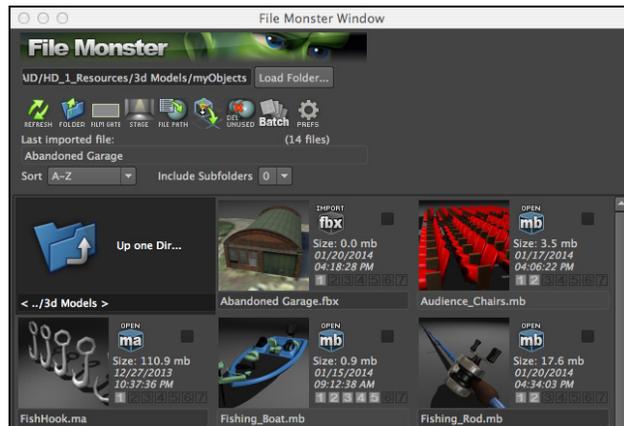


File Monster

By Peter J Walters



File Monster Overview

File Monster is a python script for Maya to make the managing, viewing, opening, importing and referencing 3d models easier and faster. I had a project where I had hundreds of miscellaneous 3d files of all types and I couldn't tell which ones I could import and which ones I couldn't. So, I wrote a simple UI window and it just kept growing to the tool you see now, which is vastly improved over my initial version.

Whether you're perusing downloaded 3d files, organizing your 3d print files in non-native formats, going through old files or looking at models/animations files which you outsourced, this is a great little viewer that filters only shows files that you can import or open in Maya. Click on the icon image to create an icon, which are the same name as the file. So even in a browser window you'll see an icon preview.

Features:

- Search levels of subfolders
- Batch render icons
- Shows up to 7 mini-icons per file
- Auto-move all your icons
- Custom set your icon folder
- Sort by name, size or date
- You can see all supported 3d files and folders

Common uses:

- Downloaded models
- 3d print files
- Client files
- CAD files
- Outsourcing files
- Importing lots of files into one file
- Files it looks for: .ma .mb .obj .dxf .fbx .dae(Collada) .abc(Alembic) .stl .igs. .stp .step .dwg

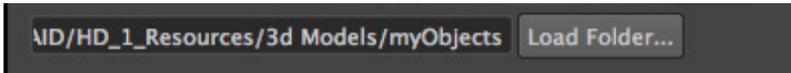
Automatically pulls up all files in a directory that Maya will open or import.

Creates icons just by clicking on the icon image. Click empty slot to make new, click existing image to overwrite.

Saves universal PNG & JPG files that have the same name as the file with added number.

New icons always update immediately without a need to reload the UI.

File Monster: The Main UI Elements



To load up files: Click 'Load Folder' to load all the 3d files in a specific folder. The UI will automatically refresh and populate.



Refresh: Deletes the current UI and rebuilds a new one based on the options you set with all the files in the directory (or subdirectories if selected). After changing prefs or options, hit this button.



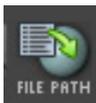
Open Folder: This will open a standard operating system file browser to the 'Load Folder' directory you specified. This should work on OSX, Windows & Linux.



Film Gate: Toggles the film gate in your current view, which lets you see exactly what you are rendering.



Stage: I have a pre-built stage that is a basic box and lights. It gives a pretty good render. Note: this is scaled dynamically on creation based on the size of all the meshes in your scene. So if your objects are small, the Render Box will be small.



File Path: This pulls up Maya's new tool for addressing textures that may not be pathed correctly. When dealing with sporadic files, this comes in handy.



Move to Origin: moves your selected object to the origin. More specifically, it moves the pivot point in Y to 0, then translates the object to the origin. If the object isn't quite getting to the origin, try freezing the transforms. Huge numbers and offsets can interfere otherwise.



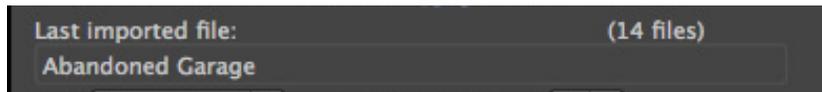
Delete Unused: This will delete any unused nodes, particularly for removing excess shading nodes that you're not using. This is best if you're importing a lot of files into one file or deleting meshes.



Batch Render: This will start a new batch render that will render all 3d files within the UI. If any cell checkboxes are checked then only those will render. If they are ALL unchecked then they will all render.

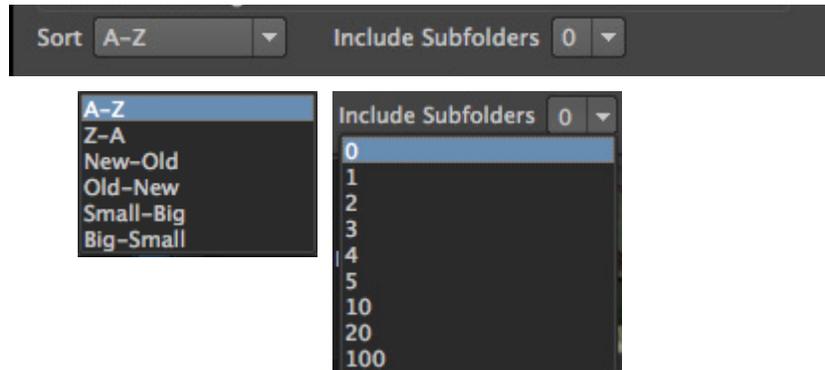


User Prefs: There are a lot of settings for sizes, render and folder options. All prefs are saved as optionVars which are saved along with all the other Maya optionVars. When entering data, it should just save, but it's good to either hit enter in the text fields just to be sure.



Simply tells you your last imported file. Text is selectable in case you want to copy it. Will not show opened .ma or .mb files, for that look at the top of Maya's main window and you can see the name.

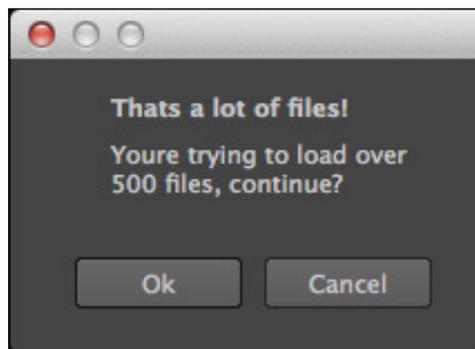
File Count: Shows you the total number of files that are loaded within the UI.



Sorting: Sort by name, file size or date.

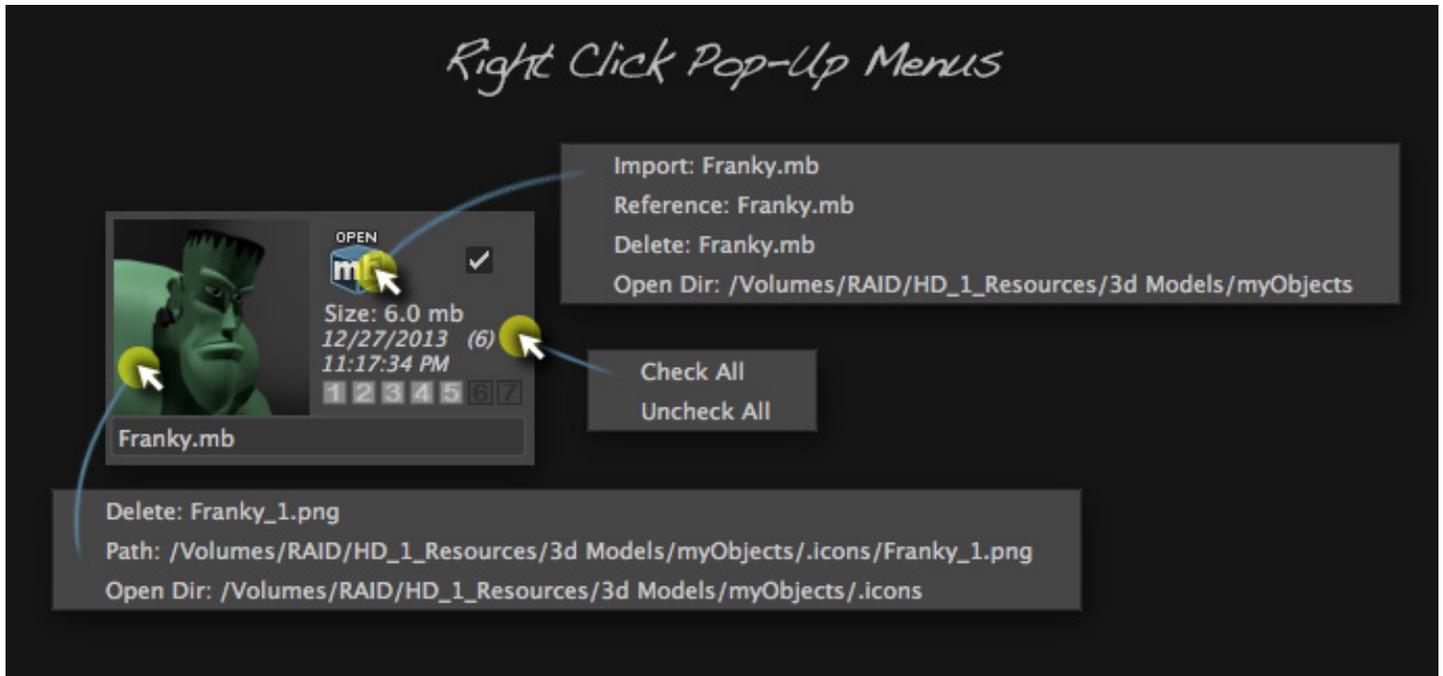
Subfolders: This will search any subfolders for 3d files. You select how many levels deep you want to search. If there are more than 500 files it will give you a warning that there are a LOT of files with an option to continue or cancel. Cancelling will only load the folder and no files.

*After selecting your option, hit the refresh button to update.



'That's a lot of files!' warning: This comes up so you don't accidentally load a ridiculous amount of files. The max warning size is currently set to 200 files.

Right-click pop-up menus



Import: Imports that file into your currently opened file.

Reference: References the file into your current file. I may add some options like namespace at some point.

Open Dir: Opens a standard operating system file browser.

Check All & Uncheck All: This is for all the checkboxes in each cell. This is only for rendering right now. So if you have 200 files and 5 need to be batch rendered. You can select those 5, hit the batch render button and only those files will be processed. If none are selected, they will all be batch rendered.

Right click on the image will bring up options for that specific icon.

Delete: Permanently deletes the icon image and removes the associated numbered mini-icon.

Path: Clicking this will just print out the image path in the command editor.

Open Dir: Opens a standard operating system file browser where the icons are located.

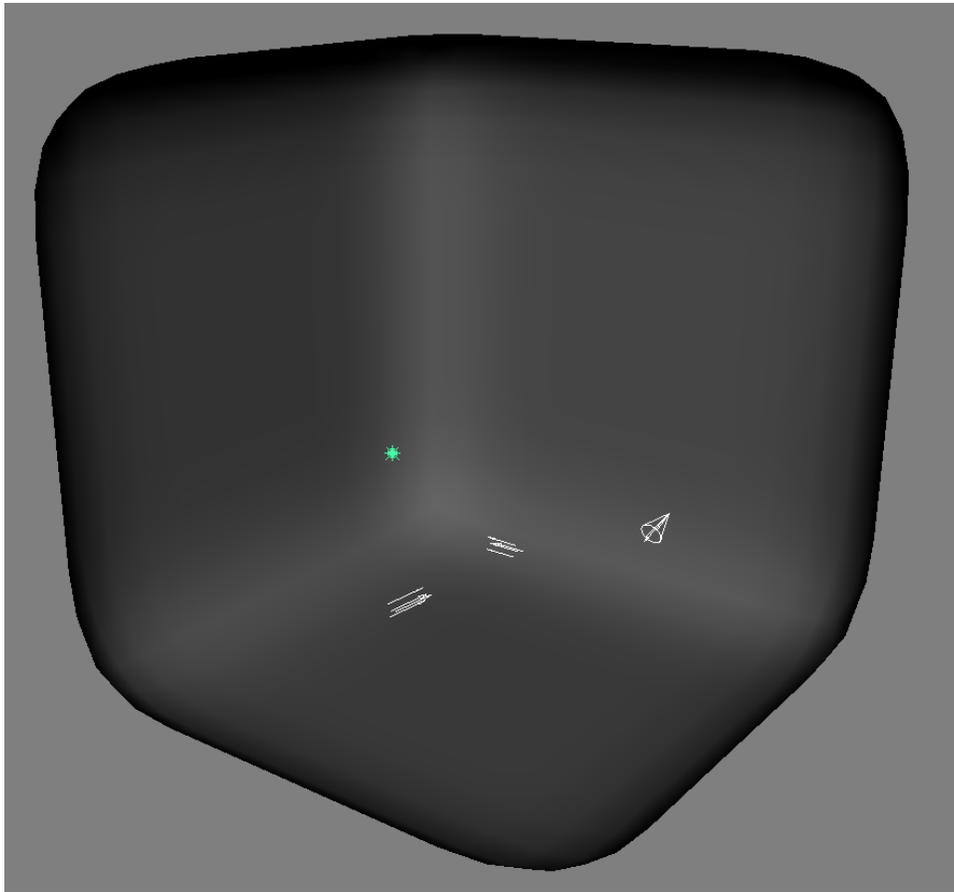
Stage



The stage is just a simple smoothed poly box, 2 directional lights, one spot light and one point light. This gives a decent render that beats the standard viewport render. If you have a scene you want to use as a base for rendering, you can set it up as the 'Master Scene' for batch rendering in the prefs window.

The scale is automatically set based on the size of the size of any meshes and nurbs surfaces you have in your scene.

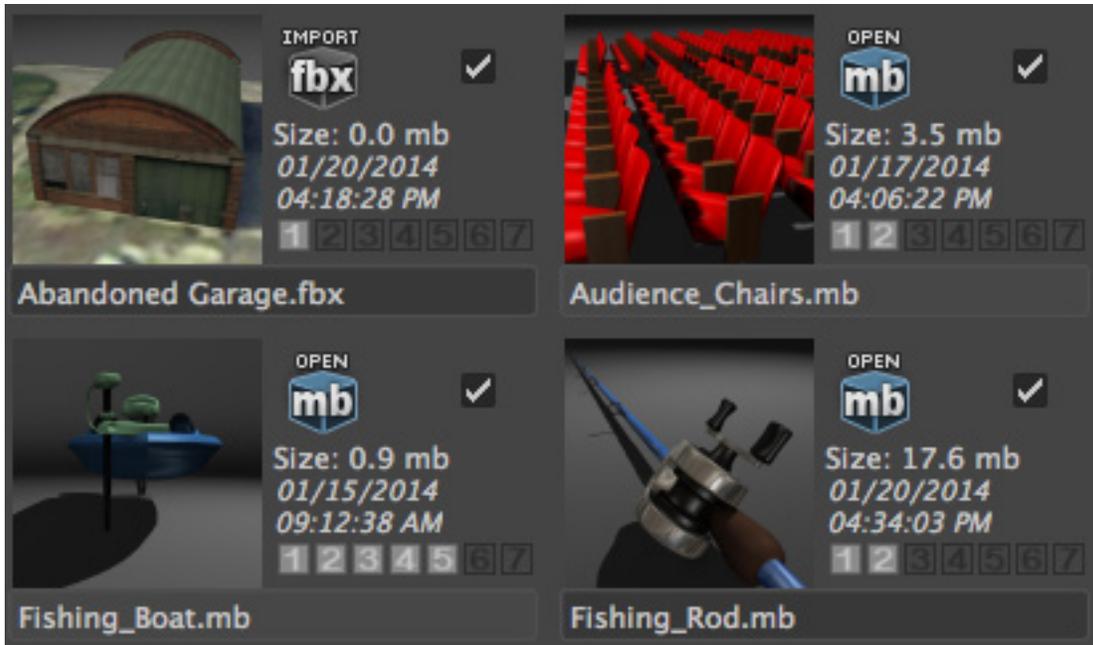
The position is also automatically set so the ground is just below your lowest mesh.



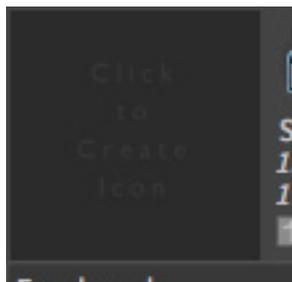
How to Render



There are 2 ways to render icons: Batch Render & Quick Render



Batch Render: Set up your settings in the Prefs window first, then hit the render button to auto-render all the icons. If you want specific files, just check the checkbox within the cells you want to render.



Renders new image.



Replaces existing image.

Quick Render: Clicking on the icon image will immediately render an icon based on what's in the current view. So you frame your object, it helps to turn on the film gate button, then either click the 'Click to Create Icon' button for a new icon. Or if you want to replace an icon, click on the icon you want to replace. The UI should update automatically.

Files are named automatically by the following: Franky.mb would render as Franky_1.png. The script will automatically take care of naming, ie Filename, underscore, number, filetype: Filename_1.jpg

- If there's a Franky_2.png but no Franky_1.png, it will create Franky_1.png, then Franky_3.png.
- Max number goes up to 99. So if you made Franky_99.png. It wouldn't make any more.
- Only the first 7 icons found will be shown, though you can render up to 99.
- It will look for any file with up to 3 characters after the main name. If you have FrankyABC.png, it will show up. If you have FrankyABCD.png, it won't show up. This is to protect against confusing files that have similar names like, FrankyV2.mb with icon FrankyV2_01.png.

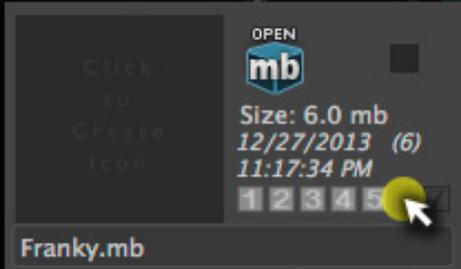
Quick Render Icons

1 Frame your model



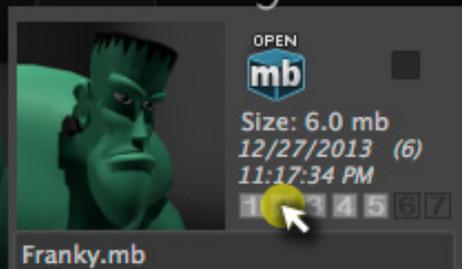
New Icon

2 Select empty mini icon

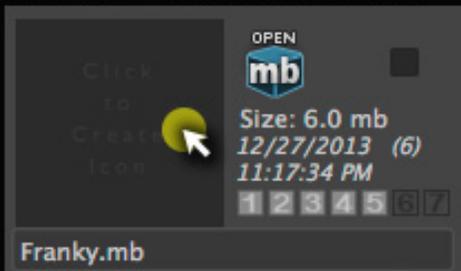


Replace Icon

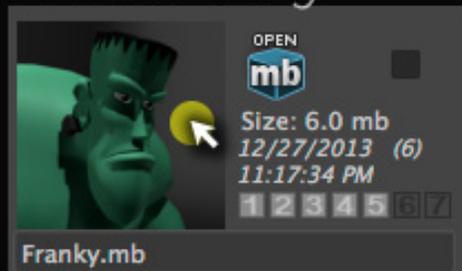
2 Select existing mini icon



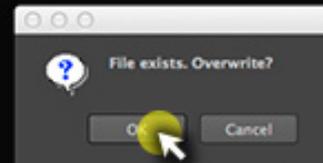
3 Select 'Click to Create'



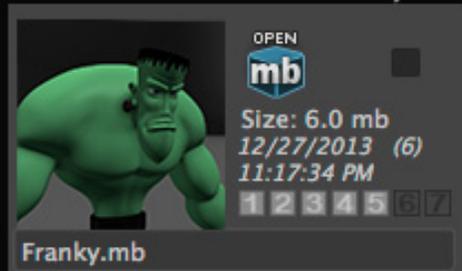
3 Select icon image



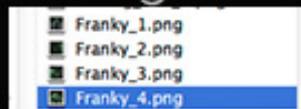
4 Icon & mini icon will update



4 Icon & mini icon will update



5 New image file saved



Prefs

Number of Columns:

How many columns show up in the UI cell build area.

Auto Scale/Frame:

This is new and somewhat experimental. It's good if you're importing huge models and they are grouped under one group. Otherwise you probably want to leave this off.

Show Folders:

Turning this off will only show model files in the cell build area.

Icon Display Size:

This is how big the icons will display. This is not the actually render size, just display. I've found between 92 and 128 is best. Going below 92 will hide certain info and may cause clipping issues.

Auto-Move Icons: This will automatically propagate your icon files from one place to another. More specifics in that section.

Save Icon Options: Where your icons will be saved.

Icon Render Size: This is the size that the renderer is set. I generally render at 512x512 or 256x256 but you can set this to whatever you'd like. Larger sizes will cause the UI to load slower, however.

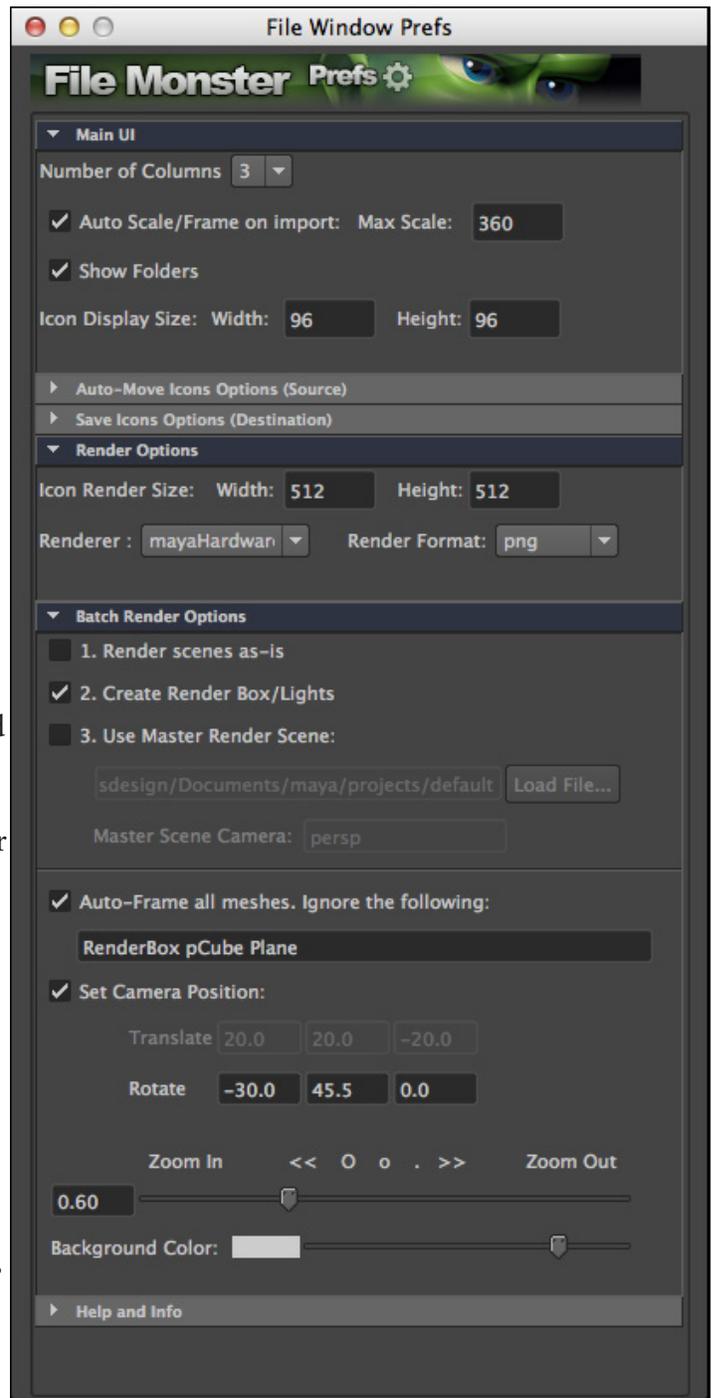
Renderer: Choose from Maya Software, Maya Hardware, Hardware 2.0 or Mental Ray.

Render Format: Set it to either JPG or PNG.

Batch Render Options:

- 1. Render Scene As-Is:** This just creates a new file & imports or opens a .ma/.mb file and renders. Nothing extra is done.
- 2. Create Render Box/Lights:** creates the same Render Box as discussed previously. Size and position are automatically set based on meshes in the scene.
- 3. Use Master Scene:** Currently set for importing only - not for .ma or .mb files. I may change this in the future. Great for having a master Mental Ray scene with all your lights render settings setup for great renders.

Auto-Frame all meshes, ignore the following: This frames all the meshes in the viewport. Maya's autoframe is decent but not great. Sometimes meshes will appear off center and I'm looking into ways to remedy this but it's just the way the built in framing works. Default is to ignore the 'Render Box' but you can add names separated by a space. Things to ignore would be whatever you don't want autoframed. For example, if you have a character



standing on a ground plane, you want the ground to be ignored so only the characters is selected. The names are wild cards so ignoring 'Plane' will ignore anything that starts with 'Plane', like 'Plane01' or 'Plane_Road' would both be ignored.

Set Camera Position: This is the starting place for the camera when doing batch renders. If auto-frame is selected, the translate is ignore because the camera auto moves to frame up the meshes in the viewport.

Rotate is in the standard order of X, Y, Z.

The first slot, X is orienting the camera up and down. 0 is straight on. -15 is looking down slightly. -90 would be looking straight down. etc.

The second slot, Y is rotating the camera Left or Right. 45 is looking left a quarter of the way. 90 is basically camera left. -45 is looking right a quarter of the way. etc.

Zoom In/Out: How much you compensate after the camera frames or how much the camera zooms in general. 0 doesn't zoom at all. It's turned off.

0.6 is a good number to set it at, which zooms in a bit.

0.3 zooms in a lot

1.0 you don't want to use, you'd probably be inside the object.

Background Color: This sets what color is set in the camera as a solid background color when rendering. Note that for PNG's the background won't show up since there's an alpha. Even turning alpha off in the render settings won't change it. Also, if there are objects in the way, ie Render Box, you won't see this. Best to use if you're rendering JPG's and only rendering single objects.

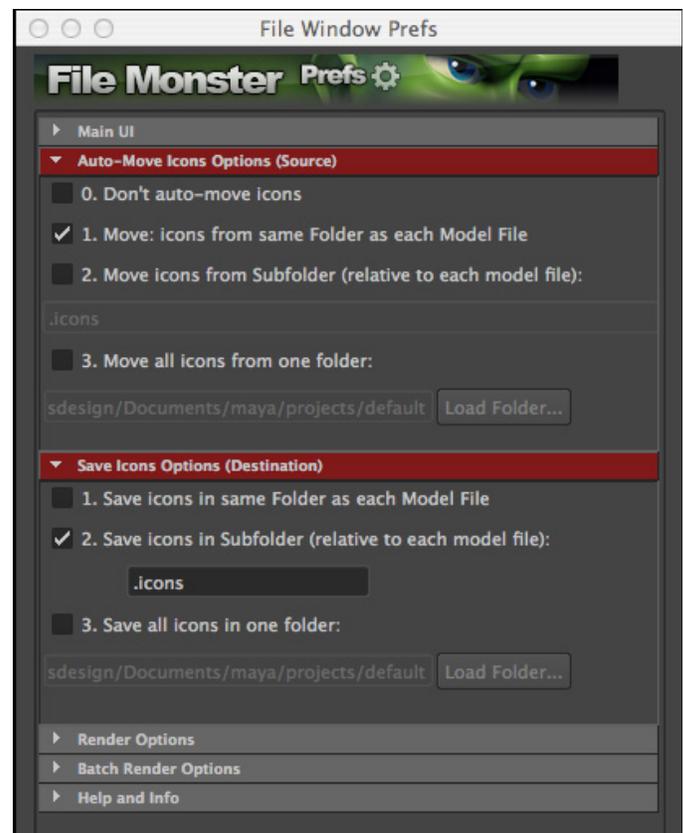
Auto-Moving Files

My lite version saves all the icons in the same directory as the model file. This version allows you to auto-move all existing icons into a specified directory. This runs every time you refresh or load up the UI, so it essentially runs in the background and is automated. Since it is automatic, when you open the frames, you'll notice they turn red just to give warning to be sure to set this accurately.

This is also good if you get files from another studio, you are looking at old files from several years ago with icons in a different directory or you want to change your icon directory to a different location or change the folder name in the future. This way it's easy and automatic.

It also handles duplicate file names by changing the end numbers only. It will not over-write or delete any files.

Another use would be to transfer all icons into one big folder for marketing, help docs, web sites, portfolios or whatever other uses you may have for the icons, since icons and renders can often cross into each other.



Common issues/solutions

After importing, textures don't display correctly.

If they are pathed correctly, save as a Maya file & reload. That should fix it.

If they are not pathed correctly, use Maya's file path tool to repath.

My renders look crappy!

Try either rendering with hardware render 2.0 or try software render set to 'Production quality'. You can also try rendering at a higher resolution which will look tightened up when viewed at a smaller size.

The polygons are flickering like crazy!

Maya sets the camera's Near Clip Plane to be relative to the size of your objects. Default is 0.1. If you're objects are huge in size, you can up this value. Or conversly, if your objects are tiny, you can reduce this number to something like 0.001. I don't currently have a setting in the batch render settings, which automatically set this to 0.1. If this is an issues, let me know I may be able to add this as a setting in prefs. But the best solution is to scale the objects down in size.

The meshes appear black in certain areas.

This probably means that the normals are messed up, which is a common issue with importing files from other programs. Try some or all the following steps...

Use viewport 2.0 & turn on screenspace ambient occlusion. The backside of a poly will shade darker.

To Fix Normals:

- Select & merge all verts with a setting of 0.001.
- 'Unlock' vert normals.
- 'Conform' all normals.
- Any normals not fixed after this need to be fixed by hand but those steps should fix most of the issues.

Can I customize the python code?

You can on the free version but this version is compiled and obfuscated.

What if I find a bug?

Go to the File Monster page on CreativeCrash.com and report it under Bugs. I generally fix bugs within a couple of days.

Notes

- Built in Maya 2014 on a Mac and tested on Maya 2011 for both OSX and Windows Vista.
- If you overwrite a JPG icon but your renderer is set to PNG, it will save as a JPG. And vice versa. This won't change the file type you selected in prefs, just for that instance.
- Use 'reload window' if you change file names or delete anything. It will auto populate.
- When setting Prefs, the last text box you edit, hit the enter key just to make sure it registers.
- 'Up one dir' always shows up first and folders always show up after the 3d files.
- Sorting: if a file is in a subdirectory, sorting will sort by the subfolder name, not the file name so all the subfolder files will be near each other. I don't have a way to over-ride this at this time.
- 'open window' will bring up a new finder window of the working directory you chose.
- New cells will show up for multiple files with the same name. For example, Franky.mb and Franky.obj will display 2 cells but share icons. I have left it this way for the time being for 2 reasons. One, I want to be able to see all the files splayed out and if if have 5 different file formats I don't want them all the be hidden in

some contextual drop down that I can't easily see. Two, changing this would mean this would become more of an assets viewer instead of a file viewer. They would need to be grouped /combined and I need to think it through so all the information is all there but also simplified. But I have been thinking about ways to do it.

How to Install

Copy the correct script depending on the Maya version you are running, into your python scripts directory & the 2 icons in your icons directory.

Script:

Windows: <drive>:\Documents and Settings\<username>\My Documents\maya\<Version>\scripts

Mac OS X: ~/Library/Preferences/Autodesk/maya/<version>/scripts

Icons:

Windows: <drive>:\Documents and Settings\<username>\My Documents\maya\<Version>\prefs\icons

Mac OS X: ~/Library/Preferences/Autodesk/maya/<version>/prefs/icons

Shelf button:

Create a new Shelf button and add the following python command or you can type into the command line.

```
import pwFileMonster; reload(pwFileMonster); pwFileMonster.pwFileMonsterUI()
```

Use FileMonster_Shelf.png for Shelf Icon.



Python Tips

If you have issues with getting python scripts to work you can try the following. PYTHONPATH in Maya.env only accepts the first path and if a system path is already defined, it won't accept any you put in that file. Frustrating so...

Run this in a command line editor, in a python tab:

```
import sys  
sys.path.append('C:/(YourMayaPythonDir)')
```

For more info on Python paths, check this page has great info:

<http://www.rthrowbridge.com/blog/2008/11/maya-python-import-scripts/>

What's Included:

pwFileMonster.pyc (*compiled python code. Compatible with Maya 2010-2014.*)

11 page, help doc: FileMonster_HelpDoc.pdf

47 custom icons