

COMPUTER SYSTEMS RESEARCH

Project Experiment 1st quarter 2008-2009

1. Your name: __Zack_Greer__, Period: __5__
2. Project title: _Exploration_of_a_3-D_Environment_
3. Language and/or software you are using:
C, OpenGL

4. 1st quarter experiment(s) for your program.

- Problem definition, clear statement of the problem(s) or goal(s) that you will analyze/test. Be specific...what is about the current state of your program, what types of input data, what kinds of scenarios or modeling can test/graph/analyze with your program.

Currently, my program is very minimal. It only displays a world with a 3-D sphere and wire cube (reference objects) from the point of view of the player, based on the player's look direction and position.

So testing consists essentially of moving to different locations and looking in different directions to see if the reference objects display properly. This is easily seen. If you move away and they get larger, that's a problem. If you look left and they do anything but move right, that's a problem.

Unrealistic action is a failure of a test, and realistic movements and perspective are successes. I have tested my program pretty thoroughly, and have not had it fail yet.

2nd Quarter Version

1. Looking ahead to 2nd quarter, what kind of experimenting can you think of to expand into? Again, be as specific as possible – kinds of input you may use (kinds of input data), algorithms and processes your program may use, and specific kinds of output(s) you will expect. For testing - how might you validate success or failure?

I plan to have surfaces loading by that time, so hit detection and physics will be things to test. If I walk on a ramp and move up along it, that's a success. If I fall off a cliff and accelerate until I hit the ground, that's a success. If I walk on a ramp and move through it, that's a failure. If I walk off a cliff and don't fall, or fall through the ground below, that's a failure. Essentially, it's meant to model real-world physics, so if something happens that's unrealistic, the program fails.

3rd and 4th Quarter Versions

2. How does all this fit into the larger scale, or longer term, problem or goal you may be trying to solve or investigate with your project or system. Estimate what your project can achieve, the state of your project could be,

for 3rd and 4th quarters. (This may be difficult to estimate, but it's a good exercise to try)

Ideally, the project will then move into networking and chat. So I'll need to test the chat capability, and its realism (how it reacts over distance, how microphone input is functioning) as well as the networking (response times? Proper reactions to events taking place on another computer?).