

MechaBeat



53-471 Platformer Assignment

Inner Circle Entertainment

Madeline Duque
Brian Fischer
Daniel Hua
Koganti Rikky Roy
Logan Smith
Jordan Tick

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2 INTRODUCTION

2.1 OVERVIEW

MechaBeat is a rhythm/action platformer for the PC. Players perform actions in sync with the beat of the music and gather a list of items needed to complete the level. Obstacles and enemies will also be moving in sync with the music.

2.2 TARGET AUDIENCE

MechaBeat will appeal to players who are fans of platformer/puzzle games. Due to the relation between mechanics and sound, players ages 10 and up are targeted. Younger players may have trouble syncing the music and player actions. The mechanical theme of the game influenced the soundtrack of the game, leading to music that would appeal to fans of electronic or synthetic music.

2.3 PLATFORM

MechaBeat is being developed for the PC. The minimal system requirements are low.

2.4 COMPETITORS

When designing *MechaBeat*, the games *Bit.Trip Runner*, *Beatbuddy: Tale of the Guardians*, and *Inside my Radio* were drawn upon for inspiration. *MechaBeat* sets itself apart from the competition by focusing on the platforming elements of the game. *Bit.Trip Runner* and *Beatbuddy: Tale of Guardians* both have an emphasis on music, but have less interesting mechanics and puzzle design. *Bit.Trip Runner's* success relies largely on the musical soundtrack made as the player runs through the world. Players have no control over the movement of the character other than actions to dodge obstacles. *Beatbuddy: Tale of Guardians* contains more platformer elements but repeated puzzles lead to player disengagement due to repetition and a lack of challenges. *MechaBeat* seeks to bring a musical focus to the forefront of the game while still providing players interesting platforming mechanics.

2.5 INTENDED EXPERIENCE

Music is core to the experience of *MechaBeat*. Rather than just being a background element, players should be actively engaged by the music. Puzzles also play a key role in gameplay. Figuring out the solutions to the puzzles should not be difficult. The challenge for the player's should arise from executing the solution in sync with the rhythm of the music.

3 GAME

3.1 SUMMARY

MechaBeat is a platformer game designed around sound. Player and enemy actions relate directly to the beat of the songs. Each level has a different soundtrack and consequently a different beat that the player must adapt too. Part of the player's actions depend on the beats per minute(BPM). Obstacle and

enemy movement and actions also differ according to the tempo. Players must collect items in each level in order to proceed to the next level.

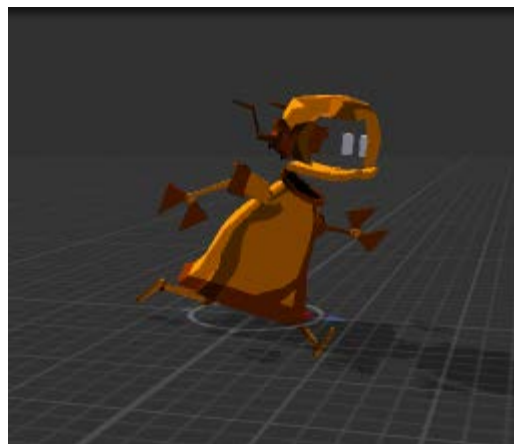
3.2 STORY

3.2.1 Plot

At core of the clockwork world Atraxis, the grand clock Zion is falling apart. Zion controls the “heartbeat of the world”. If Zion fails, then the world will start to crumble as well. Kitt, a repair robot must save its home by travelling to the center of Atraxis and repairing the grand clock. However, as a result of Zion being broken, the security system of Atraxis has had its fundamental programming corrupted. They have gone into complete defense mode. The route to Zion has been blocked off by 7 successive gateways that obstruct all outside elements from reaching the core. Kitt is a repair robot without any battle functionality built in and as such, the only way for it to get past the system and proceed further in towards the core, is to open each of the 7 gateways. In each gateway level, Kitt must collect 4 gear-key components that combine to form 1 gateway key. The gateway key opens up the gateway and allows Kitt to proceed to a deeper level. Once she gets past all 7 gateways, Kitt will finally reach Zion. As Kitt gets nearer to the core, the world’s “heartbeat” starts getting faster and faster as Zion is getting closer to breaking apart.

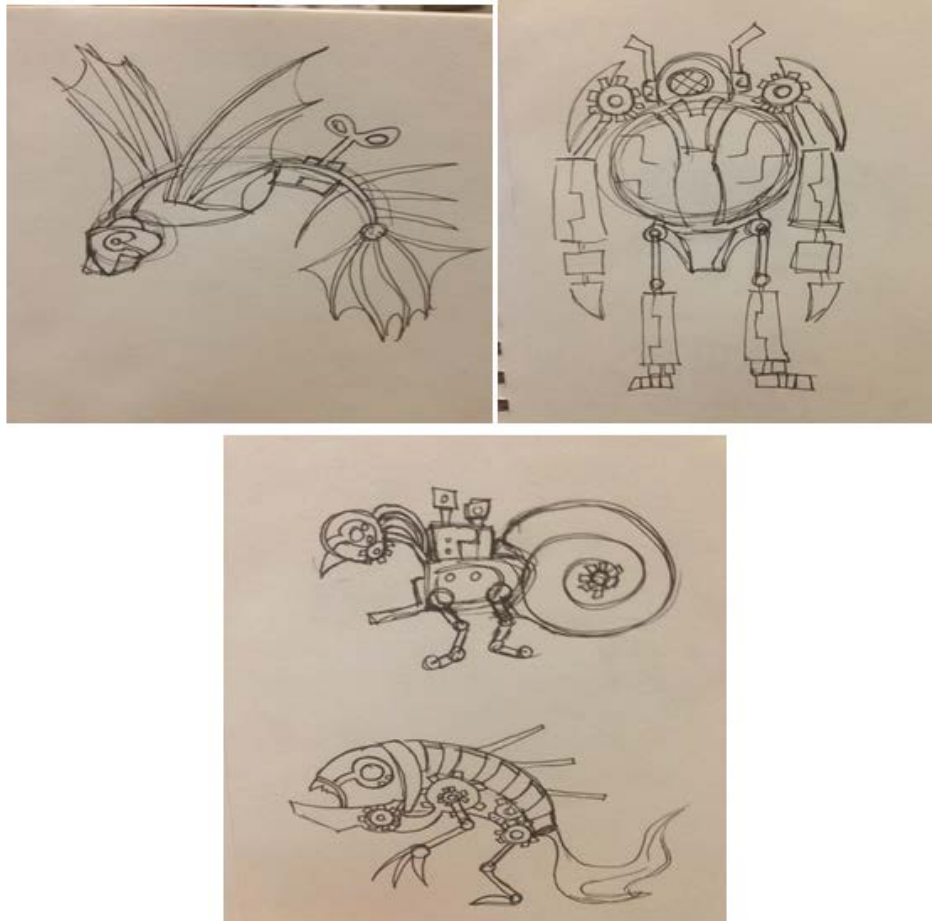
3.2.2 Playable Character

Kitt is a clockwork robot, whose main function is to repair minor clocks around Atraxis. Kitt’s gears, as the rest of the population, are designed in a special way that syncs up its actions with the beat of the planet. However, for some reason not apparent yet, Kitt’s core (a robot heart) is not synced with the planet’s “heartbeat”, unlike all its robot counterparts. For this sole reason, Kitt is the only one to escape the corruption of its inner programming. Kitt realizes it might be the only one capable Atraxis and begins the dangerous journey to Zion. Concept art and model for Kitt is shown below.



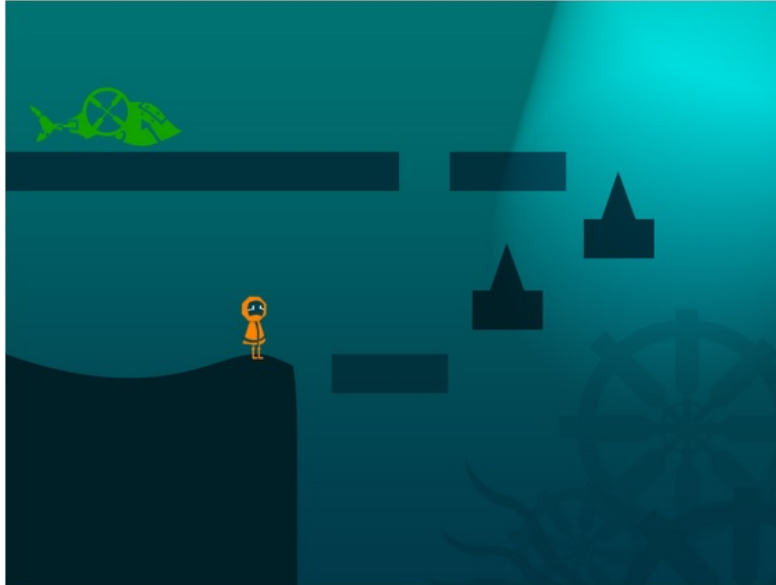
3.2.3 Enemies

The main enemies that try to stop Kitt are all part of Atraxis's security system. 2 different enemy types exist on Atraxis. Concept art for 4 enemy designs is shown below. The first appears in the earlier levels, and as the player travels deeper into Atraxis, the more dangerous enemy appears. These enemies have their "heartbeat" synced with the planet's heartbeat. This means that their movement and all their actions are synced with the beat as well.



3.2.4 Environment

On Atraxis, there are many environmental hazards, such as spikes, that the player must avoid. Enemies are also a part of this environment. Background visuals will be used to convey the player's location on Atraxis. Components of the background visual elements will be used as a visual representation of the BPM of the current level. It represents how the world is synced with the beat of Zion, and also gives the player an idea of the timing of beat, making it easier for him/her.



3.3 GAMEPLAY

3.3.1 Game Mechanics

- Player
 - Unrestricted horizontal movement. Moving left and right is not synced with the soundtrack so player can move with freedom.
 - Jump and double jump mechanic - synced with beat. Player can jump once, and the action only happens when player syncs his button press with the beat. He/she can press the jump button again while in a jump and if it's synced up with the beat again, player does a double jump. The most a player can jump without hitting the ground is twice
 - Dash/Dodge mechanic - synced with beat. Player can press dash button, and if he/she syncs with the beat, then the player moves forward in whichever direction he is facing with triple his normal speed for a short distance. The player can use this to knock down weak walls, or dodge past enemies.
- Enemy
 - Enemies make short dashing movements in sync with the beat and they move according to some fixed path.
 - If within attacking range of the player, they will stop and start attacking
 - Attacks are also synced with the beat and enemies cannot attack and move at the same time.
- Environmental Hazards and Obstacles
 - Spikes - spikes synced up with the beat. They retract and extend
 - Downward Extending Pillar - Mechanical Pillar that extend from the ceiling and retract back up, also synced with the beat.
- Gear-Keys
 - Gear-Keys are scattered throughout the level. The player collects them by touching them.
- Gateway
 - 1 per level. Player can't interact with gateway unless he/she has 4 gear-keys.
 - If player has 4 Gear-Keys and stands in front of gateway, it opens and sucks player in.

3.3.2 Gameflow

The player starts at some starting point in the level. He/she must then travel around the level, avoiding environmental hazards and enemies, while collecting the 4 gate keys. He/she must then reach the gateway. The two challenging parts for the player are synching his actions with the beat and with the enemy and environment. Different sections will have certain ways to get past them and the player must figure out the correct way and get the right timing.

3.3.3 Controls

Players control Kitt using standard keyboard controls. The left and right arrow keys are used to move the character left and right. Jumping and dashing are assigned to 'z' and 'x'. Time permitting, players will have multiple control schemes to choose from. You have to move with the beat since your gears are designed a special way that syncs with the beat of the planet.

3.3.4 Level Design

- Levels 1-7
 - In each of these levels, the player explores the map and collects the 4 Gate-Keys, while getting past enemies and other obstacles.
 - Manually designed levels with different soundtracks for each level
 - Difficulty changes by increasing the tempo or adding more complicated platforming tasks
 - Rather than having lives, checkpoints exist throughout levels. If the player dies, he/she respawns at the last checkpoint passed
 - Ensure that no way for the player to get stuck.
- Boss Level
 - Same traits as other levels, except the player is collecting 4 clock pieces rather than keys, for Zion (The Grand Clock).
 - Hardest tempo of all
 - Might add in several boss-exclusive features for the environment

3.3.5 Win Conditions

- Level Victory
 - Once the player collects all 4 gate-keys, he/she must take them to the gateway and once he/she reaches the gateway, the player finishes the level
- Overall Game Victory
 - After clearing the first 7 levels (or gateways) the player will have reached the boss level. On this level, the environment and level is the boss. The player must reach Zion, while searching the level to collect gears/clock-parts that will fix Zion. The basic win condition is still the same - collect items and reach a point.
 - However, the environment is much more violent and there are lot more hazards and enemies in the boss level.

4 ART & VISUAL STYLE

4.1 VISUAL STYLE

The visual style of *MechaBeat* is very mechanical, and has a clockwork feel. The enemies and environment design is very mechanically inspired. *MechaBeat* is in 2.5D perspective. The background will consist of 2D assets. The player character, enemies, and objects in the foreground will be 3D models. The visual style will also follow a split complementary color scheme. As the player progresses in levels, the environment will gradually shift from the outside of the planet to its core. The background will show this shift in environment.

4.2 ART BIBLE

All characters/assets(except the player character) must be designed with the following rules in mind

- Mechanically Inspired
- Constrained by gravity, if in air, needs propulsion
- Rigid/Mechanical Movement

5 MUSIC & SOUNDS

5.1 SOUND

Player, enemy, and environmental actions will have sounds associated with them. These sounds will blend with the music in order to not detract from the rhythm or tone of the current level's music.

5.2 MUSIC

The musical style of the game is heavily influenced by the environment and art design. Music will be synthetic with heavy percussion to help players stay in sync with the beat. The music will have a mechanical feel to it. Each level in the game will have a different track. The mood of the music will get darker as the game progresses. One strategy for increasing level difficulty will be to have later levels contain tracks with higher BPMs.