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CS480
Self Evaluation

This semester I developed a program that reads a binary file from a 3D graphic editor and renders the content of that file to a window by utilizing OpenGL commands.

There are certain limitations to the program. Some are imposed by the editor while others are imposed by the fact that I had only a semester to develop this program.

Firstly, the types of models stored in the binary file must be stored at the same heirarchal level, at the top. There can be no parent or children models, and no linkage between models. These are all options in 3DS Max, which is the primary editor for creating these kinds of files. Simply not grouping objects, or ungrouping before saving will solve this problem.

Secondly, 3DS Max does not pay attention to the 'winding' of the faces of its meshes. This causes a problem when computing normals for lighting. While lighting has been implemented in the final program, it is not perfect because often certain faces' normals will be inverted. To my (very limited) knowledge of 3DS Max there is no way to fix this.

Thirdly, any textures that are used in the files must be in the same directory as the binary file and must be a 24-bit bitmap. Other formats will not work. Also, files made in editors besides 3DS Max often do not work.

And lastly, the program has not been designed to include camera or lighting information as so will not load any type of camera or lighting information.

Having listed the limitations of my program, I would like to point out that I consider these as limitations, but not shortcomings of my expectations. I did not expect to develop anything beyond what I have, and am pleased to have made the progress that I have.

There are several notable virtues of this program as well. First of which being that it works very smoothly. The animations that I have tested appear identically in the editor and in my program.

Items implemented include an intricate system of parsing the binary file, storing data from the file, and assembling a scene from that data. Lighting, texturing, rotation, translation, scaling, and diffuse material color (set in the editor) are all visible components of the finished product.

This program reaches 3,587 lines of code after having been trimmed considerably. Some of this size is still unnecessary because I have left 'hooks' by which future expansion will be made easier. A lot of work went into this project. And I was forced to learn a lot by feeling my way in the dark, and resorting often to trial and error

methods.

To sum things up, I am proud of this project and am glad to have produced it. My suggested grade for this course is an A.