

More from our “Design Visualization for Architects” webcast series.

You can download the actual webcast from the [Architectural Resource Center](#).

Containers

Similar to Xreffing in their workflow, “Containers” offer the ability to have many artists working on a project at any one time. Containers add a number of enhanced features beyond the xref technology.

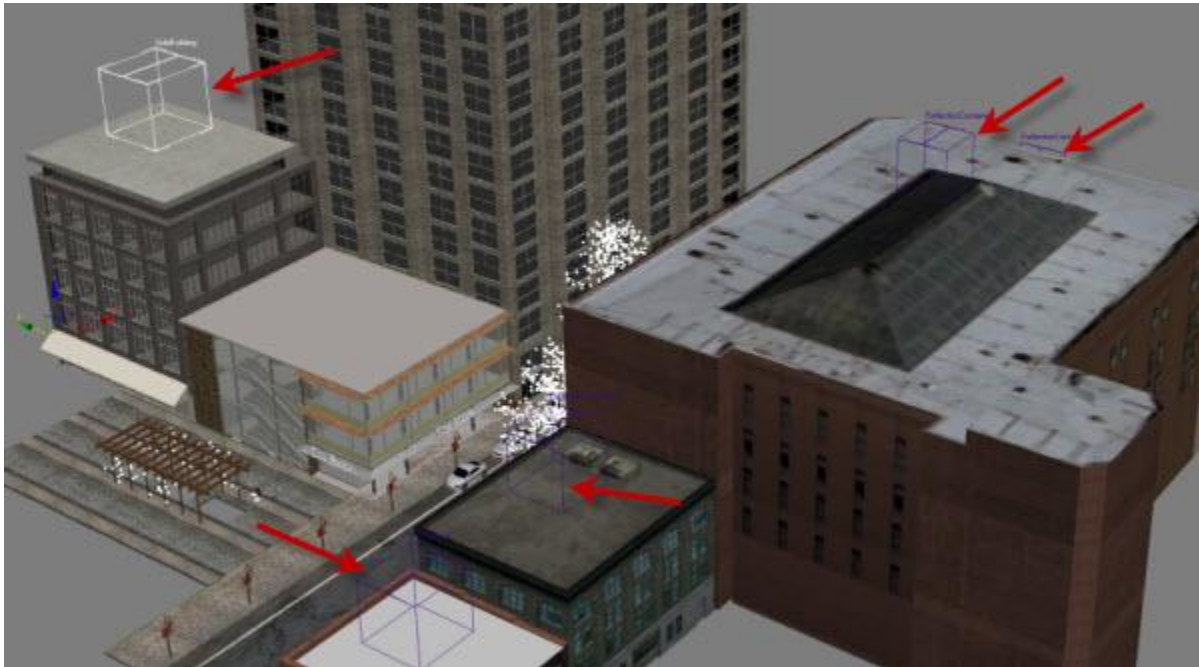
The container helper objects allows for simple transforms to the entire object.

Edit in Place allows for a minimum level of file control.

Container Labels make identifying Container Groups easy.

The ability to load and unload containers can make scene navigation a pleasure again.

The Container explorer makes all of it convenient.

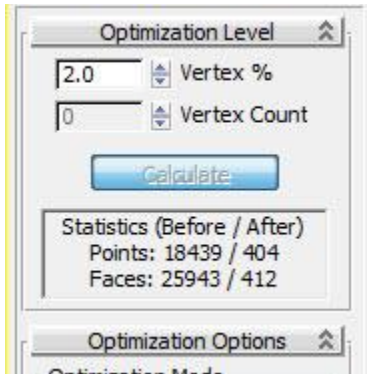


“Slop-timization”

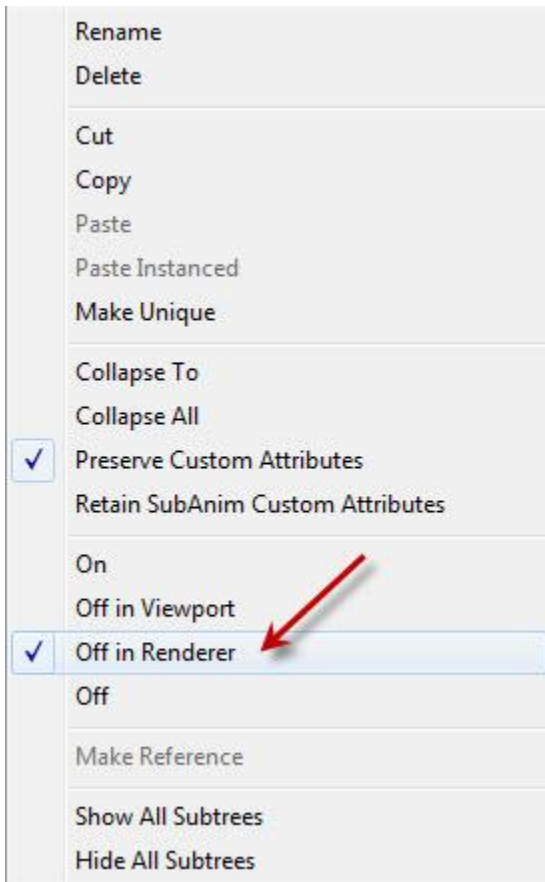
Speaking of scene navigation, Autodesk’s Gary Davis uses the following to make maneuvering in the viewport smooth without affecting rendering output.

In 3ds Max Design 2008’s subscription extension, we introduced the ProOptimizer modifier. Originally introduced to help reduce the number of faces on objects coming from other sources like Mudbox . ProOptimizer can be used to temporarily crunch the number of faces in the viewport until render time.

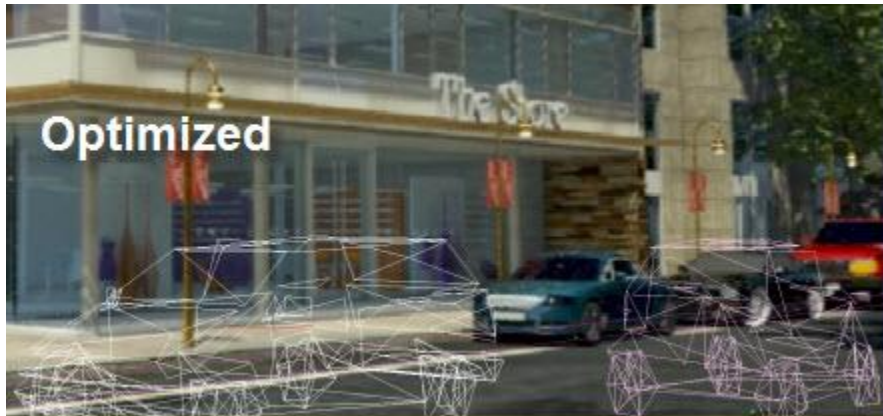
1. Apply ProOptimizer to heavy viewport object
Reduce the Vertex % to reduce the faces shown in the viewport.



2. Right Click over the ProOptimizer modifier in the stack.



3. Check the Off in Renderer option.



So the ProOptimizer can reduce the number of faces and vertices the video card needs to process. Just remember to turn it off in the rendering or the results will be less than desirable.

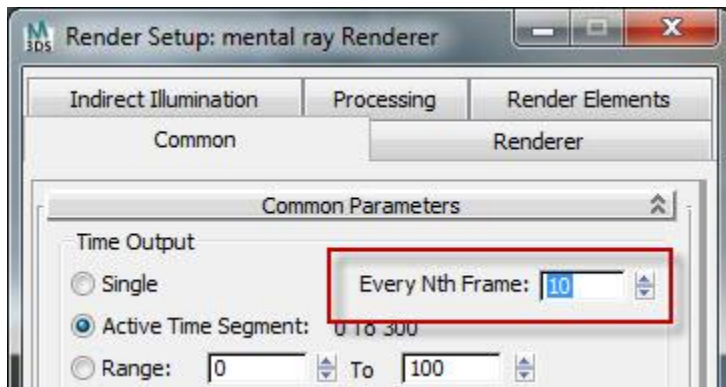
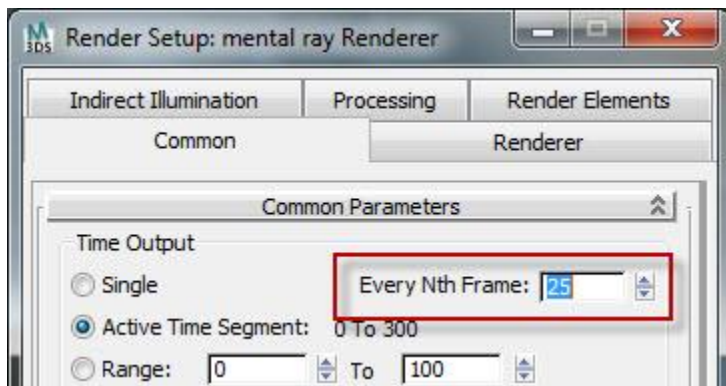
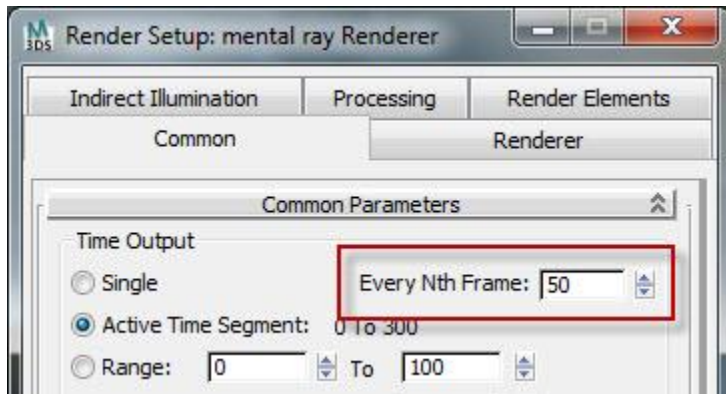
Rendering Test Runs

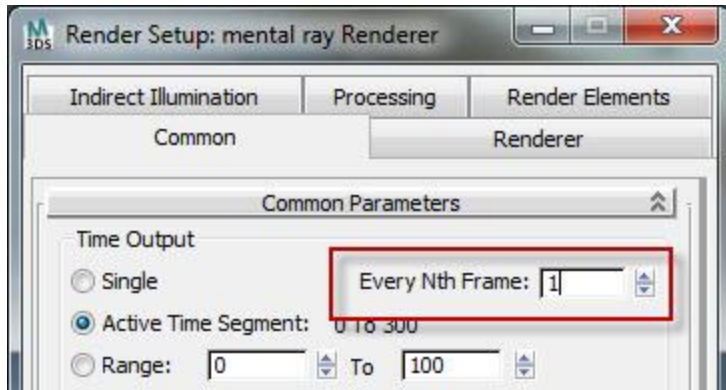
Nothing is more heartbreaking than doing a rendering and after hours, if not days of processing, to find an “issue”. Objects missing, Materials settings or lighting misplaced have all forced me to “re-render”.

When creating animations, I never recommend going straight to .avi or .mov file formats. The best practice is to render each frame as an individual file and compile in the RAM Player or applications like Autodesk Combustion or its peer.

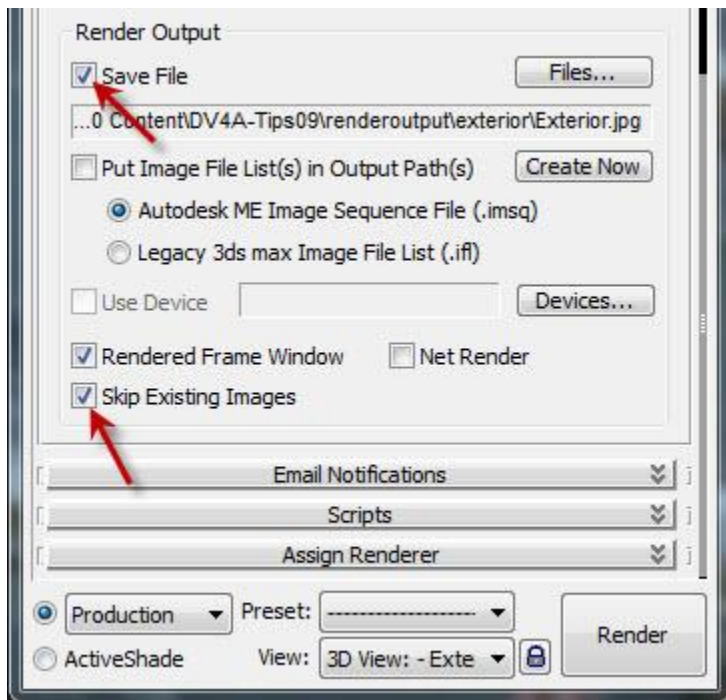
Why?

There are a number of benefits including the ability to use Satellite rendering techniques, resume rendering in the event of computer issues, etc. One of the undocumented opportunities is the ability to do test render passes and continuing to build from one test run to the next.





The key to making this a productive workflow is the ability for 3ds Max Design skip existing images in the destination folder. Of course, if I rename the output file name, this won't work.



With each rendering pass, more and more images populate the rendering output folder, yet, no images are “re-rendered”. This technique gives you the opportunity to inspect each run for “work stoppage” type of rendering issues.

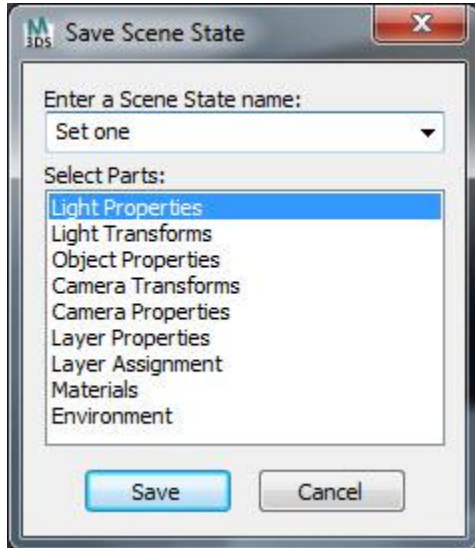
Staging a scene with Scene States and Animation

In the “Design Visualization for Architects” webcast series, we have talked a lot about Scene States. Here’s what the help file reports about “Scene States”;

“The Scene States feature provides a fast way to save different scene conditions with various lighting, camera, material, environment, and object properties that can be restored at any time and rendered to produce numerous interpretations of a model.”

Scene states can make exploring various scenarios easy. They also make moving from one scenario to another effortless.

First let's understand what we can control with the Scene State manager.



I can use any one, multiple or all of the above in the saved scene state. So you can see, it is easy to save a scene state, adjust any of the above parameters, and save that as another scene state.

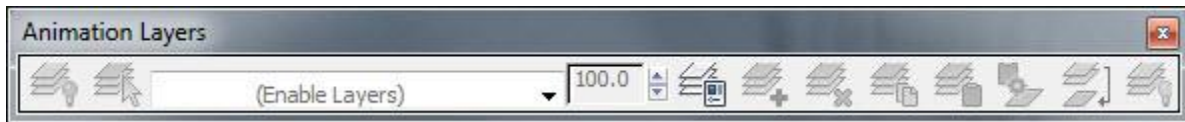
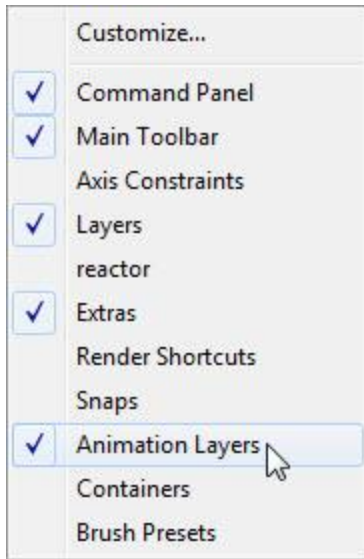
To access a scene state, simply right click in your scene and access the Restore Scene State from the Quad menu. You can also access Scene States in the Batch rendering feature. So you can render your different "states" one after another.

Animation Layers

It seems like the only element that Scene States doesn't capture is an objects position. We can easily capture those elements with Animation Layers.

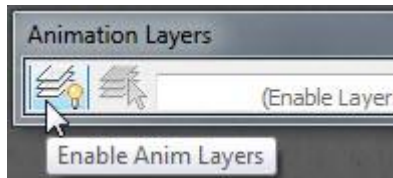
While the Help file does a really deep dive into animation layers, let's just use them, for now, to capture object position.

To make thing easier, I bring up the Animation Layers toolbar.

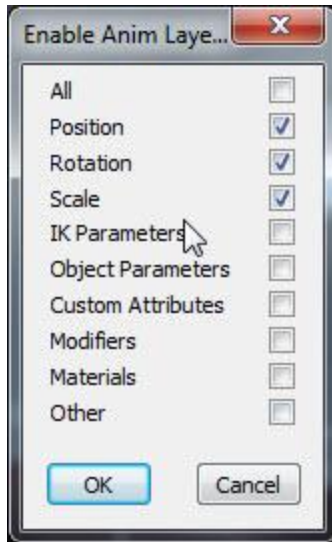


I'll need to grab everything to start the process <Ctrl>+A

From there, I need to Enable Anim Layers



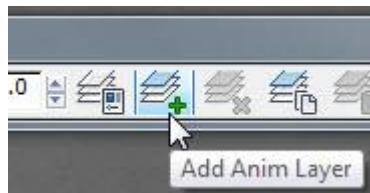
This will bring up the animation list. Here I determine what elements of animation I would like to capture. For our purposes, I will accept the defaults, Position, Rotation and Scale.



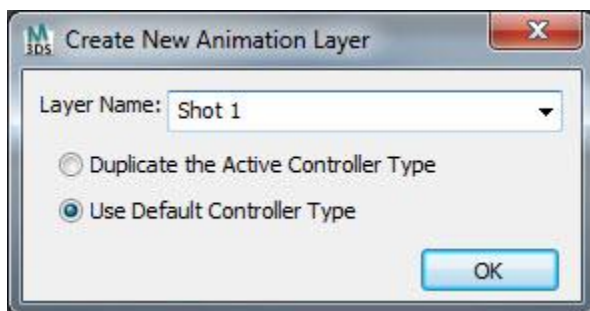
Automatically, a Base Layer is created to capture the original position.

With the Original position taken care of, let make some changes.

With everything still selected, I'm going to pick the Add Anim Layer button from the Animation Layer toolbar.



In the popup dialog box, I give the layer a name and change to the Default Controller Type.

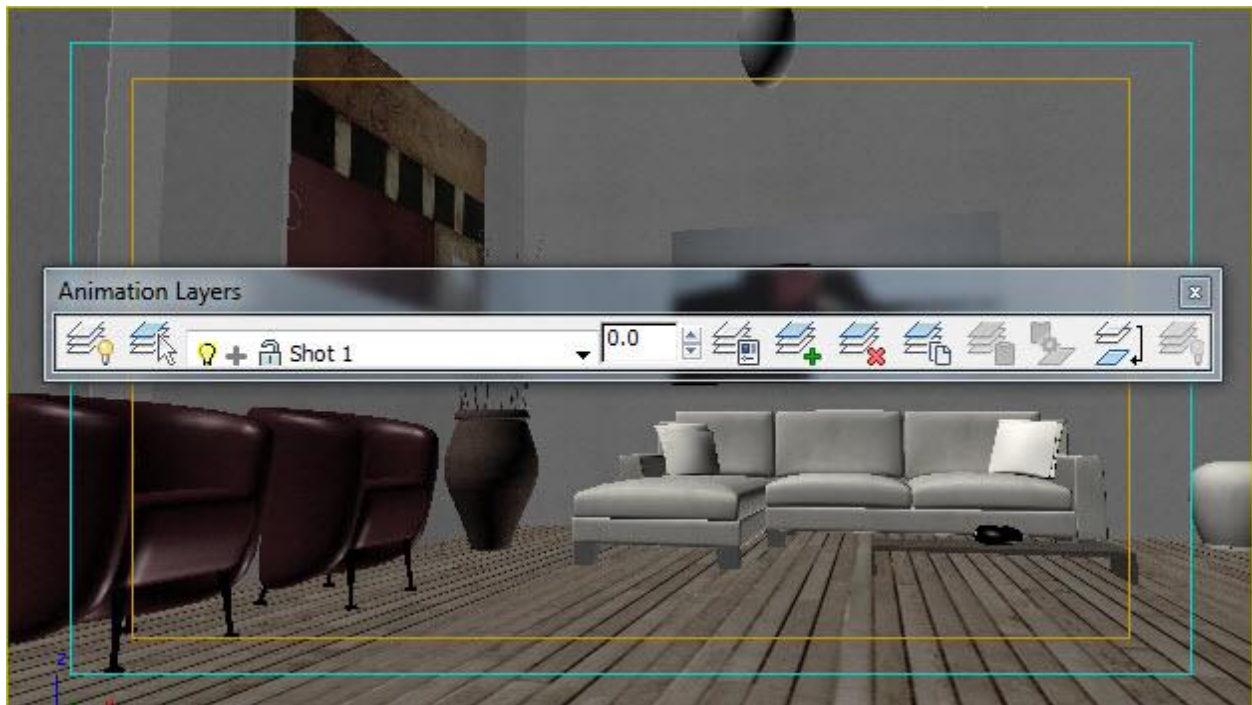
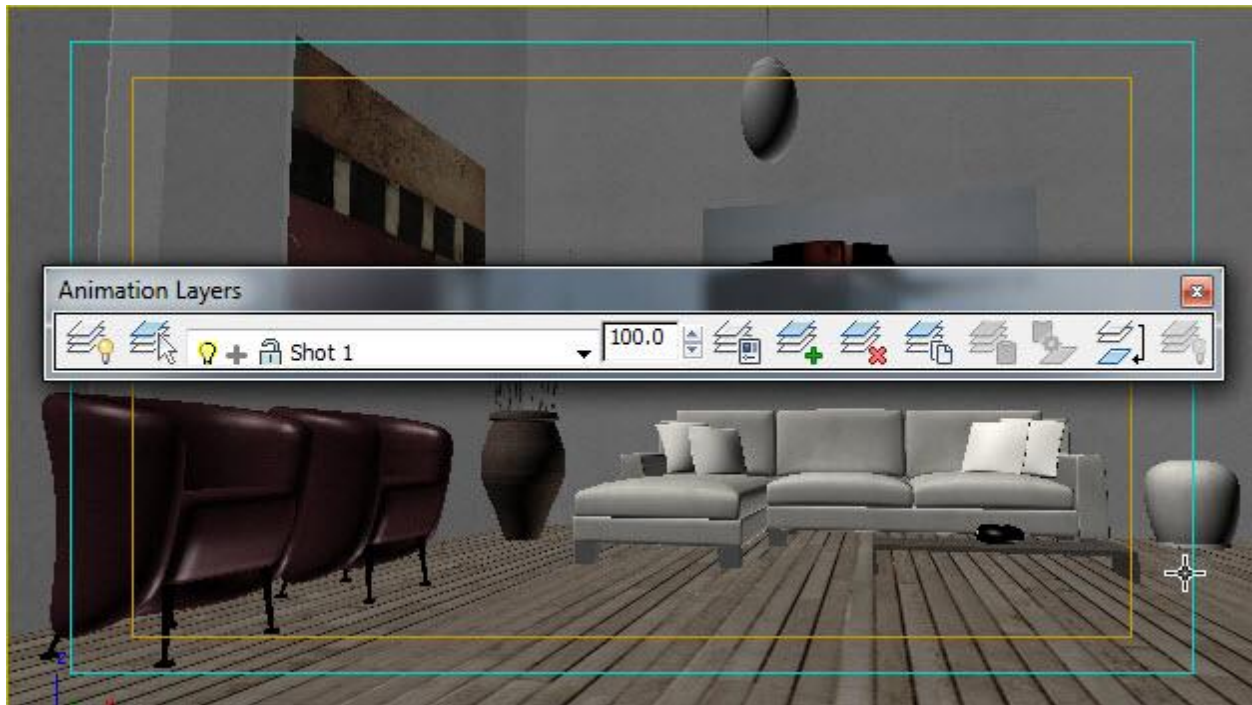


From here we can make our position changes.



Subtle? True. But, this is how Art Directors improve their movies and how you will improve your renderings.

To get the original scene back for renderings from other camera angles, we simply reduce the weight of the new animation layer down to 0% in the Animation Layers toolbar.

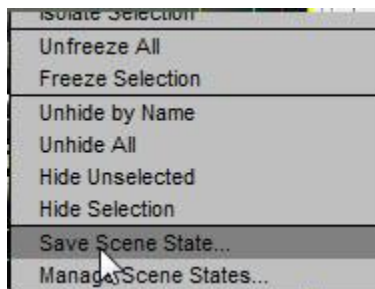


Light Lister with Scene States.

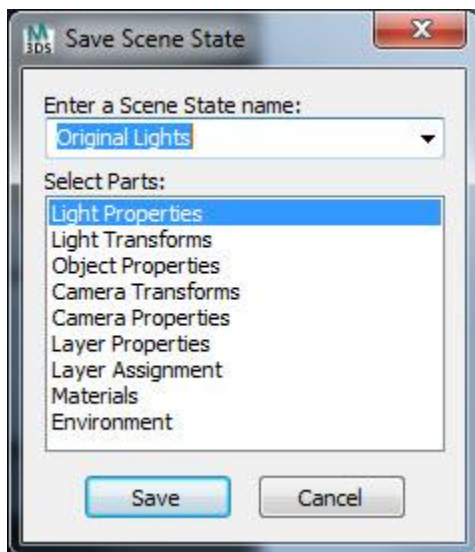
To bring it all together at this point, let's stay in the current shot with 100% weight assigned to our new animation layer. From here, I'll turn on 3ds Max Design's Viewport hardware shading to see the results of light intensities.



To capture the original intensity of the lights, I right click in the scene, bring up the Quad menu and Save Scene State.



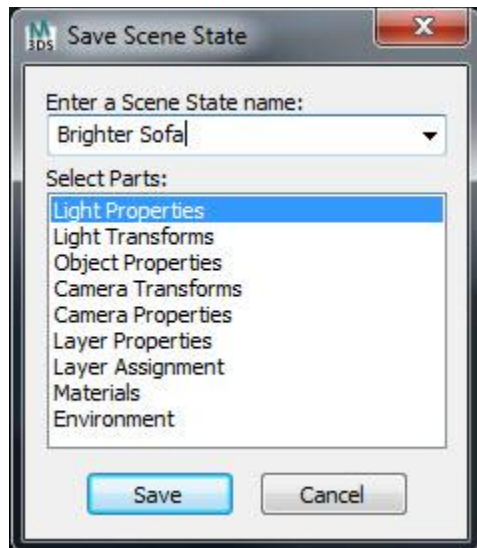
Since I am only concerned about the light intensity, I only highlight the Light Properties.



Opening the Light Lister... from the Tools pulldown, I'll make adjustments to the intensities of the lights...



...and save that to a Scene State.



Done.



Thanks for your patience for this addition. At this time of year, we here in Design Visualization are gearing up for a new year of good news. Let me know if there's anything you want us to focus on here at "With Design in Mind".