**Tutorials:
Project
Management**

Autodesk® 3ds Max®

2010

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Autodesk® 3ds® Max 2010 Software

Project Management

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This tutorial introduces you to some basic management concepts that you will use when working on scenes in 3ds Max.

In this tutorial, you will learn how to:

■ Save scene configurations as individual scene states.

■ Switch global illumination engines to save rendering time.

■ Use Batch Render to render a number of scenes sequentially.

Skill level: Beginner

Time to complete: 40 minutes

Saving and Rendering a Scene

Once you have built a 3D environment with materials, lights and cameras, you can save various scene states so that you can later recall stored parameters. In this lesson, you will adjust material and light values to effortlessly switch between a daytime and nighttime scene.

Switch global illumination engines:

You will use the mental ray renderer to simulate global illumination.

1   On the Quick Access toolbar, click the Open File button and navigate to the *\scenes\scene_management* folder. Highlight *balcony_scene-states.max* and click Open.

2   From the Rendering menu, choose Indirect Illumination.

1789

3 On the Caustics And Global Illumination rollout > Global Illumination group, turn on the Enable checkbox. Leave all other parameters at their default settings.
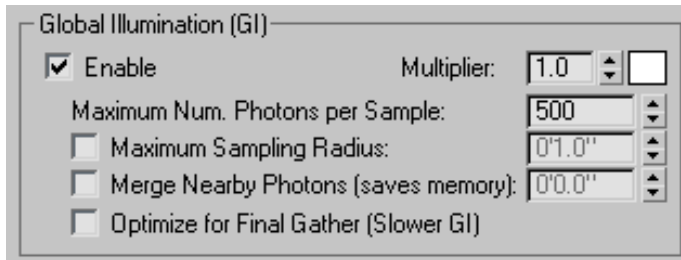
4 Render the Camera01 viewport to test the results.

Saving scene states:

1 Right-click in the Camera viewport.

2 From the quad menu that displays, choose Save Scene State.
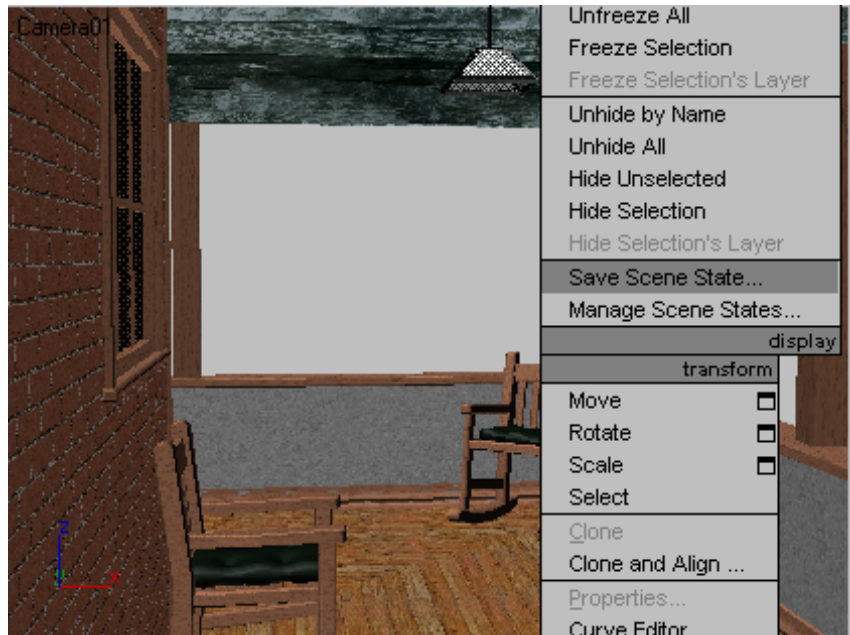
3 In the Save Scene State dialog, select all the scene parts so that cameras, environment, layers, lights, materials and object properties will be saved with the scene state.
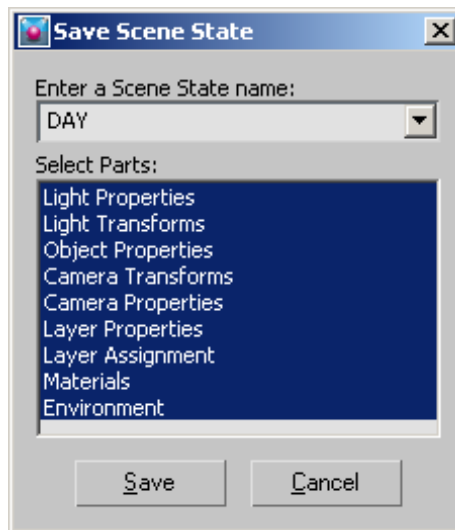
4 Name the scene state **DAY**.

5 Click Save to exit the dialog.

Changing scene parameters:

1 Go to the Display panel.

2 On the Hide by Category rollout, turn off Lights.

Three lights appear in the scene: one that simulates the sun (*Sun01),* one that simulates global ambient lighting (*Sky01),* and a simple bulb (*FPoint01).*

3 In the Top viewport, select the *Sun01* object.

> **TIP** It may be easier to select *Sun01* by pressing H to open the Select From Scene dialog.

4 On the Modify panel, in the Sun Parameters rollout, turn the light off.
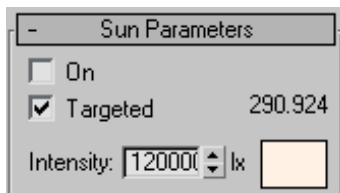
5 Press H to open the Select From Scene dialog.

6 Click the object named *FPoint01* to select it.

This represents the bulb that will light the scene at night.

7 On the Modify panel > General Parameters rollout > Light Type group, turn the *FPoint01* light on.
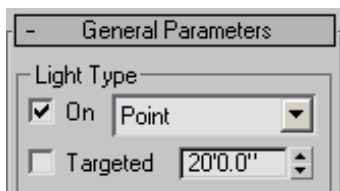
8 On the Select From Scene dialog, click *Sky01* to select it.

This object is the light system that will provide ambient illumination to the sky (skylight).

9 On the Modify panel, in the IES Sky Parameters rollout, turn the *Sky01* light off.
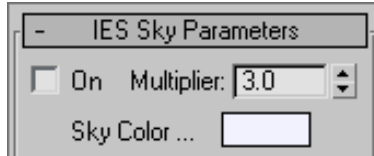
10 Render the Camera viewport.

The scene is very dark, and the background still displays daytime lighting.

11 From the Rendering menu, choose Environment. In the Logarithmic Exposure Control Parameters rollout, turn off the Exterior Daylight option.
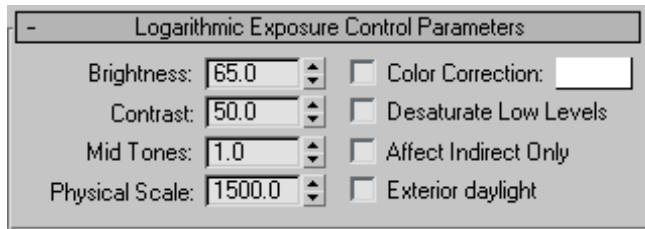
12 Press M to open the Material Editor. Locate the material named *Background*, and select it.

13 At the bottom of the Material Editor, expand the Output rollout. Set the RGB Level value to **0.2**.

-	Output	
☐ Invert	Output Amount:	1.0 ⬍
☐ Clamp	RGB Offset:	0.0 ⬍
☐ Alpha from RGB Intensity	RGB Level:	0.2 ⬍
☐ Enable Color Map	Bump Amount:	1.0 ⬍
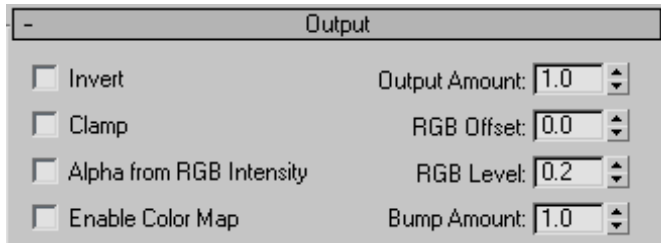
This will make the background image much darker to simulate a scene at night.

14 Render the Camera viewport again and notice the changes.

15 Right-click in the Camera viewport. From the quad menu, choose Save Scene State.

16 In the Save Scene State dialog, select all the scene parts.

17 Name the scene state **NIGHT**.

18 Click Save to exit the dialog.

Restore scene states to render:

1 Right-click in the Camera viewport, and choose Restore Scene State from the quad menu.

Notice the cascading menu lists the two scene states you previously saved.

2 Choose DAY to restore the daytime scene.

Notice in the Top viewport that the point light is displayed in black, which means it's inactive. Sunlight is displayed in yellow, which means it is enabled.

3 Render the Camera viewport to see that all scene parts such as light effects and environment backgrounds have been restored to their original states.

Next

Using the Batch Render Tool

The Batch Render tool lets you sequentially render any or all of the views in your project. It is especially useful in conjunction with the scene states tool shown in the last lesson to render different aspects of the scene with very little or no interaction on your part.

In this lesson, you will use Batch Render to automate the rendering of both your day and night scenes.

Accessing and setting up the Batch Render dialog:

1 Continue working on your scene from the last lesson, or click the Open File button on the Quick Access toolbar and navigate to the *\scenes\scene_management* folder. Highlight *balcony_batch-render.max*, and click Open.

2 From the Rendering menu, choose Batch Render.

The Batch Render dialog displays.

3 Click the Add button in the top left corner of the dialog. A new entry named *View01* is added to the list.
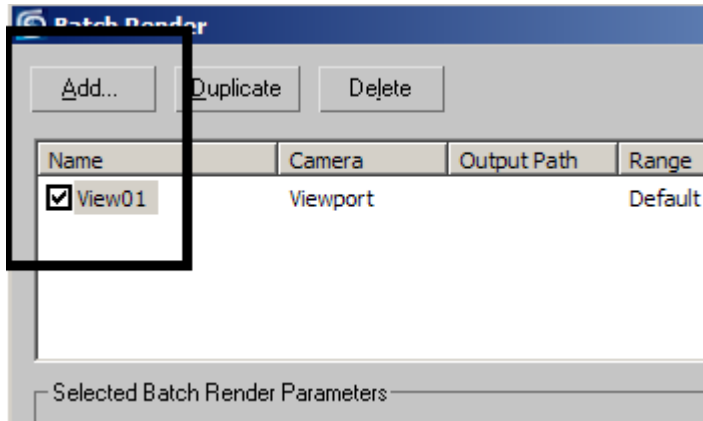
4 In the Name field, rename the view: *CamViewDay*. Be sure to press Enter after typing the name.
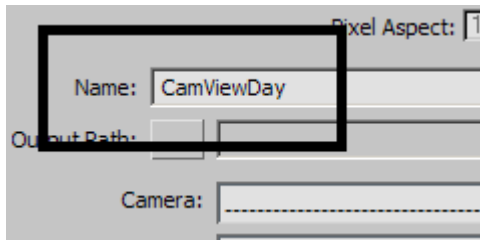
5 From the Camera drop-down list, choose *Camera01*. The view is now assigned to what this particular camera is pointed at.

6 Click the Output Path button and name the output file **DAY.JPG**, and then click Save.

7 Accept the JPEG Image Control defaults, and then click OK.

8 From the Scene State drop-down list, choose DAY.

|	Pixel Aspect:	1.0	▼
Name:	CamViewDay		
Output Path:	...	G:\DAY.JPG	
Camera:	Camera01		
Scene State:	DAY		
Preset:	--		
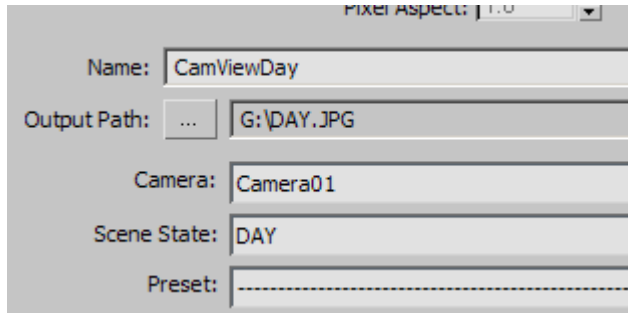
> **NOTE** This ensures that Batch Render will use the Camera01 viewport for rendering the DAY scene state, saving the output file DAY.JPG to disk.

9 Click the Add button at the top of the dialog again to add a second entry to the batch list. Rename the new entry: *CamViewNight*.

10 Assign Camera01 to this new view.

11 Make sure the new entry *CamViewNight* is displayed in the Name field, and create an output file for it named **NIGHT.JPG**.

12 Accept the JPEG Image Control defaults, and then click OK.

13 From the Scene State drop-down list, choose the NIGHT entry.
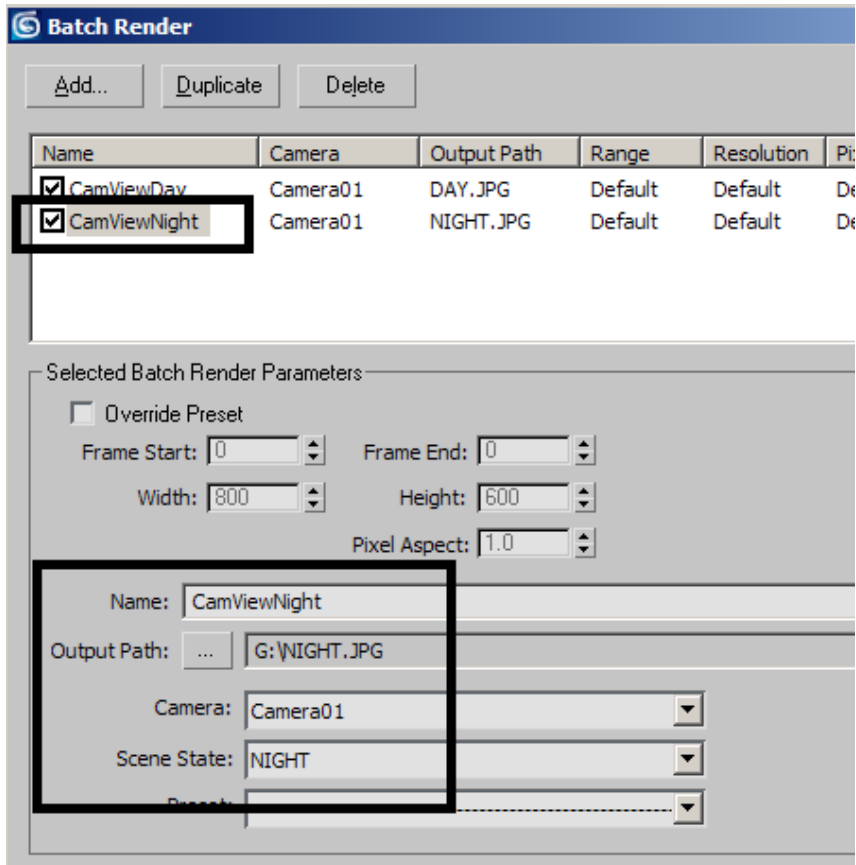
14 Click the Render button in the bottom-right corner.

Both the day and night scenes are rendered and saved to disk.

Summary

The previous lesson showed you how to save a scene state, and later restore
it. This lesson demonstrated the use of the Batch Render tool, which in a single
session lets you render multiple views and save them to disk. You can use
Scene States together with Batch Render to generate multiple renderings of a
scene under different conditions.