

# Material converter v0.9beta

## Introduction

This is a simple utility to make it easier to move scenes from a rendering engine to another. Lots of work have to be done in terms of materials or types of engines, but it will progress step by step.

In the following table you can appreciate the possibilities of the script at this moment. It will be updated with each new release along with the rest of this document.

| From.../To... | Scanline | Mental Ray | Vray | Final Render | FryRender | Maxwell |
|---------------|----------|------------|------|--------------|-----------|---------|
| Scanline      |          | YES        | YES  | NO           | ---       | YES     |
| Mental Ray    | NO       |            | YES  | NO           | YES       | YES     |
| Vray          | YES      | YES        |      | NO           | YES       | YES     |
| Final Render  | NO       | NO         | NO   |              | NO        | NO      |
| FryRender     | ---      | ---        | ---  | ---          |           | ---     |
| Maxwell       | YES      | YES        | YES  | NO           | NO        |         |

Some of the combinations shown in the table (marked with "---") can't be reached by not being able to access them from maxscript. In addition, due to changes in materials from evolution of render engines, there are the following limitations:

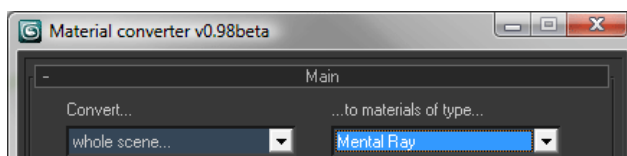
- 3dsmax9 or higher
- Vray 1.49.xx or higher
- Mental Ray takes in consideration Arch & Design (mi) material only (at this moment)
- Fryrender 1.9 +
- Maxwell 1.6 +

## Script installation

The script does not require installation of any kind. To use it, it is only necessary to go to menu MAXScript-> Run Script ... and then find the converter file.

## General settings

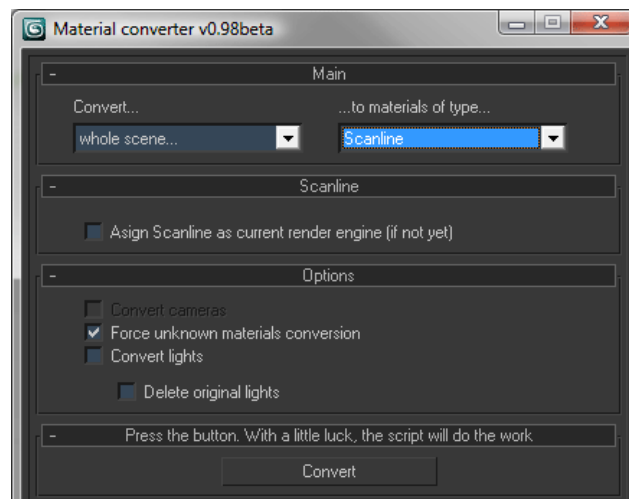
- **Convert...** : defines if you want to convert the whole scene or just selected objects.
- **...to materials of type...** : Select the destination engine for the scene.



## Scanline conversion

The *Scanline* conversion is present since the beginning of this script, and therefore remains, but it may be the least used and will probably be eliminated over time. Available options are as follows:

- **Assign *Scanline* as current render engine (if not yet):** uses *Scanline* as current renderer.
- **Force unknown materials conversion:** if this box is checked and there is any unknown material in the scene, it's replaced by default material. In this case, means that any incompatible material becomes a *Standard* material with default values.

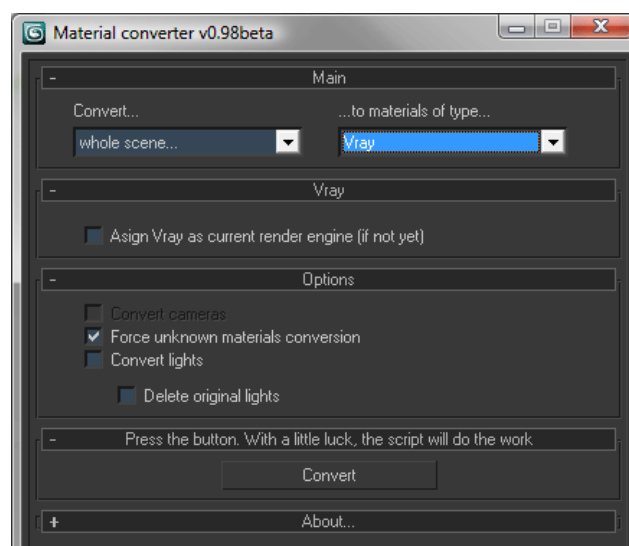


## VRay conversion

At this moment the only supported conversion comes from *Standard* materials and *Mental Ray* materials. The reason for little progress in conversions to Vray is that, normally, this is a "base" engine, where are created materials which we want to transform to another types.

Available options are as follows:

- **Assign *VRay* as current render engine (if not yet):** uses *VRay* as current renderer.
- **Force unknown materials conversion:** if this box is checked and there is any unknown material in the scene, it's replaced by default material. In this case, means that any incompatible material becomes a *VRay* material with default values.



## Mental Ray conversion

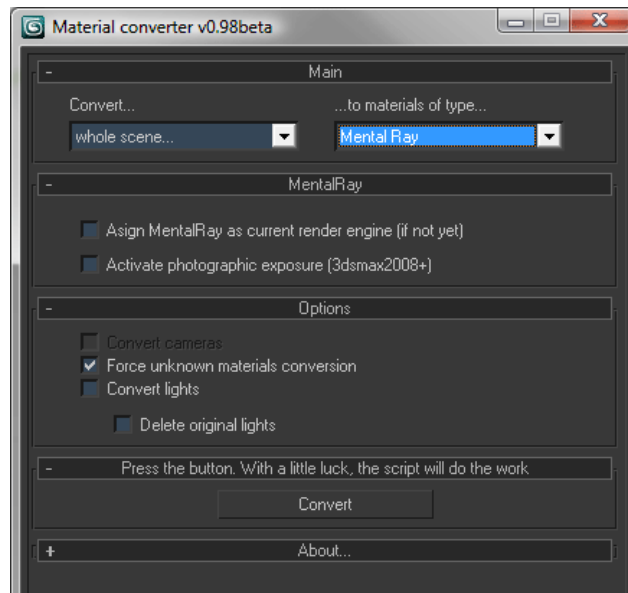
Available options are as follows:

- **Assign Mental Ray as current render engine (if not yet):** uses *Mental Ray* as current renderer.
- **Activate photographic exposure (3dsmax2008 only):** Activates exposure control (located in the environment dialog) and sets photographic exposure mode, something highly recommended in MentalRay 3.6
- **Force unknown materials conversion:** if this box is checked and there is any unknown material in the scene, it's replaced by default material. In this case, means that any material other than *Standard*, *V-Ray* or *Mental Ray* (Arch & Design material (mi)) becomes an Arch & Design (mi) material with their default values.

There are some limitations converting *V-Ray* materials, mainly motivated by the fact that their material lacks a specific value indicating the amount of reflection and refraction, only color is provided, and the color intensity determines the weight.

In addition, some *V-Ray* materials can't be converted in this moment, as *V-Ray2SidedMtl*, *V-RayBlendMtl*, *V-RayFastSSS* or *V-RayOverri-deMtl*. It's the same for maps *V-RayColor*, *V-RayCompText*, *V-RayHDRI* and *V-RayMap*.

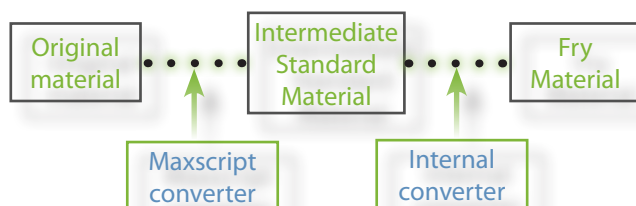
Will be added in following updates.



## FryRender conversion

First of all, the direct conversion of any type of material to *FryRender* is impossible, being an external program with which maxscript can't access.

Fortunately, *Fry* includes an internal converter for translate Standard materials in *Fry* materials. We can use it to convert materials from other engines through a simple process:



The original material, can be *Standard*, *V-Ray* or *Mental Ray* material transforms into a intermediate *Standard* material which would not be the logical translation, but it is the material necessary to perform on the last step with the internal converter, to obtain the most accurate material compared to original.

Available options in this dialog are as follows:

- **Assign *FryRender* as current render engine (if not yet):** uses *FryRender* as current renderer.

- **Convert cameras:** convert scene cameras into *Fry cameras*, maintaining the camera type, the focal length and clipping planes. If this option is enabled, takes into account the options on rollout labelled "Convert cameras":

- **Copy animation:** new cameras inherit animation of original cameras.

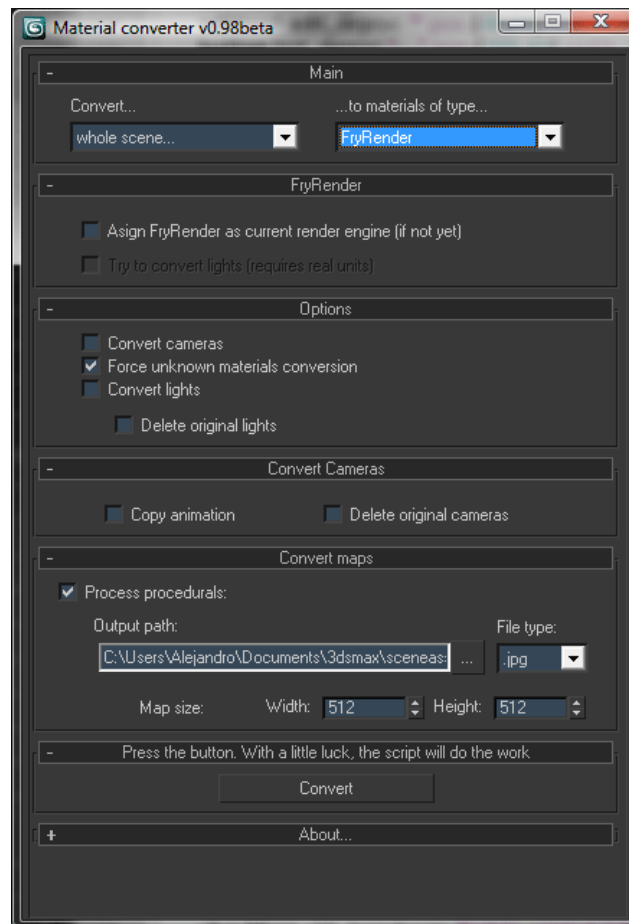
- **Delete original cameras:** remove cameras successfully converted

- **Force conversion of unknown materials:** if this box is checked and there is any unknown material in the scene, it's replaced by default material. In this case, means that any unsupported material becomes a *Fry* material with default values.

- **Process procedurals:** When the script find a procedural map, mix map or similar, if this checkbox is active, it creates an image of specified size and replace the original map with the new image. Like any texture, need coordinates information, so mapping an tile values must be adjusted manually. Output folder for maps, size and map type must be defined here.

### Notes:

- Conversion of metal materials (silver, chrome...) gives bad results, since the script can't set high nd number or create a single layer material with roughness 0 or near 0.
- Bump value in *Fry* is always 50
- It's not possible to launch the internal converter through maxscript, so after the conversion, user must do this manually with the quad menu item



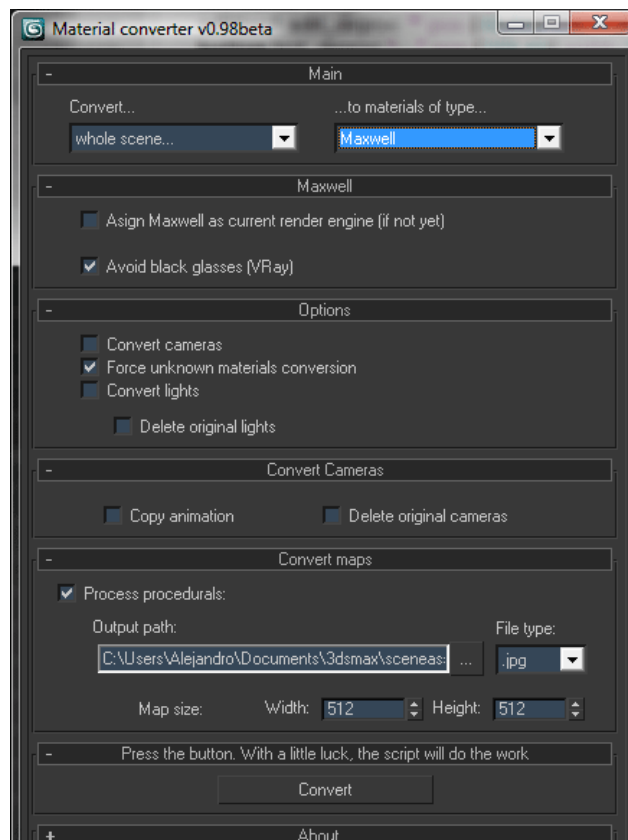
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## Maxwell Render conversion

*Maxwell* conversion can be done from Standard, *V-Ray* or *Mental Ray* materials. Unlike previous versions, since *Maxwell 1.6* it's possible to generate new material layers with maxscript. This allows more accurate conversion. It's also possible to convert cameras, although at this time only takes into account the *Vray* physical camera.

Available options are as follows:

- **Avoid black glasses (Vray):** In *V-Ray* usually set diffuse color to black or very dark when you try to get glass. Direct conversion from this material to *Maxwell* would result in a black dielectric, which is not what we were looking for. By activating this option, if one RGB component of diffuse color in original material is black, instead of copy the color it's replaced by white.
- **Convertir cámaras:** convert scene cameras into *Maxwell* cameras. Currently, only *Vray* physical camera are converted, retaining its parameters (f-number, shutter speed, ISO...). If this option is enabled, takes into account the options on rollout labelled "Convert cameras":
  - **Copy animation:** new cameras inherit animation of original cameras.
  - **Delete original cameras:** remove cameras successfully converted



- **Force unknown materials conversion:** if this box is checked and there is any unknown material in the scene, it's replaced by default material. In this case, means that any unsupported material becomes a *Maxwell* material with default values.
- **Process procedurals:** When the script find a procedural map, mix map or similar, if this checkbox is active, it creates an image of specified size and replace the original map with the new image. Like any texture, need coordinates information, so mapping an tile values must be adjusted manually. Output folder for maps, size and map type must be defined here.



## Contacto

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