

Computer Graphics

Final Project: Movie Contest



In previous projects you were given an exact specification to implement. In this final project you will create a movie using OpenGL or Blender or a combination of both. You are free to design and implement any movie you like, as long as it incorporates the required functionality described below. You can reuse any code that you've already written this term.

REQUIRED FRAMEWORK

The overall framework of your movie must include the following features:

- **Scene and Navigation:** Your movie environment must be a scene consisting primarily of 3D objects. Your movie should provide perspective views of your 3D scene while the viewpoint (camera) changes position smoothly over the entire scene (preferably by following a Bezier curve that twists around and over the scene).
- **Lighting and Shading:** Your movie must contain some lit colored objects. For these objects, you'll need to define normal vectors and materials, as well as create one or more light sources.
- **Texturing:** Your movie should include at least two textured objects.
- **Animation:** Your movie should contain at least one animated object that moves continuously as the camera flies over the scene.
- Incorporate at least **one additional feature** beyond these capabilities. Examples include: simple collision detection for your animated object; adding a spotlight that “moves” with the lamp; making an object glow as if lit from inside; adding fog to your scene; using procedurally generated textures to simulate effects such as fire and smoke; having two animated objects interact with each other; using a Bezier curve for the trajectory of an object (including the camera) – the possibilities are endless.

The maximum length of your animation should not exceed 3 minutes at 30fps.

GRADING: The additional feature will count for 25% of your grade; the remaining 75% will be assigned depending on the difficulty of what was implemented. Stated simply, grades will be proportional to effort and success. For example, a movie completed entirely in Blender will be expected to be significantly more complex and visually rich compared to a movie generated through OpenGL code.

HAND-IN: Email your movie and all source files used to produce it to your instructor, along with a readme file documenting the additional feature, the amount of time spent on this project, and any known bugs.

PRIZES: First and second place winners will receive tickets to a movie of choice (preferably an animation or special effects movie ☺).