

This assignment is intended to give you experience with:

- running Maya and loading an existing scene file,
- setting the camera position, orientation, and focal length to achieve a particular composition.
- rendering the camera view using the Maya Software renderer, and
- handing in homework.

Maya comes with a lot of online documentation which you will certainly find helpful throughout the term. For this assignment, see the following:

- Once you've got Maya running, go to Help->Learning Movies on the menu bar. Watch the navigation essentials movie and the move/rotate/scale movie.
- In the "Hand-outs" folder on urza (see below on how to mount the networked course storage disk named urza), there is a folder with Maya 6 pdf documentation. Double-click the contents file to access all of the documents. The "Basics" file alone is 320 pages long! I recommend reading chapter 1, chapter 3, and chapter 4 of "Basics" for this assignment.

### **Step 0: find a classroom machine and get ready to run Maya**

- the "dock" shows you what applications are currently running. If the dock isn't visible, go to the Apple menu and turn it on.
- Maya works best when little else is running, so quit whatever other applications you can.

### **Step 1: mount the networked course storage disk and copy the homework project folder to the desktop**

- Under the "Go" menu in the Finder, find "Connect to server..." and type in "urza"
- use cs174 as both the name and password of a registered user.
- Choose "Course Storage" and hit OK. A few moments the Course Storage disk should appear on the desktop.
- Go to cs174. This is our course folder.
- In the "Hand-outs" folder you should see the "Maya 6 manual" folder and a folder named "assignment\_01".
- Copy both folders onto the desktop of your current machine by selecting them and dragging them to desktop. I'm having you copy the manual for faster access--you will throw it away when you're done working on the machine.
- Rename the assignment\_01 folder to a\_01\_yourName (such as a\_01\_chrisPerry).

### **Step 2: run Maya and set the current project**

- In the dock you should find the circular, red Maya logo. Click on it to run it. Be patient – it takes a moment to start. You may see two windows at startup: the main Maya window and a Learning Movies window. Feel free to check out the movies, particularly the ones I mentioned above, then close the movies window.
- On the Maya toolbar go to **File->Project->Set...** Navigate your way to the RENAMED COPY of the assignment\_01 folder that you made on the desktop. When you have the folder highlighted in the file selection window, hit **Choose**.

### **Step 3: load the assignment scene file**

- Go to File->Open Scene. This will pop up a dialog box. Select the file named **assignment\_01.mb** from the **scenes** folder within **your copy** of the assignment 01 project folder. Then click on **Open**.

## Assignment 1: The Camera

- If it loads correctly, you should be looking down on a simple outdoor scene. There is a girl holding a ball on a hill with a big foreground tree and some background trees and hills.

### Step 4: select and move the camera to where you want it

- Look at Kerlow, page 191 (3<sup>rd</sup> edition) or page 189 (2<sup>nd</sup> edition). You need to hand in a **close-up** shot, a **medium shot**, and one other shot of your choice from his list of 12.
- On the left side of the Maya interface, click on the window layout button for **Persp/Outliner**. Watch the status window on the bottom as you move the pointer over the different icons to discover which is the proper icon. This may already be the window layout, in which case, you're already looking at a list of objects in the left window and a view of the scene in the right window.
- For this assignment, **only move the camera**. There are 5 objects in the scene that have the camera icon next to them in the outliner window: the 3 orthographic cameras, the 1 default perspective viewing camera ("persp"), and a camera named **sceneCamera**. This last camera is the one I want you to use for this assignment.
- Select **sceneCamera** by clicking on its name in the outliner. In the persp viewing window hit "f" to move the persp view so the selected object is visible. Now you should be able to see the sceneCamera as its current place in the 3D virtual world.
- Pick the **Four View** window layout (just above the Persp/Outliner icon). Now you are looking through the four default cameras at the scene. Try to find the highlighted sceneCamera in each view by Apple- (or option-) dragging with the middle and right mouse buttons. Can you find it?
- Now it's time to look through sceneCamera. Find the smaller menu bar above the perspective view in the persp window. Find **Panels->Perspective->sceneCamera**. This changes the camera through which you're viewing the scene to sceneCamera. You'll hopefully see a new view of the scene which may also have a little white outline showing the region of the frame that's visible to sceneCamera. It should be a centered long shot of the girl.
- Select the **move** (w) or **rotate** (e) tool (on the left side of the interface above the window layout icons), and experiment with clicking and dragging on the red, green, and blue manipulators that appear around the camera. If you click on something else and select an object other than sceneCamera, you can go back to the outliner view and select it again (or try and left-click it in one of the windows).
- If you're bold you can try manipulating the camera in the *camera's view window itself*. To do this, you can use the camera navigation keys **option-left** to tumble the view, **option-middle** to pan, and **option-right** to dolly in and out.
- You may get lost (for instance, you may end up with the camera under the ground model!). Looking through the camera while you are moving it can be difficult. It may help to switch to a different view of the scene, find your camera icon, then move or rotate it. Be sure to **switch back** to the sceneCamera view to see what your rendered image will look like given your new camera position and orientation.
- When you have the camera selected, you can (and should!) change its **focal length**. In the upper right corner of the interface there are three icons, the leftmost of which is named "show/hide the attribute editor." Turn on the attribute editor with the camera selected and you will see focal length as a parameter. It should be set to 55 to start. Another way to get to the attribute editor is by right-clicking over the camera in one of the views, holding it down and selecting the "sceneCamera..." option from the menu that appears.

## Assignment 1: The Camera

### Step 5: render your image(s)

- When you have a view you like through the camera, middle-click on the sceneCamera view to make it the active view, then click on the slate icon in the top of the interface (the "Render the current frame" icon). You should see the render take place in a new "renderView" window.
- If you still like your view as rendered, go to **File->Save Image...** on the renderView window and **save** the image to disk as a **Tiff** file. Be sure to name it appropriately, as in: **ChrisPerryCloseUp.tif**.
- Repeat this process until you have three different images, one close-up, one medium shot, and one shot of your choice from Kerlow's 12.
- Those of you who get this far without much trouble can hunt down the **Render Globals** options (2 to the left of the render icon), click on the **Maya Software** tab, and set the Quality to **Production Quality** for your final three renders. They'll take a little bit longer but will be properly anti-aliased.

### Step 6: hand in your images and clean up

- Drop your final three images into the hand-in folder on the course storage disk. Yes it's okay that you aren't allowed to see them so just click OK. If you are in danger of writing over someone else's images then you haven't named your images uniquely. Rename them and try again.
- Throw away your local copy of the Maya 6 manual folder by dragging it into the trash.

**PLEASE NOTE: I recognize that this will be difficult for a number of you. Contact TA Josh if you would like a little extra help and read through sections of the Maya manual if you're having problems getting used to the interface. You can also email the class list, Josh, or myself with questions. Good luck!**

