

Project Review

Game Name: Spy City

Development Team

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Work Completed:

1. Gained a moderate understanding of Nebula.
2. Gained a moderate understanding of ODE physics library.
3. Learned basics Tcl/Tk and Python scripting.
4. Wrote start-up Tcl script to load nebula servers and initialize world.
5. Wrote several other scripts for aiding in model loading other miscellaneous tasks.
6. Load console server for command line script loading and command input.
7. Obtained free vehicle, building, and other miscellaneous models from the internet.
8. Obtained and familiarized ourselves with many model handling programs:
 - Wftools for restructuring Wavefront object files.
 - Right Hemisphere's Deep Exploration for quick model manipulation and file format conversion.
 - GTA 3 Mapper v2.6 for terrain data manipulation.
9. Converted and loaded main vehicle (a Nissan 350z car mesh) into nebula.
10. Improved mesh appearance by adding see through windows and separated wheel mesh models from the chassis.
11. Started creation and testing of physics model for car.
12. Added collision detection for car and environment.
13. Added simple terrain for testing purposes.
14. Created a simple 3rd person quaternion based camera.
15. Added a skydome that renders two independently animated textures and simulates daytime-nighttime changes.

Work Remaining:

1. Improve physics of camera.
2. Polish physics of playable car model.
3. Add non-playable car models.
4. Write custom loader of terrain data files into game octree.
5. Implement path-finding and other AI methods.
6. Add weapon models.
7. Create GUI for game status and interface.
8. Load music and sound effects with nebula.
9. Polish.

Current Bottlenecks:

1. Problem with turning at high speeds with player car. (Stability issue with physics model.) Working out ODE specifics to solve.

2. Collision detection with terrain problems. Car's bounding box collides with moderate grade changes in terrain. Several possible solutions including changing collision parameters or bounding box model to a tighter bounding sphere model.

Current Remaining Timeline:

26 November – 2 December:

- Write and test terrain loader.
- Finish camera implementation to include spring physics with existing slerp.
- Fix high speed driving and bounding box issues.
- Create first weapon models.

3 December – 9 December:

- Add non-playable vehicle models to world. Adapt current physics model for these cars.
- Write AI routines.
- Add weapon models.
- Create GUI.
- Add sound effects and music.

10 December – 13 December:

- Fix outstanding issues.
- Polish (if time permits).
- Play Test. =)