

ECE 160/CS 182 - Multimedia Systems

Project Guidelines: Project 4

This document is intended as a guideline for completing the project. Note that this is more specific than the original project instructions. Also note that several parts of this document have been borrowed from the guidelines for project 3. However, we would **strongly recommend** that you to read the whole document once before submitting your project.

You must use a digital rendering package to animate a scene containing a complex object in the foreground. The scene should have a textured background. The scene should be illuminated and shadows should be visible. In the animation your object should move in front of the background (the shadows should move according to the object's movements)

This link provides a comprehensive list of software that you might consider.

http://en.wikipedia.org/wiki/3D_computer_graphics_software

- Create **at least one** complex shaped object in the foreground. By complex shaped we mean that it should be a combination of at least 2-3 basic object types (say sphere, cube, cylinder, cone, spiral etc.). Here is an example of how a flower could be done using basic shapes.



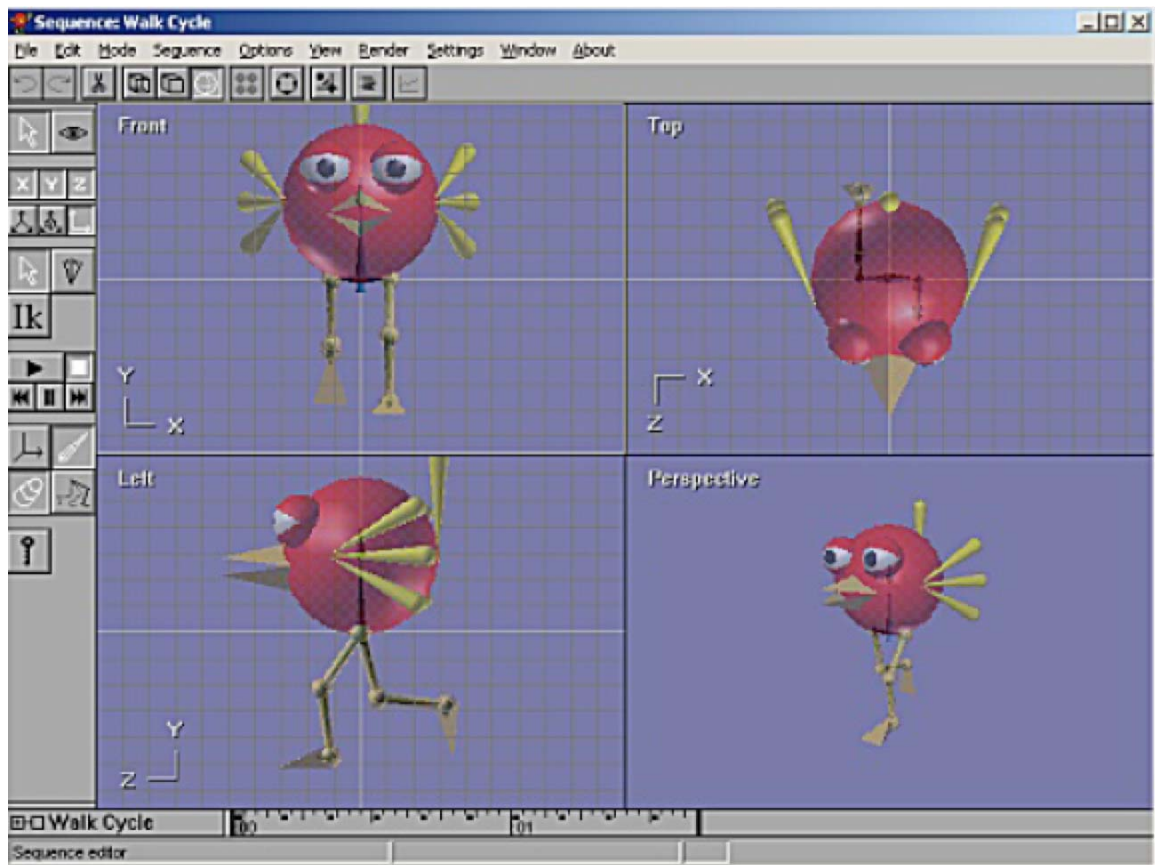
- Create a background having **at least two** different types of texture (e.g if you are creating a beach scene then the 3 possible textures are sand, water and sky. Image maps are fine).
- Illuminate the scene and appropriately create shadows for your complex object(s). Make your scene colorful.
- For the animation make your complex object move around in your scene. The shadow cast by the object should move with the object. There is no minimum time limit, but keep your final movie below 20 seconds.

- Save your work in any of the common movie formats (avi/mpg/mov/mp4). Make sure that your file plays in one of these programs: Windows Media Player/Quicktime/VLC.

Report Guidelines:

Your report should include the following (bullet format is okay):

- A screen shot of your image rendering workspace showing different views of one scene from your animation (most software have the ability to see at least 4 basic views of the scene: front, back, top, bottom, left, right, perspective etc.). See example below:



- Software used and the source for the software.
- Previous experience with animation/3D modeling software.
- Description of the steps you followed to get the final output.
- Final thoughts about the project.

To turn in:

CD: Include the finished project exported to any of the common movie formats (avi/mpg/mov/mp4).

Hard copy of Report: 1-2 pages.

Things to remember:

- If anything in this **guideline is unclear** or if you **get stuck doing your project** contact your TAs during their office hours or write to them with your queries.
- **Animation doesn't mean** that just the camera (viewpoint of the scene) moves in a static 3D world. We want to see moving objects.
- In project 3, some of the submissions were without shadows. **Make sure that your animation has shadows** of the objects moving in accordance with the objects' movements.
- Note that the grading for this project will not be based on how good your complex object looks (that was for Project 3), **but how well the object and its shadow move** in the scene.
- You may use **objects you did not create** (default objects available in your software), but extra effort must be shown with animating these.
- **Prof. Melliar-Smith has said that no extension will be given on the project submission deadline for this project, as we need to submit your grades to the registrar's office.**