

finalRender Stage1 : First hand

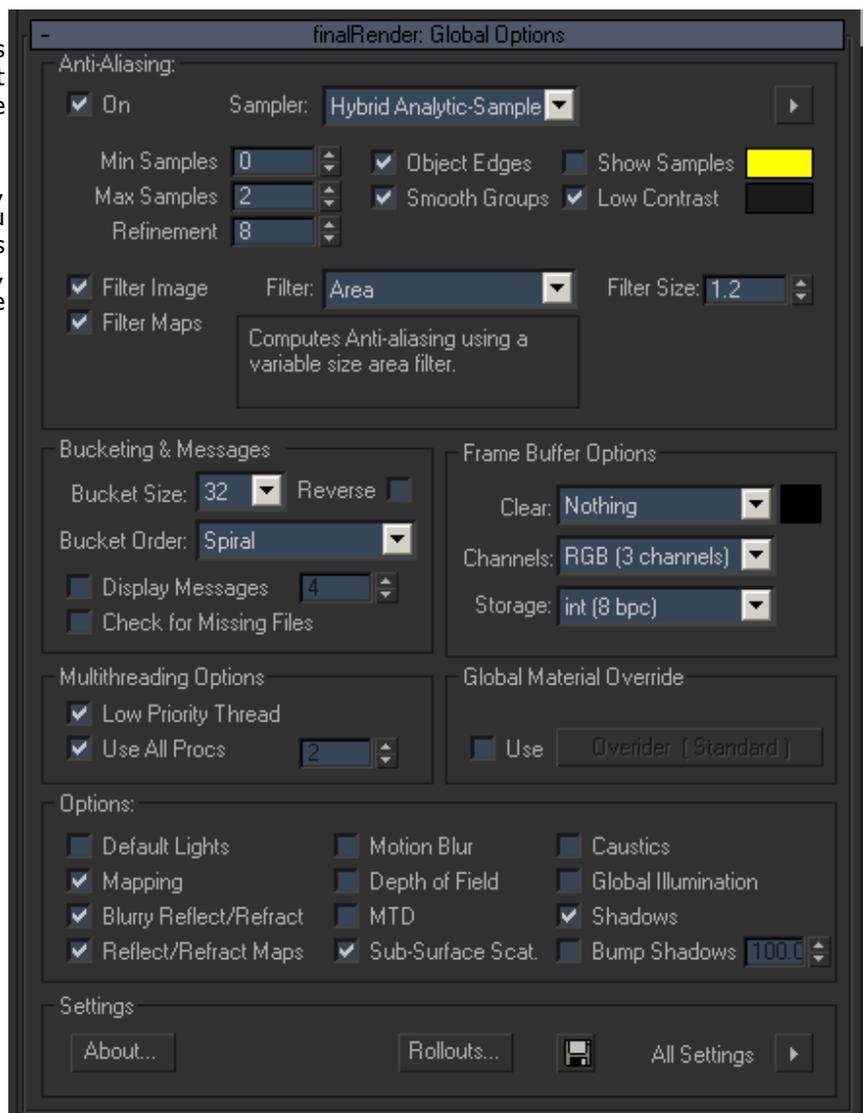
■ I will try here to show you quickly where are the main features of finalRender Stage1 to get it friendly as soon as possible after installation.

■ Renderer :

First of all, if not ever done, assign finalRender Stage1 as renderer in 3dsmax : You do that through renderer, rollout "Current renderers". You should now got a few more fonctions than our old scanline !

Basically, the "commong parameters" rollout is identical.

In "fR Globals Option", you will find the general parameters, such as antiAliasing, buckets and verbose options, etc. You also get fast access to ac/deactivate features. Others rollouts are for their own features parameters (Raytracing, GI, Caustics, MTD, cameras, etc). Take a look at them, but we will look back further.



■ Material Editor :

Another place where finding Stage1 options is in material editor. Open it, and hit "Get material". You see now four new materials and one new map type.

■ *finalRender Stage0* material is some kind of phantom material, which can't be rendered through Stage1. It is here to open old Stage0 scenes, and being able to convert them into Stage1 materials.

■ *fr_metal* and *fr_glass*, as their names implies, are some special simple/fast shaders for metal and glass surfaces.

■ *fr_advanced* is the full Stage1 material, with all shading controls over the raytracer. *fr_advanced* also give you some locals controls on caustics and GI multiplier, for instance to set an object emitting more GI than it should.

■ The *fRaytrace* map allow you to use Stage1 raytracer with any kind of material, just as standard raytrace map. You shouldn't use standard raytrace map anymore, as it is far slower than Stage1 raytracer, just to talk about speed...

■ Material Converter :

Talking about the material converter (developed by Matt Clementson), it add a shortcut in your quad at installation. you can also put an icon somewhere on your UI to launch it.

It will allow you to convert many materials to Stage1 *fr_Advanced* or standard : Standard, Raytrace, vRay, Brazil, RayMAX, Toon, *fr Stage0*, *fr Stage1*, RenderDrive. Toon materials are converted into *finalToon* materials.

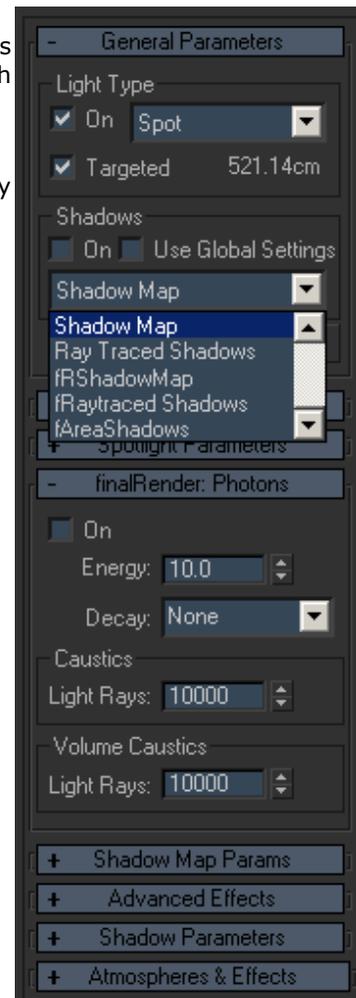
■ Lights :

Stage1 adds some new lights (Rectangular, Object, and Particules), and some new shadowing algorithms for all 3dsmax lights. You get *fRaytraced shadows*, faster and more complete, in particular with transparent objects, including SSS.

Also *frshadows maps*, which can be prerendered, and support opacity mapping.

Last but not least, you get *fAeraShadows*, for ... aera shadows !

You also get a new rollout, "finalRender : Photons", on the lights, which give control the caustics send by the light.



■ Locals properties :

Lastly, and not the least, you will find all local controls, per objects, in fr_properties, accessible via the quad.

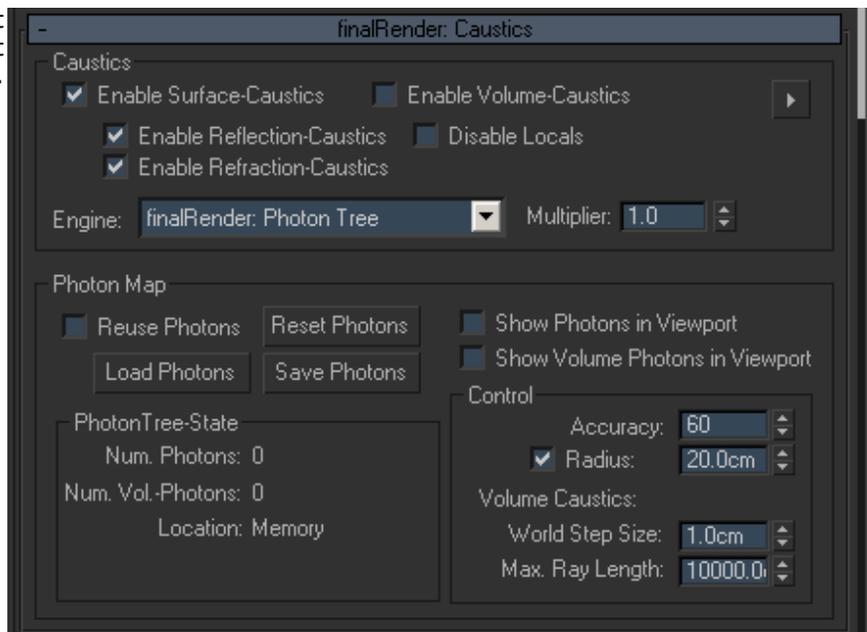
It's here that you will find object properties for Stage1, such as "send GI", "seen by camera", etc. You can for instance, got an object which send GI, but not rendered, or whatever combination like this.

You will also find all locals controls about GI, Geom, Caustics, MTD, etc. Feel quiet, you are not forced to use these settings ! but it's really powerfull in complex scenes where you need different settings for different objects.

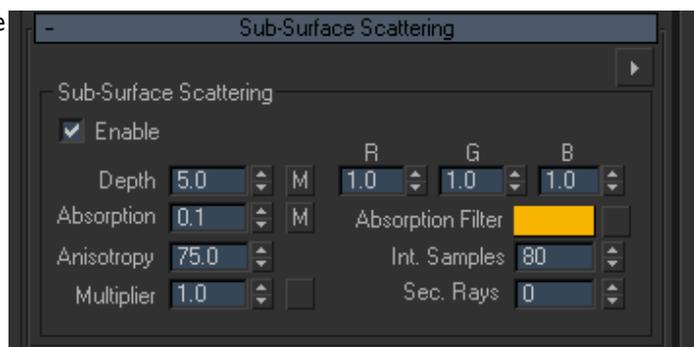
Where finding what :

■ **GI** : Enable Gi in renderer. By default, all objects receive and send GI (fr_properties).

■ **Caustics** : By default, objects receive Caustics, but don't send. You must enable "send Caustics" for at least one object (fr_properties), and one light (rollout finalRender:Photon). Then enable Caustic in the renderer.



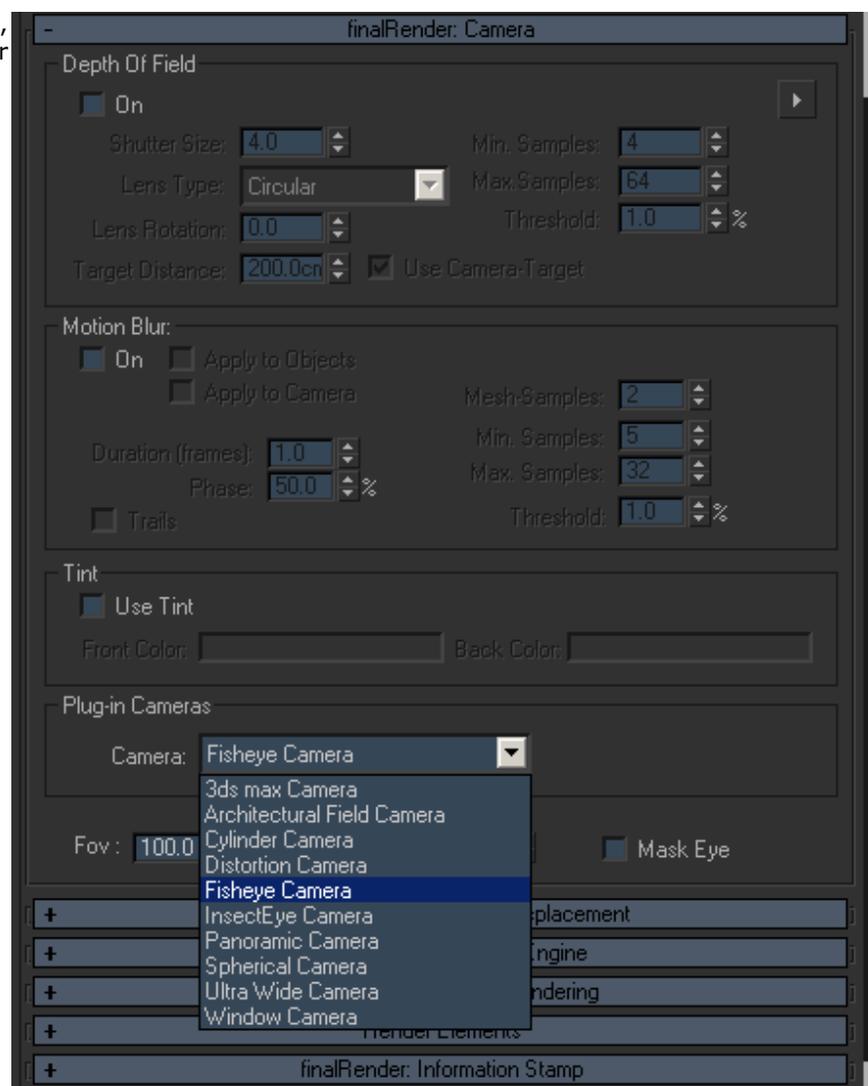
■ **SSS** : SSS is accessible through fr_advanced material, in Sub Surface Scattering rollout.



■ **MTD** : MTD options are accessible through renderer. Then, you must put a map on a displacement slot in any material (standard, fr_advanced).

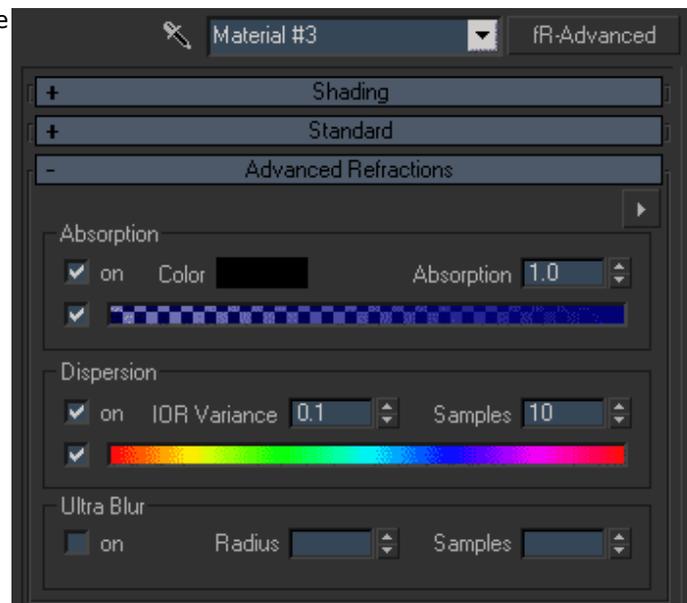


■ **fr_cameras** : The Stage1 special cams (Fisheye, Distortion, Panoramic etc) are in the renderer, in "finalRender : camera" rollout.

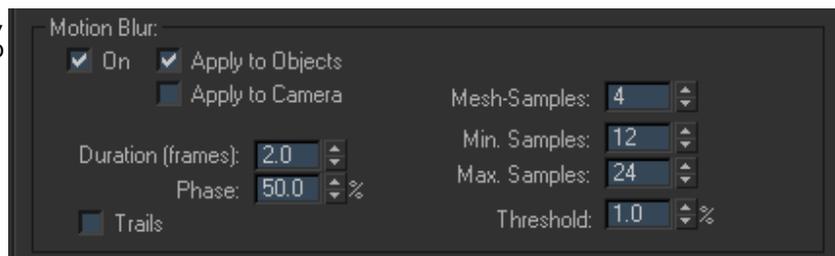


■ **Distributed rendering** : The standard network rendering is accessible as usual in common parameters. Stage1 DR got its own rollout "finalRender : Distributed Rendering" in the renderer (if installed).

■ **Dispersion / Absorption** : Access these parameters in fr_advanced material



■ **3D Motion BLur** : Access these parameters in the renderer, rollout finalRender:cameras. You have also to active it into fr_properties of concerned objects.



■ **finalToon** : finalToon is accessible into renderer/effects.

Annexe :

fr_advanced :

Blinn L1 L2 L3 L4

Enable Specular Layer 1

Specular Level 45.0 M
Glossiness 32.0
Soften 10.0
Anisotropy 50.0
Orientation 0.0
Global Roughness 0.0

Copy Paste

Standard

Diffuse M Self-Illum.
Level 100.0 Level 100.0

Reflection

Reflect M Blurry 0.0
IOR 1.5 Samples 1
Fresnel Quality 0.0

Refraction

Refract Blurry 0.0
IOR 1.5 Samples 16
Priority Quality 0.0
Fresnel Internal

Exclude... All Settings

Advanced Reflections

Absorption on Color Absorption 1.0
Max Distance 1000.0

Ultra Blur on Radius 4.0 Samples 80

Anisotropy Amount 0.0 Align Object UV Camera
Orientation 0.0

Spectral Amount 0.0 Direct Swap
Balance 0.0 Grazing

Falloff Advanced Fresnel Metallic Custom Curve
Exit Color Environment

Local Settings Ray Threshold 10.0 Consider Atmospherics
 Blurry Affects Caustics

Environment Use Global Environment Settings None

Advanced Refractions

Absorption on Color Absorption 1.0

Dispersion on IOR Variance 0.0 Samples 10

Ultra Blur on Radius 4.0 Samples 80

Shading Maps

	Amount	Map
<input type="checkbox"/> Roughness.....	100.0	None
Layer 1:		
<input type="checkbox"/> Specular.....	100.0	None
<input checked="" type="checkbox"/> Specular Level...	100.0	Map #1 (Splat)
<input type="checkbox"/> Glossiness.....	100.0	None
<input type="checkbox"/> Anisotropy.....	100.0	None
<input type="checkbox"/> Orientation.....	100.0	None
Layer 2:		
<input type="checkbox"/> Specular.....	100.0	None
<input type="checkbox"/> Specular Level...	100.0	None
<input type="checkbox"/> Glossiness.....	100.0	None
<input type="checkbox"/> Anisotropy.....	100.0	None
<input type="checkbox"/> Orientation.....	100.0	None
Layer 3:		
<input type="checkbox"/> Specular.....	100.0	None
<input type="checkbox"/> Specular Level...	100.0	None
<input type="checkbox"/> Glossiness.....	100.0	None
<input type="checkbox"/> Anisotropy.....	100.0	None
<input type="checkbox"/> Orientation.....	100.0	None
Layer 4:		
<input type="checkbox"/> Specular.....	100.0	None
<input type="checkbox"/> Specular Level...	100.0	None
<input type="checkbox"/> Glossiness.....	100.0	None
<input type="checkbox"/> Anisotropy.....	100.0	None
<input type="checkbox"/> Orientation.....	100.0	None

Maps

	Amount	Map
<input checked="" type="checkbox"/> Diffuse.....	100.0	Map #2 (Splat)
<input type="checkbox"/> Self-Illumination...	100.0	None
<input checked="" type="checkbox"/> Reflect.....	100.0	Map #1 (Splat)
<input type="checkbox"/> Reflect Blurr.....	100.0	None
<input checked="" type="checkbox"/> Bump.....	50.0	Map #2 (Splat)
<input type="checkbox"/> Displacement.....	100.0	None
Sub-Surface Scattering:		
<input type="checkbox"/> Depth.....	100.0	None
<input type="checkbox"/> Absorption.....	100.0	None
<input type="checkbox"/> Absorption Color..	100.0	None
<input type="checkbox"/> Multiplier.....	100.0	None
<input type="checkbox"/> Light Filter.....	100.0	None

Sub-Surface Scattering

Enable

Depth 5.0 R 1.0 G 1.0 B 1.0
Absorption 2.0 Absorption Filter
Anisotropy 80.0 Int. Samples 80
Multiplier 1.0 Sec. Rays 100

GI / Caustics

Global Illumination Send 1.0
 Receive 1.0

Caustics Send 1.0
 Receive 1.0

Overrides Object Settings Generate Reflection Generate Refraction

Exclude...