

Robo-Ventures Game Design Document

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Game Overview

Pitch

Robo Ventures is a platformer action game where you follow Robo, who's stranded on an alien planet, and missing his 4 fuel cells and 3 mod chips. Take control of Robo to maneuver through enemies and platforms to repair his ship.

Key Features

- 3 Non-Linear levels that are connected by 1 Hub Level. Each level will see Robo unlocking a new ability, which also acts as the gameplay theme of the area.
- Each level will also have side-areas which use the abilities of other levels to encourage fun back-tracking. These areas will have small collectibles for the player to unlock to enhance the sense of progression.
- Detailed UI which shows Health, Ability Cooldowns, active options, and held Fuel Cells.

Gameplay

Key Mechanics and Stats

1-2-3 Punch

The default way of dealing damage is a punch combo composed of 3 animations, with varying hitbox sizes and shapes.

- The first punch is a quick punch with a lean-in. It's quick so the player can easily resume play in case they misclicked.
- The second punch is the second fastest, but has the longest time to return to idle. We want the player to easily chain into the third, so it needs to take the longest to return to idle.
- The third punch is the slowest, but has the largest hitbox and knockback. This way it's more satisfying on the impact and recovery. It will recover to idle almost as fast as the first, so the player can resume play.

Stun Grenade

The stun grenade is a throwable AOE item which will stop enemies from moving and cause them to take damage. It does not cause knockback to enemies or Robo, and the lingering area does not damage Robo.

- It will have a cooldown between 8 seconds. It's long enough to not spam and not have the player constantly looking to see if it's done charging, but short enough to be used consistently (around 2 - 3 times an encounter).
- The area is 3x the width of Robo to encapsulate a large area that Robo himself can walk into to attack the enemies.

Team 8

- The Stun Grenade has 1 animations and one VFX - Throw (Arm back and out), and a lightning effect on the ground. The affected enemies has a shaking animation applied.

Dash

Our first intended ability unlock is the Dash. The Dash can be used in the air and on the ground, but Robo should move further in the air than on the ground.

- The Dash has a cooldown of 2 seconds. This will facilitate frequent use in combat and not be annoyingly slow in platforming.
- The 2 second cooldown has the potential to be spammed during combat, but we will have to wait until playtests.
 - If spammed in combat, nerf its ground distance or increase cooldown. Increasing cooldown will be more annoying for platforming, so we should avoid that.
- The Dash will use 2 animations and one VFX - Dash (Leaning towards Dash Direction with head leading), Recovery (Legs crouched slightly - blends into idle pose), and a dust effect applied on the Recovery/after the dash.

Grapple

The Grapple is our second intended ability and is used for vertical movement, rather than horizontal movement.

- The Grapple has a short cooldown of 1 second. The Grapple is very situational, so a cooldown isn't important, but they shouldn't be able to spam in the Grapple Level.
- Using GameObjects labeled Grapple Points, the player will be given a UI prompt to grapple to that point.
- The Grapple will be an instant velocity stop, so falling is slowed down, and the player's velocity will be set in the direction of the Grapple Point.
- The velocity should be enough to go past the Grapple Point to give it more of an impact on the player's fun.
- It will utilize 3 animations - Grapple Pose (arm out), Grapple Reach (the grapple itself extending), Grapple Pull (arm pulled back). It will then blend into the falling animation.

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Charge Punch

The Charge Punch is used to break specifically designated walls, and in combat to damage multiple enemies.

- The Charge Punch should have a cooldown between 5-8 seconds. Since it's situational, it doesn't need a quick cooldown. It's set around 5-8 to not encourage frequent use in combat.
- To compensate the hitbox should be very large and have a large amount of knockback for a strong impact.
- The Charge Punch has 2 animations and 2 VFX - Charging (Kamehameha style arm back), Punch and Stance (Doomfist reference, but standing still for 1.5 seconds) blends back into idle.
- The first VFX will be used to make the fist look like it was heating up from 0 alpha, to red, to white. The second will be a wind effect around the punch.

Combat Section

Each level has at least 2 combat sections with at least 6 enemies.

Enemies attack with jumps at the player, often jumping past the player and having to turn around. They should aim generally for the player, rather than accurately at them.

Combat areas will act as aggression triggers, where the player's presence will enable or disable enemy action.

After each enemy death, the trigger will check to see if all enemies are dead, and will then unlock anything locked by the encounter, and play a small battle jingle.

Combat Stats

The player will be able to take about 6 hits before dying, and will regain health overtime out of combat. Our actual health value should be out of 120 so we can have a smooth animation.

Enemy's health should be 3-5. It depends on whether the 1-2-3 Punch combo killing an enemy is satisfying enough, or if using the 1-2-3 Punch combo twice will be too annoying. We also need to balance around our Charge Punch.

Narrative and Lore

Location

Robo has crashed on an alien desert planet, right in a valley with 3 branching paths.

This valley is inhabited by Scavenger Automaton, small robots with an unknown creator. The area used natural materials, dirt, stone, trees, and grass. But formations aren't natural. A large spiral with platforms around it, a cave with solid rectangle walls and weird carvings. The whole thing is off.

Robo

Robo is on a small scout robot that pilots the S.S. Chipley, a rocket ship equipped with an AI personality.

The S.S. Chipley is a rocket ship with an upbeat personality. They give the player advice and encouragement throughout the game.

Robo is around 5 feet tall and is blocky in shape, but has smooth beveled edges

Scavenger Automatons

Scavenger Automatons are super small robots that scavenge the surface for food for an unknown owner. These Scavenger Automatons are territorial and will hunt the player on sight. They skate on the ground using unknown technology , and jump at intruders to damage them.

Art

The game will use Stylized Low-Poly art for most models, with environments using simple geometry shapes (cube, hexagon pillar, crystals). Our textures will be pixelated for complex models, like our robot or ship.

However, environmental models and textures will follow a normal stylized art style, focusing on hard edges with soft lighting effects baked on. We will simplify this process by using monochromatic color palettes for the models.



The rocks are our environmental sample. They are simple primitives with a simple base coat, and a tiny amount of dirty gradient over it. Normal maps should be used to add complexity, but not much past that.

The crystal is our detailed environment sample. It uses a simple blue gradient for the base, and then a modified blue for edge details.

Theme

Robo and associated space models should use textures with sharp coloring and low-res textures. This will make them stand out against the natural desert environment which uses larger textures with more gradation.

Audio

Audio will primarily be used to create atmosphere and give feedback. Each level has its own theme and some kind of ambience added through effects/filters or SFX.

For example, our Grapple Level is set in a grandiose tower of an unnatural origin. Our music should then reflect this by having an eerie undertone to a slow and large piece of music, with a little bit of reverb around it. We'll also apply reverb to all sound effects in the area to provide atmosphere.

The levels are meant to be explorations into an unknown world for the player, so the music should be mellow. We will transition in and out of combat with a faster tempo piece when entering combat, to really sell the vibe.

Levels

Structure

We have one open scene with the Hub at the center of the whole map to connect other sections. Each level has an exit that is inaccessible. The player traverses through the Level and back to the Hub to insert Fuel Cells or enter other sections.

Hub Level Brief

The player spawns having crashed in their escape pod. They are prompted with a UI prompt on the side of the screen to use WASD to move and their Mouse to look. They will move around and see an enemy a few platforms up from where they are, they will go to them and learn the fighting mechanics. After, they will learn how to use all of the power-ups to move through the tutorial and make it to the main hub level. There they will see their crashed ship in a circular canyon, with three pathways that lead to the three levels. Once approaching the ship, they start a small conversation with the ship's AI and are informed they are missing their 3 Mod Chips and 4 fuel cells. The player then travels to any of the three levels.

Dash Level Brief

This level's main ability will be "Dash". This ability lets the player move a large distance at a great speed that they would otherwise be unable to do with just a normal jump. The level consists of a series of platforms that the player has to dash across in order to get to the end of the level and retrieve the Mod Chip.

Grapple Level Brief

This level's focal point will be a large spire that the player has to climb. They will do so by obtaining the "Grapple" power-up. This power-up lets the player pull themselves towards specific grapple points that take the shape of roots coming out of the spire. There are a series of platforms and grapple points that twist up the spire for the player to reach the top. On the top of the spire is a large dead tree and the Mod Chip needed to beat the level.

Wall Level Brief

The wall level is a large maze-like structure that the player has to get through. There are many walls and rooms each with different things inside of them. Some rooms have power-ups, some have enemies, and one room contains the Mod Chip. The player will be able to enter these rooms by breaking a breakable wall with the "Wall Break" ability.

UI

HUD

The HUD will show details about the player's condition. It has an HP bar, spaces for cheat icons, a cooldown box for the stun grenade, dash, and charge punch, and spaces to show the Player is holding Fuel Cells and modchips.

Main Menu

The Main Menu will be the first thing the player sees when they start the game, and lists different menus relating to pre-play. It will have a Start, Options, Credits and Quit button.

Options

Lists different options relating to play. The first should be a button to open the controls menu, the second should be Mouse Sensitivity, and the rest should be Toggles for cheats we implement.

Controls

Lists all of the controls for the game. Each should have a default and should be editable using the InputField UI Element.

Pause Menu

Pauses gameplay and controls, lists different options and progression level. Opens with Escape, but has to be closed with the Continue Button.