Technical Checklist for Texture Artists in Production.

. All images that are to be used as texture files should be **.pic** for Xsi/Softimage or **.tga** (Maya/Lightwave) and preferably in multiples of 2 pixels i.e. 256, 512,1024, 2048, or combinations thereof. This makes best use of Mental ray's memory space at render time. Any texture space outside of UV space should be filled in black to further reduce memory load.

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Stay away from .tif files as not all 3D apps support them fully, and there WILL be problems if the file names become too long, and layered files are supported by .tif's, which is a bad thing in production where texture loads become a problem.

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Pay special attention to bump and specular maps, they are key to lending your textured assets a lifelike appearance.

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Make sure everybody on the production has their monitors the same model, and that they are color corrected every week.

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Turn off any feature in a shader network that you are not using. A zero value still computes, so disable whatever you can.

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Make sure all Artists in a production are using the same Photoshop color profile.

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Make sure all Artists are using the same Light Rig for texturing.

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Use mathematics to combine vectors, not colors!

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Learn at least some scripting, MEL, jScript, Perl are easy and you can do tedious things with limited knowledge of a language.

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Learn "Normal Mapping" and "Sub-surface Scattering"

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Make sure your work is understandable to the next person to have to inspect/correct/adjust...that means name everything with it's function or source…. according to the production standards. This will allow queries and adjustments to be made in the asset database via scripting rather than manually.
A CG feature film can comprise 10,000 discreet elements.

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Avoid scene ambiance unless the assets will have their ambient channels textured/shaded. Scene ambiance can create a gray murkiness.

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Do not ever use parallel lines unless the render settings and output format can handle it. Best to avoid Moiré patterns. (Rasterized rendering can reduce Moiré and fix mo-blur problems on occasion.)

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Texture your assets so they can be lighted, not just to have them approved by the Art Dept.

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Never use Phong unless you absolutely can not achieve a desired look otherwise, and if you do use Phong, be sure to tune your falloff/specular decay.
Continued.....

Naming conventions for Texture Files:

Color	**-dif** (diffuse color)
Bump	**-bmp** (bump map, a scalar map, 0 to 1 value)
Specular	**-spc** (specular map, “” “”)

Reflectivity **-rfl** (reflection map, “” “”)
Ambient **-amb** (ambient color)
Environment **-env** (most often a color, HDRI, or reflection map)
Displacement **-dsp** (a scalar map)
Mask/Alpha **-alp** (alpha or mask)

asset(_scene)(_Hi/-Lo)_function_extension

Example: barnDoor_52a_Hi_dif.tga (optional)

There are quite a few variations on this and each production has their own version that is somewhat dependent upon the primary scripting language and/or asset manager software being used.
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Never append a numerical character to any texture file... 3D apps are prone to reading a numerical character as a sequence……and never have spaces!..your render may fail.

Texture sizes relating to rendered output: All textures created in your 2 graphics package (Photoshop, etc) Need to be at 72 ppi. Ignore the dpi settings… and they should be square (64 x 64, 128 x 128, etc) to use memory space efficiently. Refer to your storyboards or other documentation to judge how much screen space the asset will occupy, and then make them a little larger in case there is a change. Downsize the texture file to a size that still gives good results.

Example:
Rendered output 1280 x 1024
“Hero” or extreme CU: 2048x2048 (can be 4096 x 4096 for head/face maps or “zoom-into shots”)
Mid-ground (1/2 screen space) 1024x1024
Mid-background (1/4 screen space) 512 x512
Background 2x2 to 256 x 256

Maya specific tips:

+ Maya’s advantage in shading and texturing lies in the fact that nodes can be shared between shading networks and this can lead to lighter scene files. Once an asset has been finaled, check the hypershade tabs to see if there are any nodes that can be shared and run the “ Edit>Delete Unused Nodes” and the” Edit>Delete Duplicate Shading Networks” commands.
+ Maya has the disadvantage of including reflectivity in the Blinn, Phong, PhongE, and hairTube shaders by default. Make a script/button/hotkey to turn off reflectivity, add reflectivity as needed.
Turn off filtering in the texture nodes, and name the texture file nodes with the name of the texture.
Filtering should be done instead in Photoshop/Gimp/CinePaint .

Avoid raytraced reflections when you can, use “fake" See my "envreflection tutorial" or use the handy mel script : createEnvMap.mel created by JD!
And finally…..
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Never use Phong....use Cook-Torrance or Blinn or PhongE or Ward instead.

Go to www.texturelighting.com for free downloads and tutorials.