

# Awakening: The Pursuit of The Artifact

Team C Game Design Document

Eric Bosley, Karen Manuykan, Jason Ware

# Contents

<b>1</b>	<b>Introduction</b>	<b>3</b>
<b>2</b>	<b>Game Mechanisms</b>	<b>4</b>
<b>3</b>	<b>Artificial Intelligence</b>	<b>6</b>
<b>4</b>	<b>Story Overview</b>	<b>7</b>
<b>5</b>	<b>Game Progression</b>	<b>8</b>
<b>6</b>	<b>State Diagram</b>	<b>10</b>
<b>7</b>	<b>Contributions</b>	<b>11</b>

# 1 Introduction

The game we are developing will be a RPG set in a medieval/fantasy type environment. The story focuses on a main character whose world is in turmoil because of evil creatures. The cause of these creatures is from an evil person named the Dark Lord. The only way to stop him is to obtain the Artifact which the main character must find in order to defeat the Dark Lord and win the game.

## 2 Game Mechanisms

The game mechanics will be based upon a real-time fighting system. The player will interact with the main character through the mouse.

- Environment
  - The terrain will be generated pseudo-randomly on the fly using Perlin Noise
  - The world will generate forests and villages within certain areas
  - Here is an in game example of the world being generated:

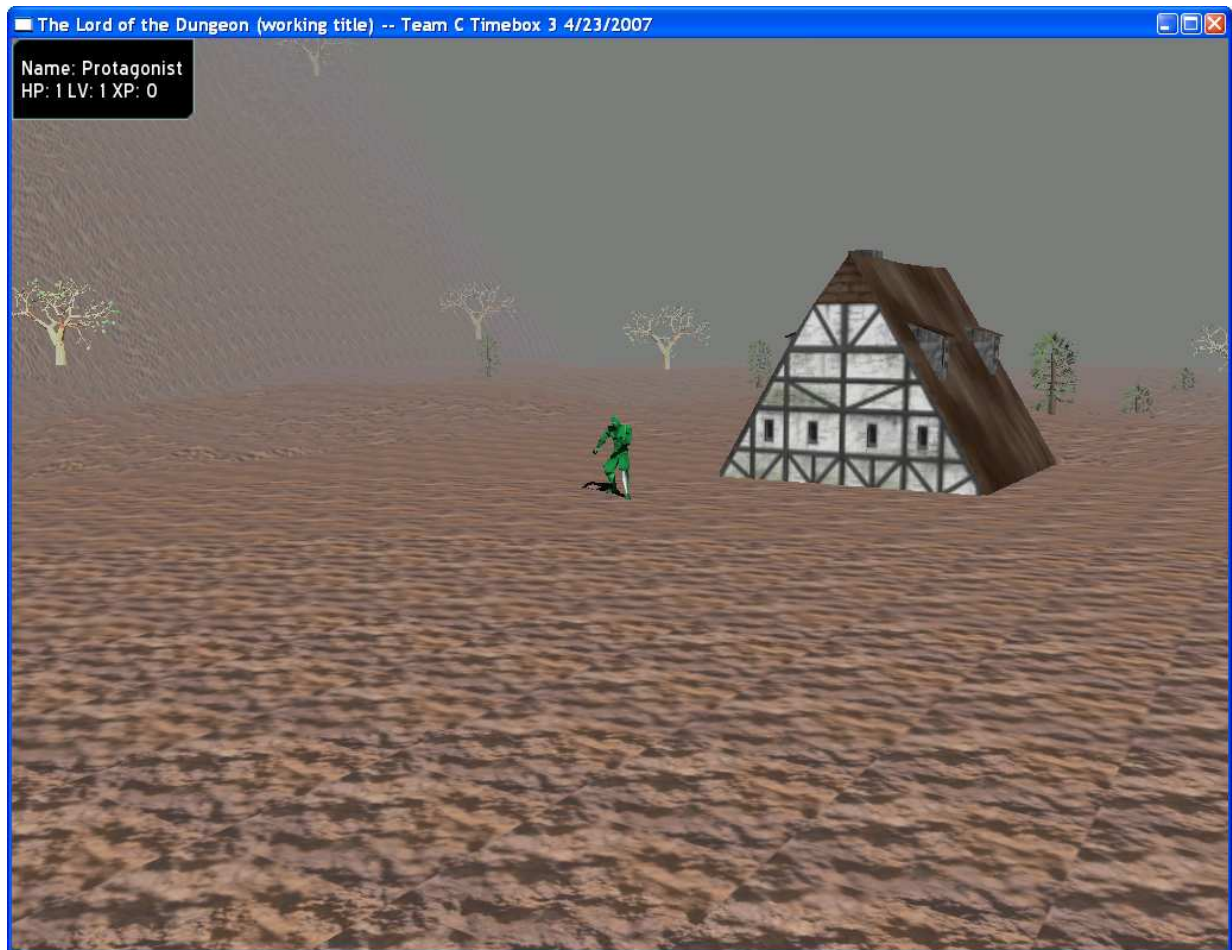


Figure 1: In-game screenshot

- Since the world is created procedurally, the layout of the map will change each time a new game is started.
  - The location of each town will be randomized, but the design of the towns will be fixed
  - The sound effects of the game will contain 3-D perspective in reference to the camera
- Viewpoint
  - The camera perspective will be positioned behind and above the main character

- The viewpoint will be set up to display images with 3-D object texture and mesh models
- The user will have the ability of navigating the camera's position how they see fit
- The camera commands will use the WASD key functions to adjust the perspective
- Control and Gameplay
  - The character will manage to interact with the environment through the mouse in a 'point-and-click' interface
  - The main character will freely roam his environment, but will have boundaries on how far they can explore
  - The boundaries will consist of high mountainous area the character will be unable to climb
  - As the main character defeats enemies, they will gain experience points to gain levels, money to hire allies, and potions for healing
  - When the main character gains to a new level, the player will gain additional stat points through which they can customize the character's stats
  - A player will be allowed to save their data at any point during the game
  - When the game is loaded from a saved game, the main character will start exactly at the same spot, but the enemies will not be nearby
  - If the main character dies, they will have to load a previous saved data or begin a new game
- Animation
  - Each of the characters and objects will be 3-D models based upon textures and meshes
  - During fight scenes, the main character and enemies will display different styles of action and reaction (swinging a sword, parrying, blocking, etc..)
  - The characters shadows will be created through stencil shadowing technique
- Main Menu
  - The player will have the ability to load and save data from this screen
  - When the main character dies the player will be redirected to this screen where they can load or start a new game
  - The player can access the options screen where they can adjust the background music and sound-effects of the game
- Computational Configuration
  - Scripting will be incorporated using LUA
  - LUA is an interpreter which we link to our code
  - Can assign and load values as an array with indices
  - In-game console will allow usage of LUA scripting
  - Resources for the game will be loaded at the startup
  - Scripting will load values which are set within the "soundConfig.Lua" file within the bin folder of the installer
  - The scripting console can be accessed in game by typing the GRAV/tilda key
  - The music files are being loaded through scripting

### 3 Artificial Intelligence

The Artificial Intelligence design will be based upon the interaction between the main character and enemies, allies, or non-playable characters(NPC's).

- Enemy Characteristics
  - The enemies will attack automatically when the main character's party comes within range
  - Each enemy will have the same capabilities to attack and defend as the main character
  - The enemies strength and skill will be dependent on the relative distance to the Artifact, a randomizing factor, and the level of the main character
  - Once the level of the enemy is decided, the stats are loaded from a predefined table in the "SetLevels.txt" file
  - When an enemy is defeated they will provide experience points to the current party
  - Defeated enemies will occasionally drop gold or potions which will be picked up automatically
  - Enemies are created randomly as the main character explores the world
- Ally Characteristics
  - Allied characters will possess similar characteristics as the enemy in reference to attacking and defending
  - The allied characters will progress in strength the same way as the main character
  - Allied characters will represent similar statistics as enemy characters
- Environment and NPC Interaction
  - A pathfinding algorithm will be incorporated whenever a character must reach a certain destination
  - The main character will interact with certain NPC's through one main text dialog which appears upon entering the town
  - The text box will also contain ways for the main character to find information about the Artifact

## 4 Story Overview

- Background

- For many years, the world has lived in peaceful harmony. Yet suddenly a disturbing fog begins to loom over the land corrupting the creatures. People begin to notice these creatures transforming into evil beasts harming and killing innocent villagers who come near. Soon, rumors begin sprouting about the second coming of an omen. The revival of an insidious, vile leader known as the Dark Lord. As a child, you recall stories grandfather would mention describing the many devious acts the Dark Lord ordered while in power. He narrated the courageous effort many people put forth to defy and bring down the Dark Lord's reign of terror. He vividly described the destruction of the malicious dictator with the help of an Artifact. The Artifact, he said, contained an extraordinary amount of power to help rid the world of evil. Up until now, you assumed this to be a mere fairy tale, but perhaps there is some truth to the story after all.

With the violence in the world ever increasing, only the help of the sacred Artifact can conquer the Dark Lord and his vicious army. Unfortunately, the location of the Artifact has been hidden for centuries, but the wise men in your village possess an ancient tome which contains information on finding the illustrious relic. Knowing the imminent battle against the Dark Lord is approaching, you set out on an adventure to seek out the Artifact before it is too late.

- Essence of Gameplay

- The incorporation of the fog along with the brooding background music lends to the eerie effect we are trying to present. The world in itself is simple and strange caused by the looming presence of the Dark Lord. The enemies seem to resemble humans as well, but they are actually beasts transformed into weird beings waiting to attack. As the only sign of nature are some scraggly bushes and decaying trees, the world is not a great place. The game is not designed to be about glitz and glam, but to make the player feel surrounded and lost as a dark presence looms over the land. Even the ally characters may seem helpful, but they are not the best protectors. Only you can fight and finish this game to the end.

## 5 Game Progression

- Phase I: Prototype Features (4/9)
  - Construct base framework for entire development of the game
  - Display loading screen to the user
  - Design, interact, and integrate GUI Main Menu system
  - Create basic game design to run entire game process
  - Produce background music and sound effects
  - Formulate design documentation
  - Finalize game story
  - Begin layout of the game's concept design, mechanics, and interactions
- Phase II: Progressive Design Features (4/23)
  - Gather resources (models, songs, sound effects, skins for gui)
  - Expand GUI from basic state
  - Make framework multithreaded
  - Custom scenemanager with dynamic page-loading (for this phase, just hilly terrain, limited features, start location, end location, boundary)
  - Get some basic mood settings by appropriate music and basic lighting settings (gloomy)
  - Get models for main character and a few npcs
  - Design basic character interaction mode
  - Implement simple npc reactions – make data driven in preparation for ai scripting in future, pathing
  - Come up local coordinate system for each terrain page
  - Main character controllable
  - Implement camera controls (zooming, rotating about player controlled character, perhaps free-look mode)
  - Different sound effects for different actions
- Phase III: Realistic Playable Features (5/7)
  - Integrate infinite terrain generation
  - Incorporate scripting
    - \* Load in level up tables
    - \* Load sound effects, music
    - \* Load character information
    - \* Change game values during run-time (character stats)
  - Show some towns
  - Show some trees
  - More sound effects, positional
  - End game state, get to artifact
  - Create installer
- Phase IV: Advanced Game Design Feature (5/21)



- AI: Pathfinding
- Character generation and intro sequence
- Character death shows defeat menu and sends back to main menu
- Saving and Loading
- More enemies/models
- System for generating items, money, and experience after killing monsters
- Customizable character (level up)
- System for enemy generation (scaling levels based on main chars level and closeness to end of game)
- Phase V: Finishing touches (Finals week)
  - Allies and recruitment
  - More enemies/models
  - Testing
- Beyond Phase V: Extras (?)
  - Advanced item generation (item level requirements, prevent tough monsters from dropping garbage)
  - Enemy grouping behaviors
  - Custom shaders (pretty water)
  - Custom animations (context sensitive fighting)
  - Side/sub-quests (more story elements)
  - Procedurally generated towns

## 6 State Diagram

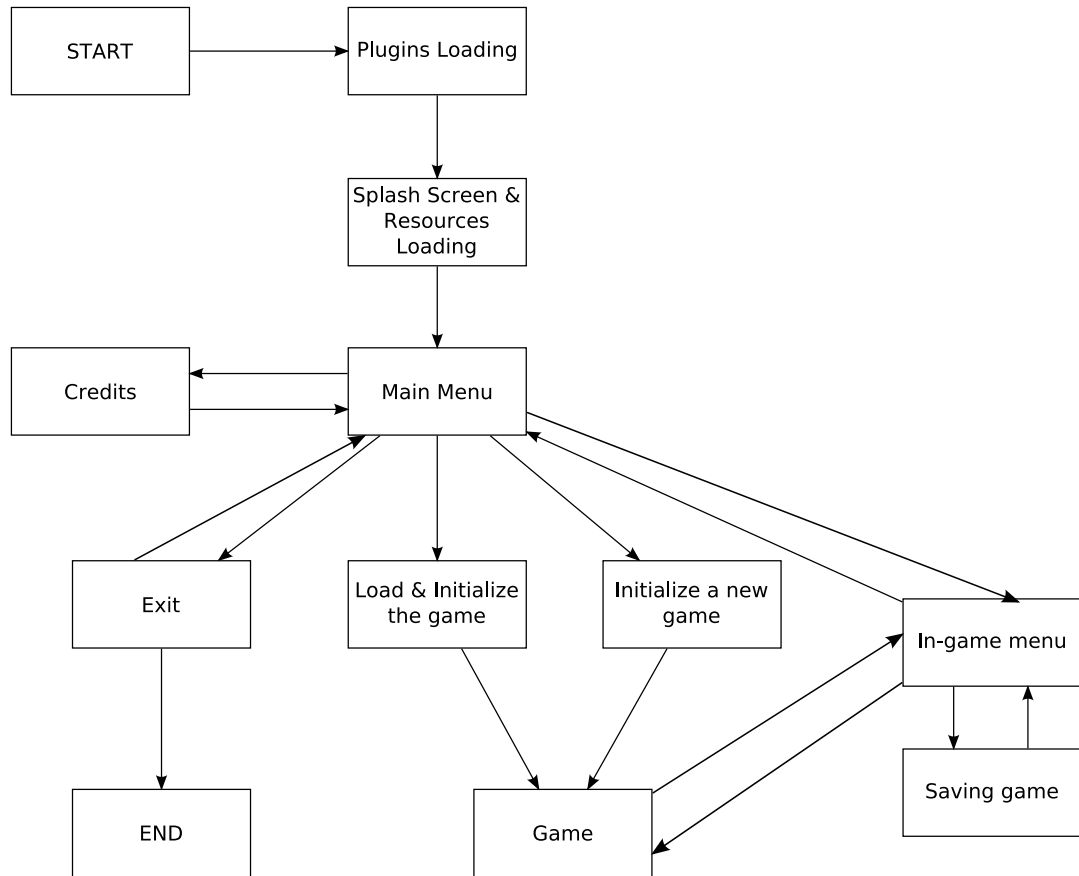


Figure 2: State Diagram

## 7 Contributions

These are the files and music which we used during our game to help display and present properly

- Music Files
  - Menu Theme - The Benedictine Monks of Santo Domingo De Silos - "Os Iusti"
  - Game Theme - Sigur Ros - "Avalong"
  - SoundEffects Link - [www.sounddogs.com](http://www.sounddogs.com)
- Mesh Files
  - All the animated .mesh enemy files were taken from the open source project "9th Life"
  - The tree mesh files came from the public repository through SVN
  - The main character ninja mesh is the mesh obtained through the Ogre3d application
  - Discussion Forums Link to find 9th Life - [www.ogre3d.org/phpBB2/](http://www.ogre3d.org/phpBB2/)
  - Ogre3D Link - [www.ogre3d.org](http://www.ogre3d.org)
- Scripting
  - The scripting is done through the LUA interpreter
  - LUA Link - [www.lua.org](http://www.lua.org)