Sleep Fright

Game Design

Version 1.00

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**1. Introduction**

This document specifies a design for the gameplay of a game with the provisional title “Sleep Fright”. It has been in development since 11/29/2018 and began as an extension to Unity’s [Survival Shooter Tutorial](https://unity3d.com/learn/tutorials/s/survival-shooter-tutorial).

* 1. **Scope**

This document is intended to be read by programmers, artists and producers involved in the design, implementation and testing of Sleep Fright.

**2. Target System**

Sleep Fright will be produced for the following platforms: Windows PCs and Macs. This document is primarily concerned with the PC version. The game will be available through digital download only. It will not be graphics-intensive so that low-spec systems can run it easily.

**3. Development System**

Sleep Fright will use the Unity Engine as an overhead. It will be developed using Unity version 2018.2.14f1 and Visual Studio 2017.

**4. Specification**

**4.1 Concept**

The aim of Sleep Fright is to produce a fun, addictive, and smooth survival shooter game which utilizes simple graphics. It will have a story mode as well as endless wave modes and a high-scoring mode.

**4.2 Story**

Our main character falls asleep one night and drifts into a nightmare where all of his toys have come to life to try to kill him. He must defend himself with his trusty gun across a set of different dreamscapes in order to wake up from his nightmare.

**4.3 Game Structure**

There will be multiple levels, each with a different theme and graphic style (eg. Mountains/hills, castle, farm, sci-fi, abandoned hospital). Each map will be large enough to make each level sufficiently detailed, but small enough that the player can experience everything in the level. By limiting the scope of each map, players can become familiar with the layout and locations of enemy spawn points and power up spots. Each map will support all game modes available.

**4.4 Players**

The PC game will be playable by one player on a local machine. There will be no online component to the game, it is single player only. Players can only play as the main character, the little kid named Angus.

**4.5 Action**

Players will be able to move in 3D space and they can not jump in most cases, a low gravity powerup will be looked into however. Angus will spawn with his primary weapon, his gun, and can purchase temporary weapon upgrades or pick up dropped upgrades from killed enemies throughout the map. Once a picked up powerup runs out of ammo or expires, Angus’ weapon resets back to normal. There will also be a health pickup somewhere on the map and will be the only method of healing in the game. Upon death, the camera will fade to a game over screen and the player can choose to try again.

**4.4.1 Pickups**

* Health
  + One location on the map, purchased with points
  + Adds 50 health to Angus
* Minigun
  + Random chance to drop from a killed enemy
  + Will expire if not picked up in 20 seconds
  + Doubles or triples the gun’s rate of fire for some time
* Low Gravity?
  + Random chance to drop from enemies
  + Allows player to jump for some time
  + Might not be implemented, have to make sure players can’t get anywhere they shouldn’t be
* Sniper
  + Random chance to drop from enemies
  + Gun shoots 50% slower, does triple the damage
* Insta-kill
  + Random chance to drop from enemies
  + Enemies die in one hit, points awarded for kills are halved
* Grenades
  + One location on the map, can be purchased with points
  + Explodes for 100 damage after 1.5-2 seconds
  + Can only carry two at a time

**4.6 Objective**

The objective of the game will vary depending on the game type.

**4.5.1 Endless Wave Mode**

There is no way to “win” this mode, players will keep playing the game until they die. Upon death, the player will be shown how many waves they successfully completed. The first wave will be the easiest, and waves will continually progress in difficulty by adding harder enemies and spawning more enemies.

**4.5.2 High Scoring Mode**

There are no waves in this mode, enemies are just constantly spawned at a steady rate. Players will have a total points score that can only go up. Their current points (which they can spend to buy powerups) will be on the other side of screen. After killing an enemy, the score and the points will be incremented by the same amount.

**4.5.3 Story Mode**

The story mode will feature a blend of the two modes above, sometimes edited to fit within the context of the story. For example, an endless wave mode wouldn’t make sense for a story mission, but instead the player might have the goal to survive 3 progressively harder waves. Another example of a mission would be to survive a High Scoring type of mode for a certain amount of time. There will also be some dialogue in cutscenes.

**4.7 Graphics**

The map and everything in it will be viewed in a 3rd person view for the entire time. The camera will be orthographic for each map.

**4.6.1 Objects**

* Player -- will be represented by an animated boy named Angus and is always carrying his gun with his gun. This character was included in the tutorial this game is based on.
* Enemies – The enemies will be the three distinct enemies from the tutorial, the Zombunny, the Zombear, and the Hellephant
* Pickups – prefabs will be made by myself using simple 3D shapes and materials or taken from the Unity Asset Store.
* Maps – some maps will be taken from the Unity Asset Store and others will be created by myself using the terrain editor or other imported assets

**4.6.2 HUD**

* Health – located in the bottom left corner
* Ammo – located above the health display
* Points – located at the top left of the screen
* Wave # or Score – located at the top right of the screen

**4.6.3 Popups**

* “Press E to pick up weapon” when near a health pickup or grenade pickup
* Pressing escape will bring up a menu with options to resume or quit to the main menu

**5. Gameplay**

**5.1 Landscape**

Each map will consist of a square grid, buildings (some accessible, some not), assorted objects to both hurt and help the player depending on how they are corralling enemies. The landscape is fixed and can’t be edited by players. A level will be the same for each game mode.

**5.2 Controls**

* ‘w’ – move forward
* ‘s’ – move backward
* ‘a’ – move left
* ‘d’ – move right
* ‘e’ – purchase pickup
* ‘left mouse button’ – shoot
* ‘right mouse button’ – throw grenade
* ‘mouse’ – aim

**5.3 Physics**

Gravity will be used in this game, simulated by Unity’s Rigidbody component. The grenades will basically be the only thing affected by gravity.

**5.4 Enemies**

* Zombunny – easiest enemy type, identified by the light blue neon glow, 100 health and does 10 damage with each attack
* Zombear – second hardest enemy, identified by the purple neon glow, 100 health and does 15 damage per attack
* Hellephant – hardest enemy type, identified by the yellow neon glow, 300 health and does 50 damage per attack

**6. Front End**

**6.1 Menus**

* Main Menu – The menu will ask the player to play the story, an endless wave mode, or high scoring mode. If the story is selected, the user can continue a saved game, or start a new one. For both the high scoring and endless modes the player can select the map to play on.
* In-Game Menu – Two options: Resume or Quit where quit will take them to the main menu

**6.2 Endgame Screen**

Once the game is over, there will be a pop up screen that displays the score, or final wave if playing one of those modes. If it is story mode, the game over screen will prompt the user to either quit to the main menu or retry the current level. If the user won the mission in story mode, the game will load the next level.

**7. Development Tools**

**7.1 Editor**

The editor used for Sleep Fright will be the Unity Engine, which allows assets to be placed, rotated, and edited in the environment easily. Each map will be a separate scene.

**8. Time**

Official Start Date : November 29, 2018

Complete Game Design : December 2, 2018

Milestone 1 – Alpha : December 4, 2018

End of Project : December 13, 2018