CS 159: Computer Animation and Lighting   **Fall 2000**
Assignment 1: objects, scenes, keyframes, and preview renders

This assignment is intended to get you familiar with creating a Lightwave scene, adding objects, moving them around, and rendering preview movies.

At a minimum, you are to choose one Lightwave object from the content directory on e-work, load this object into a new Lightwave scene, and animate it. Specifically, you need to set at least two keyframes for each kind of xform (translation, rotation, scale), and these keys cannot all be set on the same frame. For instance, if you key the translation of your object on frame 10, don't key the scale and rotation xforms on frame 10 as well. Your animation needs to be a minimum of 3 seconds long, but don't make it longer than 9 or 10 seconds.

Once you like the motion you've created, render a **SMALL** preview movie and save it in your name in the proper folder. For instance, my assignment would look like this:

          `ChrisPerryA1.mov`

(I added A1 to the file name to help me differentiate between assignment 1 and future assignments)

SMALL means less than 320x240 pixels in spatial resolution. How do you tell what the resolution is? First of all, it should be much smaller than the size of the screen. A way to tell specifically is to load the saved movie into QuickTime player and do "Get Info". If you hunt around you should find what the spatial resolution is (I think it's under "video track").

DUE Monday September 18th at the beginning of class

Here are some helpful tips. Well, less like tips and more like a recipe:
- Bring a Zip disk and make a CS 159 folder on it.
- Inside the CS 159 folder make folders named Objects, Images, and Scenes.
- Mount e-work ("Recent Servers").
- Run Lightwave and load a few objects (+ hotkey) from the e-work directory until you find the object you want to work with.
- Quit Lightwave and copy that file from e-work to your Zip disk's Objects folder.
- Run Lightwave again.
- Set the content directory (o). Hit "choose" when you have your CS 159 folder selected (the one on your Zip disk).
- Use + to load the copy of the object that's sitting on your Zip.
- Switch to the camera view. If you don't see your object, go back to a perspective or orthographic view and move your object in front of the camera (or vice versa).
- Set the length of your scene to 90 frames (30 frames per second * 3 seconds).
- Pop up the general options again (o) and make sure Auto Key Create is set to Modified Channels. Do you understand why?
- Move your object around! Remember, whatever xform you change on whatever frame will set a key frame. You can delete keys by moving to the appropriate frame and hitting (delete).

(Assignment 1 continued)

- SAVE YOUR SCENE AS YOU WORK. Lightwave crashes a lot.
- When you want to preview your animation in real time, use (d) and switch to a window layout that puts a small window in the upper left (Do you understand why to use small windows when previewing?). Make sure this is your camera window.
- Make a preview (use the Preview popup menu). Play it and stare at it and make sure it's what you want.
- When it is, save the preview (use the Preview popup menu). Put it on your Zip disk and copy it to e-work before class!
- Make sure you save your scene, too (on your Zip disk).

Concepts

This assignment is trying to familiarize you with a number of (possibly new) concepts. Think about these when you're doing the assignment and make sure you're understanding them as you go! If not, please bring questions to Monday's class.

1. How Lightwave deals with objects and scenes. The Content directory.
2. Making keyframes automatically for xforms that you change on a given frame (but not other xforms).
3. Why size matters (in rendering preview movies, that is).
4. Saving all your files to your Zip disk (scenes, objects, etc.) but copying only the movie file to e-work.