3.4), but we won't use it since this parameter is inactive when Global Illumination is turned on.

*"Preompute Photon Lookup"* pre-estimates some of the FG calculations to be perfomed during the rendering process. This option is very important when working on animations, since it reduces rendering times.

### 1.4.1 How to set up the Final Gather

Here are the parameters I used for the test

your settings should be similar:
"Rays": 50 (for mental ray 3.3 you will need at least 100-200)
Change the filter"Filter" from 0 to 1
Leave the "Radius" at 0 and launch a est render at a low resolution (400x300)

Now let's see how to optimize the radius. If you're already satisfied with the result obtained using the default radius but still want to optimize your rendering-time, you could have a look at the MR output window and check for the radius automatically set from MR and try to adjust this value. Only remember that lower radius means more details and more noise.

For my own tests I usually start with small radius values and with few rays, in order to keep my rendering-times low. I also perform various "Render region" of the most "critical" areas of the scene. This allows me to get the best compromise between scene detail and render-speed.

Here you'll find some test made using different radiuses:


FG+GI | FG Rays: 50 | min-max Radius: 1 - 10 | Rendertime: 56s


You can increase the radius so that to eliminate (or at least greatly reduce) that “noisy” effect you get using small radius values.
Remind that this value is scale-dependent. You should get an optimal time/quality compromise using radiuses from 1 to 10.
Once you found the radius that fits your needs, do some Render region of those areas where you see rendering artifacts, and increase the number of emitted rays to eliminate them.
This value is strictly dependent from the Mental Ray version you’re using. The 3.4 version is highly optimized for low radius values, while previous versions need higher values (and this meand higher rendering times).


**1.5 How to set up the final rendering**

For the final rendering there are some important things that need do be handled properly and here you'll find a short description of each one.

**1.5.1 The materials**

To get a photorealistic render the materials assigned to the objects are fundamental. I suggest you to learn everything you

can about the Mental Ray materials, particularly the dgs, the dielectric and some other interesting shaders (dgs_fresnel, l_glass). The tutorial made by Alessandro (Pantich) about those shaders is surely an excellent beginning.

The advantages you'll get by using these materials are mainly of two types: shorter rendering times and better light behaviour.
If you started this tutorial using a lambert shader, simply assign a DGS material (without glossy reflections) to every object in your scene and do a rendering test to see the difference between the two shaders.
Remember that, as for other Mental Ray shaders, if you wish to use a DGS material you must set the dgs_photon or the mib_photon_basic into the "photon shader".

When setting up a scene, I suggest you to choose a shader type and then use it for the whole project.
If you start with a Lambert shader (a maya native shader), keep using maya shaders for every object in your scene, otherwise your render could show very weird (and unwanted) artifacts.

### 1.5.2 Anti-Aliasing quality

For the final rendering is very important to optimize the AA. My advice is to use the Mitchell filter: in Mental Ray it offers the best quality/speed.

The most important AA settings are *"Numbers of Samples" e "Contrast Threshold"*

The *"Min Sample Level"* indicates the smallest number of rays that mental ray uses. The *"Max Sample Level"* (obviously ), the max number of rays.

**note**
The sampling values in mental ray for Maya do NOT increase linearly but exponentially. Therefore if you use 0 samples you will get 1 ray, 1 sample: 4 rays, 2 samples: 16 rays and so on. This means that too high values will greatly affect rendering time.
In 3dsmax the parameters are different: they control the number of rays, therefore if in Maya the sampling parameter is set to 2, in 3dsmax should be set to 16, etc

How can we determine the min and max samples? By setting the *"Contrast Threshold"*. " values.
This often neglected parameter is fundamental for getting good results.
If in a particular area of the render the chosen contrast threshold is surpassed, mental ray will use the max samples, while

if the contrast remains below that threshold, it will use the min samples. This comes useful if your render has wide uniformly colored areas, where high sample values are almost meaningless.
At this link you'll find an in-deep analysys of the Contrast Threshold parameter made by the LAmrUG

These are the settings that I suggest you :

Mitchell 4 | 4

Min samples 0 (either -1) (for 3d max 1 or 1/4)
Max samples 2 (for 3d max 16)

R 0,05 G 0,05 B 0,05

**1.5.3 Area Light Sampling**

This parameters sets the amount of noise in the shadows generated by the Mental Ray Area Lights.
In our case we should choose the Point Light and go to the *"Mental ray"* > *"Area Light"* panel.
To get the best results from your rendering you must know how to handle the following parameters:

*"Sampling"*: number of shadow samples
*"Low Level"*: the number of bounces (reflection/refraction depth) beyond which Mental Ray begins to stop using the "Sampling" parameter and starts using the "Low Samples". Setting this value to 0 (default), means that Mental Ray won't use the low samples.
*"Low Samples"*: sampling value that can be set for the secondary bounces of your shadows.

For good results I suggest you to use the following parameters:

Samples 6-6 (max 8-8)
Low Level 0 (either 2)
Low Samples 3-3 (or 4-4)

Example: using Area Light Samples default (3-3)

Samples 6-6


**1.5.4 Light color**

To achieve a photorealistic interior-lighting, it is nessesary to change the color of the light to a real life light color. In Mental Ray 3.4 we have a new utility, that I think is really powerful, that allow us to choose the color of the light based on a Kelvin Temperature scale. This is the diagram for you to follow:

| Degrees Kelvin | Type of Light Source | Indoor (3200k) Color Balance | Outdoor (5500k) Color Balance |
|---|---|---|---|
| 1700-1800K | Match Flame | | |
| 1850-1930K | Candle Flame | | |
| 2000-3000K | Sun: At Sunrise or Sunset | | |
| 2500-2900K | Household Tungsten Bulbs | | |
| 3000K | Tungsten lamp 500W-1k | | |
| 3200-3500K | Quartz Lights | | |
| 3200-7500K | Fluorescent Lights | | |
| 3275K | Tungsten Lamp 2k | | |
| 3380K | Tungsten Lamp 5k, 10k | | |
| 5000-5400K | Sun: Direct at Noon | | |
| 5500-6500K | Daylight (Sun + Sky) | | |
| 5500-6500K | Sun: through clouds/haze | | |
| 6000-7500K | Sky: Overcast | | |
| 6500K | RGB Monitor (White Pt.) | | |
| 7000-8000K | Outdoor Shade Areas | | |
| 8000-10000K | Sky: Partly Cloudy | | |

Based on information from the book [digital] Lighting & Rendering
Chart and colors (c)2001 Jeremy Birn for 3DU.com

The trick is to pick a color similar to the sunlight for the spotlight and a color similar to the skylight for the Area Light

Mib_cie_d

In the case you are using a version of Mental Ray previous to 3.4 you can use a yellow/orange color for both the lights and a ligh-blue color for the photons.

**1.5.5 Bsp The Binary Spatial Partitioning**

*"Render Global> Memory and Performance"* is a really important parameter for the rendering speed optimization. Also for this topic, an in-deep exploration of this parameter would require a specific tutorial. Anyway you can find interesting informations (as always) about the BSP on the LAmrUG site at this address.

My advice is to do a lot of lo-res renderings (or Render region tests of the most "critical" or complex parts of your scene)

changing the BSP value by steps of 3. For example if you start with 40 try 37/34/31 and so on. Compare the rendering times and find the value that best fits your needs.

**1.5.6 Output framebuffer**

Mental ray hasn't got a real tonemapping control, but there are different workarounds that allow us to solve this problem.

One way is to use the *"gamma"* parameter *( "Render Global" > ""Framebuffer" > "gamma")* that controls the overall brightness of the rendered image, in particular for its shadowed areas (values lower than 1 increase the brightness)
However my advice is to adopt another workaround: export the render in a 32bit format and adjust the tonemapping in post-production. Mental ray, from the 3.3 version, supports the OpenExr (32bit) format. You can find news and plugins for this image format at the following address: OpenExr
This format offers greater advantages than the HDR format (as has a greater dynamic range) and the TIF format (as it allows to store the data in half-space respect to the classic RGBA 16bit format)

If you are a Mental Ray 3.4 user is very easy to use the EXR format: in the *"Framebuffer"* set RGBA (float) 4x32bit and choose the OpenExr "image format".

If you use the 3.3 Version of MR, exporting your rendering in EXR format is a bit more complicated. I suggest you to download the mrclasses made by Gonzalo Garramunos from this site and use the output_exr shader as output shader for your camera. Thanks to it you'll be able to export your render in EXR format.

Here you'll find the values I used for the final rendering, the one you see at the beginning of the tutorial.

**- RENDER GLOBAL**

**AA Quality**

Samples -1 | 2
Mitchel: 4 | 4
Contrast R: 0,05
Contrast G: 0,05
Contrast B: 0,05
Contrast A: 0,1

**Raytracing**

Reflection: 4
Refraction: 4
Max Trace Depth: 8

**GI**
Accuracy: 512
Radius: 15
Max Photon Depth: 5
Max Reflection Photon: 5
Max Refraction Photon: 5

**Final Gather**
Rays: 400
Min / Max Radius: 2 | 15
Filter: 1
Trace Depth: 2
Trace Reflection: 1
Trace Refraction: 1

**- Other Settings:**
Area Light
Sampling: 6 | 6
Low Level: 0

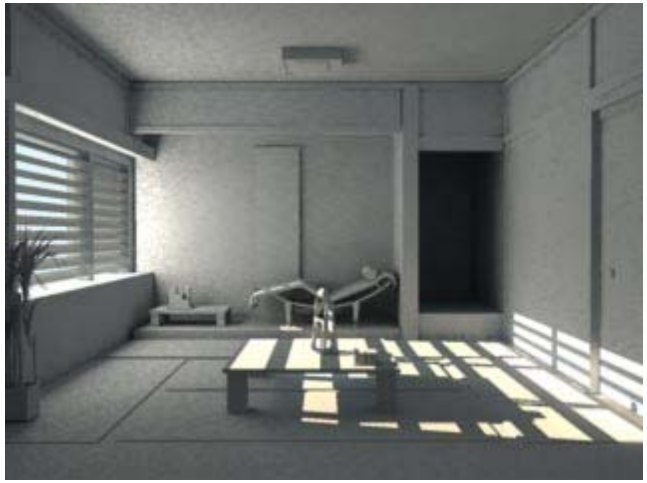
**2.0 Other types of lighting systems**

As I have already told you before, I made various tests to choose the “best” lighting scheme for this kind of render. Below you’ll find a list of the tests I’ve done, with the light I used and the resulting render.
If you are seeking a particular kind of illumination, you can choose from these various possible combinations.

(Sunlight + “Diffuse” light)

Direct + point(arealight) with physical_light

Direct + point(arealight)



Direct + spot(arealight)

Spot + physical

Spot + spot(arealight)

I hope this tutorial will help at least some of you MR freaks around the world!
If you find some mistakes or information inaccuracies in this tutorial (you know, it became so long!!), please let me know!

ciau

Mat
http://www.imodesti.com

- References:
http://www.lamrug.org
http://www.jupiter-jazz.com/
http://www.impresszio.hu/szabolcs/MentalRa...RaySampling.htm

Messaggio modificato da **Macphisto** il Jan 25 2007, 08:14 PM

**Files allegati**

index.jpg ( 8.53k ) Numero di download: 2329

Su Segna Rispondi

**Haola** Jul 10 2005, 12:28 AM Messaggio #2

Matricola
Messaggi: 2
Iscritto il: 9-April 05

Hi , this is very useful tutorial with mental ray but the settings of Maya is far different with max , how can I get the same quality with mental ray in Max. What lights should I use for "diffuse" light in Max ?

Su Segna Rispondi

**florenceale** Jul 10 2005, 06:40 AM Messaggio #3

treddente

Messaggi: 1.678
Iscritto il: 20-November 04
Da: firenze

**Professione**: Architetto

**Eseguo lavori con:**

Look at this thread, it's both for max and maya users. If you use mental3.4 you can't find many examples overthere ...

link

Don't follow too much Dagon anyway, he use vray and then he says that the work is done with mental!...isn't it dagon ?

Messaggio modificato da **florenceale** il Jul 10 2005, 06:42 AM

Su Segna Rispondi

**dagon** Jul 10 2005, 04:56 PM Messaggio #4

treddizzofrenico

Account Gratuito

Messaggi: 6.538
Iscritto il: 25-August 04
Da: Milano

**Professione**: Geometra

**Eseguo lavori con:**

> **QUOTE(florenceale @ Jul 10 2005, 07:40 AM)**
>
> Look at this thread, it's both for max and maya users. If you use mental3.4 you can't find many examples overthere
> ...
> link
> Don't follow too much Dagon anyway, he use vray and then he says that the work is done with mental!...isn't it dagon ?
>
> [snapback]90229[/snapback]

nope, isn't it!
i'm using mental ray, vray is toooo slow for me

Su Segna Rispondi

**dagon** Jul 10 2005, 04:57 PM Messaggio #5

treddizzofrenico

Account Gratuito

Messaggi: 6.538
Iscritto il: 25-August 04
Da: Milano

**Professione**: Geometra

**Eseguo lavori con:**

> **QUOTE(Haola @ Jul 10 2005, 01:28 AM)**
>
> Hi , this is very useful tutorial with mental ray but the settings of Maya is far different with max , how can I get the same quality with mental ray in Max. What lights should I use for "diffuse" light in Max ?
>
> [snapback]90195[/snapback]

u can use a photometric area light in 3d max
look at the link in the florenceale's post for more info


Su Segna + Rispondi

**Haola** Jul 12 2005, 06:44 PM Messaggio #6

thanks for the link , can you short-describe the method cause I cant read italian , sorry

Matricola
Messaggi: 2
Iscritto il: 9-April 05

Su Segna + Rispondi

**filippocrea** Jul 14 2005, 11:51 AM Messaggio #7


fatto in max...con qualche modifica...è migliorabile ma ho impiegato 16 minuti di render...
ciao a tutti

**Files allegati**

rr2.JPG ( 34.02k ) Numero di download: 1674
42.JPG ( 35.25k ) Numero di download: 1424

Treddiano


Messaggi: 306
Iscritto il: 31-January 05
Da: ancona

**Professione**: Altro

**Eseguo lavori con:**

Su Segna Rispondi

**dagon** Jul 14 2005, 12:00 PM Messaggio #8

mi sembra buono, la GI è decisamente da migliorare e anche qualche materiale
mi piace il legno, forse gli darei un po' più di glossy, che shader hai usato?

cmq postalo nella sezione italiana che ho meno difficoltà a risponderti

treddizzofrenico

Account Gratuito

Messaggi: 6.538
Iscritto il: 25-August 04
Da: Milano

**Professione**: Geometra

**Eseguo lavori con:**

Maya 3ds Max

Su Segna Rispondi

**filippocrea** Jul 14 2005, 03:39 PM Messaggio #9


Si la g.i. è migliorabile, ma io cerco il rapporto qualità velocita, ho nella global illuminatio 5000 fotoni 100 sample e 100 raggi di final grater, antialias 4 x 16...ciao a tutti

Treddiano

Account Gratuito

Messaggi: 306
Iscritto il: 31-January 05
Da: ancona

**Professione**: Altro

**Eseguo lavori con:**


Su Segna Rispondi

**dagon** Jul 18 2005, 12:52 AM Messaggio #10

treddizzofrenico

Account Gratuito

Messaggi: 6.538
Iscritto il: 25-August 04
Da: Milano

**Professione**: Geometra

**Eseguo lavori con:**


> **QUOTE(Haola @ Jul 12 2005, 07:44 PM)**
>
> thanks for the link , can you short-describe the method cause I cant read italian , sorry
>
> [snapback]91288[/snapback]

this is a screen for the area light in 3d max

hope it can help you

Su Segna Rispondi

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Oggi è il: 18th September 2009 - 05:24 PM