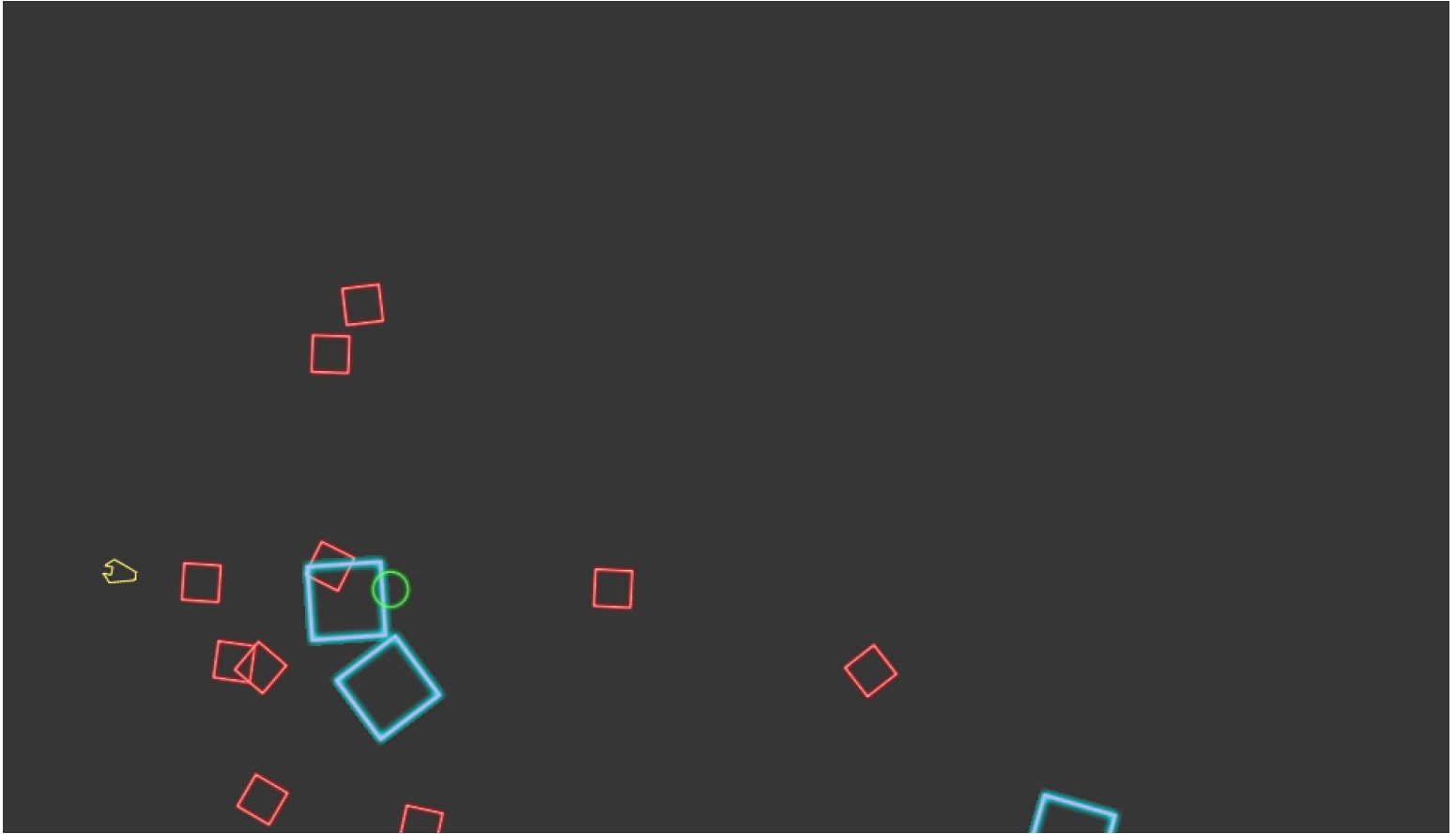


Rhythmic Shapes Game Design Document (GDD)



'I didn't know music could make me do these things!!!' - Sam Schneider

This page: Table of Contents and Team Member Listing

Table of Contents

- 1 Game Overview
- 2 High Concept / Genre
- 3 Unique Selling Points
- 4 Platform Minimum Requirements
- 5 Competitors / Similar Titles
- 6 Synopsis
- 7 Game Objectives
- 8 Game Rules
- 9 Game Structure
- 10 Game Play
 - 10.1 Game Controls
 - 10.2 Game Camera
 - 10.2.1 HUD
 - 10.2.2 Maps
- 11 Players
 - 11.1 Characters
 - 11.2 Metrics
 - 11.3 States
 - 11.4 Weapons
- 12 Player Line-up
- 13 NPC
 - 13.1 Enemies
 - 13.1.1 Enemy States
 - 13.1.2 Enemy Spawn Points
 - 13.2 Allies / Companions
 - 13.2.1 Ally States
 - 13.2.2 Ally Spawn Points
- 14 Art
 - 14.1 Setting
 - 14.2 Level Design
 - 14.3 Audio
- 15 Procedurally Generated Content
 - 15.1 Environment
 - 15.2 Levels
 - 15.3 Artificial Intelligence NPC
 - 15.4 Visual Arts
 - 15.5 Audio
 - 15.6 Minimum Viable Product (MPV)
- 16 Wish List
- 17 Bibliography

Game Development Team Members

PRODUCER

Sam Schneider

PRODUCTION MANAGER

Sam Schneider

PRODUCTION COORDINATOR

Sam Schneider

GAME DESIGNERS

Sam Schneider

SYSTEMS/IT COORDINATOR

Sam Schneider

PROGRAMMERS

Sam Schneider

TECHNICAL ARTISTS

Sam Schneider

AUDIO ENGINEERS

Sam Schneider/Sharvay Ajit

UX TESTERS

Sam Schneider

1 Game Overview

Title: Rhythmic Shapes
Platform: PC Standalone
Genre: Rhythm / 2D shoot-em-up
Rating: (10+) ESRB
Target: Casual gamer (aging from 12 - 30)
 Serious games
Release date: April 18, 2021
Publisher: CherryHill

Description: Rhythmic Shapes is 2D level-based rhythm game. You play as a small shape that is the first to discover the music dimension. As you go back you start to realize that the rhythm of the music has a strong controlling grasp on the shape universe you live in. Fight through different songs and sound to take control back from the music that controls you!

2 High Concept / Genre

Rhythmic Shapes is 2D level-based rhythm game. Each level has a dedicated song, where the player(a small pointer like shape) will shoot to the beat of the music. Enemy shapes will spawn off screen and move to attack the player, but be careful as each time the player shoots, they are propelled backward. The player can move anywhere on the screen, but so can the enemies. The player will aim based on where the cursor is. Each enemy has a time limit before they de-spawn, but the more the player shoots, the more points and perks they will have available to them.

3 Unique Selling Points

- Amazing custom soundtrack
- Captivating Story
- Unique Gameplay that combines rhythm and controls

4 Platform Minimum Requirements

5 Competitors / Similar Titles

- Geometry Dash
- Space Invaders

6 Synopsis

As a curious being, you wander to a place you shouldn't be. You discover how to listen to the sound around you. As you leave, you can't help but notice how much control that funky beat has over you and your peers. It seems to move you in ways you never wanted. Fight through the sounds to take back control of your universe!

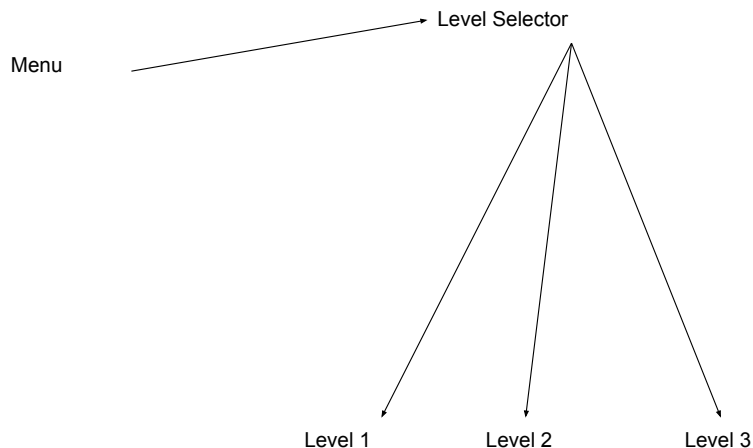
7 Game Objectives

The objective of the game is to make it through the levels. Each level objective is to survive the incoming enemies for as long as the song plays. Killing enemies grants points which can be used to purchase extra lives and perks. Perks are abilities you can use (taking back control from the music) to aid you through the level.

8 Game Rules

The Player will shoot based on predetermined times based on the rhythm of the song. The player shooting is also how they will move as when they shoot, the player will be launched backward. The player can move in all directions and to anywhere on the screen, so long as there are not enemies in their way. When the player comes in contact with an enemy they lose a life, the amount of lives they have is default one but can be upgraded by scoring points. Each enemy has different behaviors (see enemies). If the player dies, they must start the level from the beginning again.

9 Game Structure



10 Game Play

10.1 Game Controls

The game has very simple controls(In part because movement and shooting is controlled by the music). The player can aim using the mouse, the player will always point to where the cursor is on the screen. Perks and abilities can be accessed by scrolling to select the one they want, and using right click to activate it.

10.2 Game Camera

The Game Camera will not move as each level is completely contained on screen. The player will move around screen but the camera will remain stagnant.

10.2.1 HUD

The HUD will show when the player will shoot, this way they can time when to aim and where. It will also show their lives and what perks that have.

10.2.2 Maps

Each map will be the same but each level will have a different song. In a sense the different maps will be the different songs and enemy spawn patterns.

11 Players

11.1 Characters

The player is a small arrow shape. They will fire out of the tip(right) of the arrow.
(Temporary Subject to Change)

Actual Size:



Scaled Up:



11.2 Metrics(Subject to Change)

Impulse Distance:5 meters(When the player fires a bullet they will be launched back)

Speed: 5

Lives: Default 1, can be upgraded through collecting points

Attack Damage: 10

11.3 States

Idle/Movement: No animation

Shooting: Small light explosion when the bull is fired

Death: Light dissolve animation

11.4 Weapons

| Weapon Type | Description | Damage | Player Controlled? |
|-------------|--|---------------------|--------------------|
| Bullet | Shoots a bullet in front of the player. The bullet has travel time. | 10 | No |
| Laser | Shoots a laser from behind the player. It has not travel time. Propels the player forward at a constant speed. | 3 Damage per second | Yes |
| Light Bomb | An AOE attack originating from player position until it reaches the screen edges. Looks like a circle growing in diameter. Dealing damage to enemies once it reaches them. | 30 | Yes |

12 Player Line-up

There is only one player.

13 NPC

The only NPC's are the enemies.

13.1 Enemies(Subject to Change or additions)

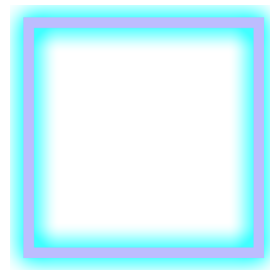
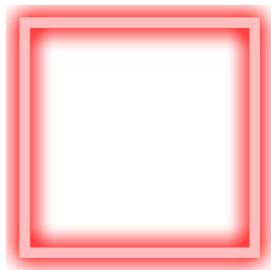
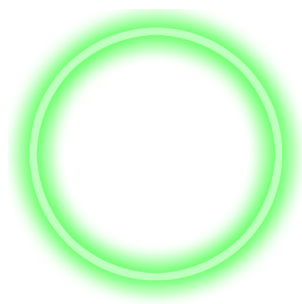
Enemies spawn off screen and all spawn facing the player. They spawn in groups and the order of spawning is hard set by the level designer and is custom for each level.

| Type | Health | Movement | Size |
|---------|--------|---|-----------------------|
| Linger | 10 | Only moves in the initial direction of the way they spawn, cannot change direction. Move with a constant speed of 20 | 1 meter diameter |
| Tracker | 10 | Constantly moves towards the player with a constant speed. Always tracking the player. Move with speed 7. They turn slowly making there movement less presice | 1 meter * 1 meter |
| Stalker | 50 | Constantly moves towards the player with a constant speed. Always tracking the player. Move with speed 1. They can turn very quickly, making movement slow but precise. | 2.5 meter * 2.5 meter |

Linger:

Tracker:

Stalker:



13.1.1 Enemy States

Idle/Movement: No animation

Death: Light Dissolve, Same as player

13.1.2 Enemy Spawn Points

Enemies can spawn from anywhere off screen. There is a box around the screen, and the enemies have an equal chance to spawn from anywhere in this box(excluding the screen). The level designer can specify if spawn groups spawn from specific locations in this box.

14 Art

14.1 Setting

The setting is a space like neon dimension. The player and enemies exist in a strictly 2D dimension, and sound is considered to be a "3rd" dimension.

14.2 Level Design

Each level will be the same. The background will be black with neon lights. There won't be any obstacles in each level.

14.3 Audio(Subject to addition and change)

| Name | Author | Where in game? |
|-----------|----------------------------|----------------|
| SpaceJame | Sam Schneider/Sharvay Ajit | Level 1 |

15 Wish List

I would add more levels and abilities. Having more enemies and boss enemies would enhance the game greatly. I would also like a background that changes color in time with the music(using FFT).

16 Bibliography:

Player and Enemy Sprites:

Entertainment, M. (2016, May 3). Neon Shapes [All images for the Enemies and Player Sprites]. Retrieved March 20, 2021, from <https://assetstore.unity.com/packages/2d/textures-materials/neon-shapes-61454>

Menu and Level Music:

Ajit, S., & Schneider, S. (2021, March 30). War Flutes Menu Music [MP3].

Ajit, S., & Schneider, S. (2021, March 30). Odyssey Level One Music [MP3].

All Sound FX:

Schneider, S. (2021, April 19). Beat Shooter Sound FX[MP3].