

Computer Animation I

Assignment 1: The Camera

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 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 "handouts" folder on the shared disk (see below on how to access the networked course storage disk), there is a folder with Maya 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

- If the machine isn't sitting at the login screen, go to the Start menu and log out. Then re-login using the login instructions from the course information sheet.

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

- Find the "my network places" (or whatever it's called) folder and navigate your way to the G drive on workstation 5.
- Go to art374. This is our course folder.
- In the "handouts" folder you should see the "Maya6Manual" 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_yourLastName** (e.g. **a_01_perry**).

Step 2: run Maya and set the current project

- On the desktop you should find the red Maya logo. Double-click on it to run it. Be patient – it takes a while 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**.
- If it loads correctly, you should be looking down on an odd outdoor scene. There is a big man holding a rifle, running on a platform with a background desert and sky.

Computer Animation I

Assignment 1: The Camera

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

- Look at Kerlow, page 191 (3rd edition) or page 189 (2nd 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 **MainCamera**. This last camera is the one I want you to use for this assignment.
- Select **MainCamera** 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 MainCamera 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 MainCamera 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 MainCamera. Find the smaller menu bar above the orthographic view in the "front" window. Find **Panels->Perspective->MainCamera**. This changes the camera through which you're viewing the scene to MainCamera. You'll hopefully see a new view of the scene which shows what's visible to MainCamera: a poorly-staged, down-angle, long shot of the guy.
- 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 viewing 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 hotkeys **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 inside the big blue sphere). 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 MainCamera 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 "MainCamera..." option from the menu that appears.

Computer Animation I

Assignment 1: The Camera

Step 5: render your image(s)

- When you have a view you like through the MainCamera, middle-click on the MainCamera 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). The render should occur 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, using your last name and the type of shot, followed by the suffix **.tif**: **perryCloseUp.tif**.
- PLEASE FOLLOW STRICT NAMING CONVENTIONS OR ELSE WE WON'T LOOK AT YOUR WORK.
- 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 should 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 handin folder on the course storage disk.
- Throw away your local copy of the Maya 6 manual folder by dragging it into the trash.