Project Staker

Game Design Document

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# Version History

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| Version | Date | Changelog |
| 0.1 | 8/2/2017 | * Document created. * Elevator Pitch, Vision Statement & Core Concept created * Player Breakdown created * Gameplay Section created |
| 0.2 | 9/2/2017 | * Vampire States Breakdown added to Gameplay section |
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# Overview

## Vision Statement

A first-person co-operative horror game focused on extreme tension and creeping dread. Mechanically builds tension by having players need to move apart to dispel enemy spawn-points before they can spawn high-danger enemies, & encourages players to rely on a torch that is very fragile as they navigate linear environments.

## Elevator Pitch

Wanna go vampire hunting in the haunted estate of a long-dead Count? Bring a torch and three of your most expendable friends. For PC.

## Core Concept

Enemies do not spawn where the player/s are shedding light from torches. This causes the players to play a tense game of hide-n-seek with semi-randomly instantiating enemy spawners in their local area as they progress through linear levels, splitting them up and slowing their progress, and building creeping tension.

### The Core Loop



The three stage core loop of the game leans on the player torch mechanic; When holding a torch, the players can move up to a spawning vampire and burn away the darkness before the creature is fully formed and capable of attacking them.

### Core Pillars & Player Needs

The game builds itself off two core pillars:

* **Fear** of the unknown, in the oppressive and dangerous game environment, and
* **Relief** or release of tension, as player success brings brief respite from the horrors of the game.

The player/s should be experiencing varying levels of low-level anxiety as they progress through the game, getting pangs of genuine fear.

# Gameplay

## Quick Look

The gameplay of Project Staker relies on two core systems:

* The **Light Generation** system, and the system it interacts with,
* **The Smokespawn** system.

The way these systems work is fairly simple: A player holding a lit torch can, as they progress through game levels, prevent dangerous enemies from spawning by finding their spawn location, marked by gathering black smoke (A particle effect), and shedding light on this smoke. This light is shed in a 270-degree radius, being blocked by the player’s own body as they hold out the torch.

This mechanic gives the players the need to essentially manage spot fires – dangerous, vampiric spot fires – or become overwhelmed. The first layer of gameplay this mechanic gives is essentially a deadly game of hide-and-seek.

The second layer of gameplay comes when the vampires actually spawn; Although they are not damaged by the light, they find it unpleasant. After a vampire spawns and starts to chase a player, that vampire will be unwilling to enter the light for a short amount of time, giving a period to the player where they are directly threatened without being damaged.

Finally, the vampire will begin to outright attack them. It can be dissuaded by players responding, but in this stage, the best chance for the players is to mount a fighting retreat to any safe place they can see – Houses with barricadable doors, or the hallowed ground of a church.

Although the players can become empowered by finding weapons such as silver swords and blessed crossbows, these weapons do not kill their enemies, merely dissuading the beasts from continued attack for a time.

At the outset of the narrative, the players’ goal is to kill Count Lugos, the Sire of the brood infesting the Lugos Estate. Mechanically, however, the goal of the players is to find places of rest. These places – high hills, abandoned churches, old gatehouses – serve as the breakpoint between levels, and lead them ever closer to the Mansion.

To complicate the players’ journey from safety to safety, level obstacles that will cause one or more player to drop their torch – Such as a gate that must be cranked open – Will be used to ratchet up the tension, forcing the players to wait agonizing seconds as the hissing in the dark grows louder.

## The Player Characters

### Character Feel

The player characters are contrasted against the fast, dauntless and nigh-invulnerable vampires; They are slow, tire easily, and die even easier.

### Actions

The players can take these actions:

* **Move**, via WASD controls.
* **Sprint,** via left shift.
* **Jump,** via spacebar.
* **Kick**, via the K button.
* **Wave Torch**, via the left mouse button when holding a torch. Initially reduces vampire bloodlust and extends the light radius.
* **Attack,** via the left mouse button when holding a torch.
* **Light Torch,** via the E button when holding a torch & near a light source.

### Attributes

The players have these attributes:

* **Health**, in the form of a three-hit-down system. When struck three times in succession, players will go into a ‘Shock’ state where they are vulnerable to being killed by a vampire. These three health points recharge at a rate of 1/30s. A player brought back from Shock has 1 hit point. Player screens greyscale as they lose health, making it harder to see.
* **Stamina**, another recharging resource utilized for sprinting (left shift) and attacking. If the player is out of stamina, they cannot sprint or attack. Stamina will recharge after not being used for several seconds.
* **Light Radius**, a stat determined by whether the player is holding a lit torch or not.

### The Torch

The player’s primary line of defense and the core mechanic of the game, the torch sheds light in a 270-degree radius around the player. This ring of light burns away the smoke that the vampires come from, and the vampires are hesitant to enter the ring of light – They must reach a threshold in their Bloodlust stat to do so.

When wielding the Torch, a player can left-click to wave the torch in front of them. This will decrease the Bloodlust level of vampires.

### Shock

When a player reaches zero hp, they go into Shock. Their screen goes black, and their character falls over, but they can still hear. Their torch goes out.

Another player can shake a player out of Shock in five seconds by pressing the E button. Otherwise, they will get up by themselves in 30 seconds.

When in Shock, any attack made by a vampire on a player will cause a vampire to Feed, killing the player instantly and setting the vampire’s Bloodlust to 100.

### Player Death

When a player ‘dies’, their body will ragdoll. The player’s corpse is transported to designated points later in the level. Should the rest of the players reach one of these points, they can shake the ‘dead’ player awake.

### Weapons

Throughout the environment, the players can find weapons. When wielding these weapons, the player’s torch is doused and put away.

There are two variants of weapon: **Sword** and **Crossbow.**

#### The Sword

The player can swing the sword with left click. This will cause them to consume stamina and damage any enemies in front of them in a wide arc.

#### The Crossbow

The player can press left click to fire a crossbow bolt. This will not consume stamina, but after firing, the crossbow must be reloaded and this will consume stamina. The player can choose to reload by pressing R.

## Player Light Generation

When holding a lit torch, the player casts light around themselves in a radius. Although this makes their immediate area brighter, it actually makes it harder for them to see, as the moonlight also quite bright.

Vampires approaching a player with a lit torch will hover at the edge and stalk them as they build up their Bloodlust.

## Enemies – Vampire Smokespawn System

## Enemies – Vampire Breakdown

### Enemy Feel

The vampires are extremely dangerous, being fast, vicious and nigh-unkillable.

### Actions

The vampires can perform these actions, which are active in certain states,

* **Move**, pathing to the player or through the environment,
* **Stalk**, hovering at the player’s light radius,
* **Attack**, swinging at the player,
* **Feed**, on a player in Shock, killing them, and
* **Flee**, when their Bloodlust reaches zero.

### Attributes

The vampire has these attributes:

* **Scent Range,** an adjustable radius from the vampire which will be used to simulate smell. When utilizing Scent, the vampire will not auto-face the players.
* **Sight Range**, an adjustable radius from the vampire used to simulate sight. When a target is in sight range, the vampire will always face the closest target.
* **Stalk Range**, a distance from the player that the vampire will stay while in the Stalk state.
* **Bloodlust**, it’s primary behavior determinant. Bloodlust is a very complicated statistic, and explained in greater detail in its own section below.
* **Hatred**, a secondary behavior determinant. When the vampire is in the **Attack** state and has its **Bloodlust** reduced by a player, it will build the **Hatred** stat against that player. If a vampire’s **Hatred** for a player is above a threshold, it will preferentially target that player instead of the closest target.

### Bloodlust: Brief

The vampire has one core attribute that is used to determine their behavior – Bloodlust. Rather than dying when their Bloodlust hits zero, the enemy will simply flee and, given enough distance between the players and the creature, disappear into smoke.

The Bloodlust stat will guide the vampire through several key behavior states dependent on the Bloodlust count. These states are **Explore, Stalk, Attack,** and **Flee,** and they flow together naturally. Let’s walk through an example.

### Bloodlust: Scenario Walkthrough

See Vampire States flowchart.

A vampire has spawned outside of immediate aggression range (which is a variable set depending on the specific level the vampire is placed in,) of the players with a **Bloodlust** count of 20. As it has just spawned, the vampire is in the **Explore** state. It wanders in the general direction of the players, but not directly at one of them until it comes into Scent Range of the players.

Once inside this aggression range, the **Bloodlust** count of the vampire begins to tick up rapidly. Once it hits **the Stalk Value**, the vampire enters the **Stalk** state and begins to path directly towards the players. During **Stalk**, the vampire’s **Bloodlust** begins to tick up, and it hovers at the edge of player’s light radius as they are holding a lit torch. Once it hits the **Attack Value**, the vampire enters **Attack.**  One player waves their torch at the vampire, reducing the vampire’s **Bloodlust** count, and pushes the vampire back into the **Stalk** behavior state for a few moments. But not for long.

Important to note is that a vampire will not exit the **Stalk** state unless it triggers the requirements to enter **Attack** or **Flee**. In other words, once a vampire begins stalking its prey, it will not stop unless the players are dead, they drive it away, or they get outside of its Scent Range.

So the vampire has entered **Attack.** It ignores the light and begins to attack relentlessly. The one player with a sword attacks the vampire, setting the **Bloodlust** count down by his weapon damage value each strike. The vampire’s **Bloodlust** count is set to back below the **Attack Value** – the vampire re-enters **Stalk**, retreating to the edge of the light.

The player with the sword moves in to continue attacking the vampire, but the overconfident swordsman leaves the ring of light. The close range and lack of light sets the vampire’s **Bloodlust** to the **Attack Value** threshold automatically, and the vampire strikes.

Before the vampire is scared off, it hits the player holding the sword and sends them into Shock. This does not actually raise its bloodlust; it’s still at the precipice of running away. But the players, scared, move away from their fallen comrade, and he falls outside the circle of light.

The vampire then enters a sub-state of **Attack**: **Feed.** With the fallen player separated, the vampire leans down and bites onto the neck, killing the player instantly.

After **Feeding**, the vampire’s **Bloodlust** is set to maximum. However, the other players have managed to reach safety; They’ve ran into a church as the vampire fed. The vampire enters **Flee** and disappears in a puff of smoke after pathing away from the players for a few seconds.

### Vampire Behaviour States Breakdown

#### Explore

The vampire spawns in this state. It moves randomly in the general direction of the players until one enters its scent range. It has a static Bloodlust count until a player is within scent or sight range.

#### Stalk

The vampire enters this state when within scent or sight range of a player, and its Bloodlust count has exceeded the Stalk threshold. The vampire paths to the edge of a player light radius, if it has one, and begins to increment Bloodlust.

#### Attack

The vampire ignores player light radius and attacks. If a player has a Hatred value exceeding threshold while the vampire is in this state, it will pursue and target that player. Otherwise, it will target the closest player.

If a player is put into Shock while the player is in Attack, and that player does not have another player holding a torch over them, the vampire will Feed, killing the shocked player instantly.

#### Flee

If a player with a sword attacks the vampire enough times and puts its Bloodlust count below the Flee threshold, or the vampire cannot path to living players, the vampire will Flee. The vampire will path in the opposite direction of the players if it can, or otherwise path randomly, then de-spawn.

### Vampire Hatred

The Hatred stat is a simple numerical variable that increments every time a player strikes an individual vampire, and decrements over time. Once the Hatred for a player is in excess of a threshold, and the vampire is in an attack or stalk state, the vampire will target that player.

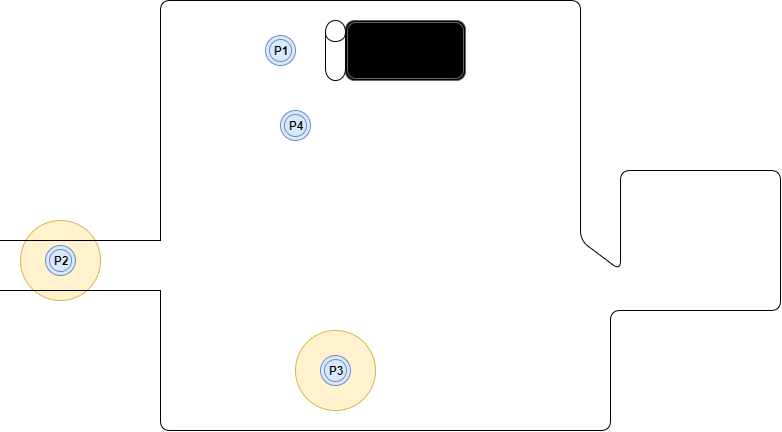
## Level Obstacles

Although level obstacles may come in different aesthetic varieties, their core principle is simple: They remove one player from the team lineup for a finite amount of time while they complete a task.



*A screencap from Payday 2 wherein a player is reigniting a thermal drill by holding down the F key and standing still. This is mechanically very similar to our goal; The player is removed from the action, and reliant on his teammates to protect him.*

The intent of these tasks is to raise tension: The players are forced to be stationary in a single area while the task is completed.

Here’s an example for Staker: 

This group is in the Crypt, and have to winch up the elevator from the lower levels to access the next level.

Player 1 is winching up the elevator, which means he has to put his torch out and down.

This leaves only Player 2 and Player 3 with torches. Player 2 and 3 are patrolling, trying to keep on top of Smokespawns, but they can’t cover everything; They’ve left the antechamber unattended. Tension is high, as it’s only a matter of time before a vampire spawns in there, but leaving the main room unattended would be even more disastrous – Something could spawn in there and start attacking the unlit group members immediately.

If these players stack up and try to huddle in the light, they will be overrun with vampires. But if they split too far, they risk one spawning behind their backs. Tension is high.