Procedurally Generated Dark Forest

Team 14 Members

Name	Student ID
Ashley Lee	26663486
Lori Brons	26543944
Clement Hennebelle	27432917
Radu Saghin	27667086

Table of Contents

1. Goal

The goal of the project is to create a program using OpenGL where the user can move through a procedurally-created virtual world.

1.1 Description

The team plans to create a virtual world in which the user is moving through a dark forest. The user will have a torch or flashlight, which they can shine to illuminate the scene around them. The main features to be added will be grass and trees but we also want to add rocks and a sky with a moon that shines moonlight on the environment.

1.2 Method of Asset Creation

We plan to acquire our 3D models from the following website: http://www.loopix-project.com/

Once acquired, we will integrate them in the project and modify them in such a way so as to apply randomness to the objects size, position, colors and other attributes.

1.3 Interaction Schemes

1.3.1 View Manipulation

The project would use keyboard controls to move forward, backward, left and right. Mouse controls would be used as well to change the direction of the camera. The camera will be in a first person view. In addition, a flashlight or torch will be introduced to decrease the view peripheral, creating a tense atmosphere with the limited vision from the darkness.

1.3.2 Virtual World Manipulation

The user will have the option of entering values which determine the rate, size and color of trees, grass and other objects that will be spawned in the world.

1.4 Expected Challenges

Some challenges the team expects are how to prevent the user from passing through features and the application of textures to create a realistic-looking world. Another main challenge will be to respect the milestones we have put forth.

2. Milestones

The team has tentatively planned the following timeline for implementation milestones:

	Feb-07	Feb-14	Feb-21	20-Mar	27-Mar	03-Apr	07-Apr
1. Design of code							
2. Camera controls							
3. Featureless terrain							
4. Features							
5. World generation							
6. Camera collision							
7. Documentation							
8 Testing							
9. Extras							

Tentative milestone assignments are:

1. Ashley, Radu and Lori
2. Clement
3. Lori
4. Ashley, Radu and Clement (and Lori once 3 is concluded)
5. Ashley and Radu
6. Clement and Lori

Milestones 7-9 will be performed by each team member.

3. Roles and Assignments

Radu will assume the role of Project Leader. All team members will take part in programming, testing and documentation.

For testing, the team will be divided into two groups of two: Ashley with Radu and Clement with Lori. Each person will be responsible for testing the components of the program that his or her partner codes.