

Something's Funny at the Peanut Factory Version # 1.0

GAME & LEVEL DESIGN IV SINGLE PLAYER FPS
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1. Version History

Date	Version #	Details
10/17/2019	0.1	Template created and issued
10/17/2019	0.2	Added narrative and world building overview
11/10/2019	0.3	Updated Narrative Added maps
11/12/19	0.4	Added Storyboards Added narrative descriptions Added Variable Descriptions Added Mechanics Descriptions
11/13/19	0.5	Added reference images Added Character information for Brick Spanner Corrected text for clarity
03/28/20	0.6	Added Menu and Game Over Screens
03/29/20	0.7	Added Audio Artifacts Added Video Artifacts Added Text Artifact Added Image Artifact
03/30/20	0.8	Added Reference images
03/30/20	0.9	Added Audio Asset list Added Art Asset list
03/31/20	1.0	Edited for formatting and continuity

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2. Product Overview

2.1. Genre/Platform

- First person shooter / adventure
- Dark Comedy
- PC

2.2. Audience

- Primarily people who are interested in 1st person FPS games
- Ages 13+ (ESRB Teen)
- Fans of interesting visuals

3. Game Overview

3.1. Gameplay Overview

- Traverse the landscape by collecting keys, opening doors / gates and fighting or avoiding enemies.
- Navigate to the key locations
 - Factory
 - Underground control center
- Fight and defeat the boss AI

3.2. Gameplay Objectives

3.2.1. Main/Primary Objectives

- Locate keys to the gates for level progression.
 - Terrain to courtyard
 - Courtyard to factory
 - Factory to AI Core
- Locate and destroy the insane controller peanut AI.

3.2.2. Secondary Objectives

- Collect the peanut data disks located throughout the facility.
- Defeat or avoid enemy robots.

3.2.3. Bonus Objectives

- Find the 5 peanut collectables.

3.3. Aesthetic Design

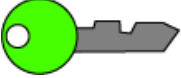
- Retro modern futurism
- The visual style for the terrain / courtyard is a combination modern and industrial
- Ai Core style is “star trek” futuristic

4. Level Design

4.1. Game World Overview

The world is a desert like planet with very little vegetation. Buildings and structures show signs of heavy degradation due to exposure to the environment as well as the industrial chemicals used in interplanetary peanut production.

4.2. Legend(s)

	Door		Amunition (Basic)
	Wall		Amunition (Explosive)
	Switch (basic)		Turret Enemy
	Switch (Event)		Roaming Enemy
	Hatch		Charging Enemy
	Elevator		Boss Enemy
	Health		Access Condition
	Key Access Point		Explosive Weapon
	Key		

4.3. World Map (Exteriors)

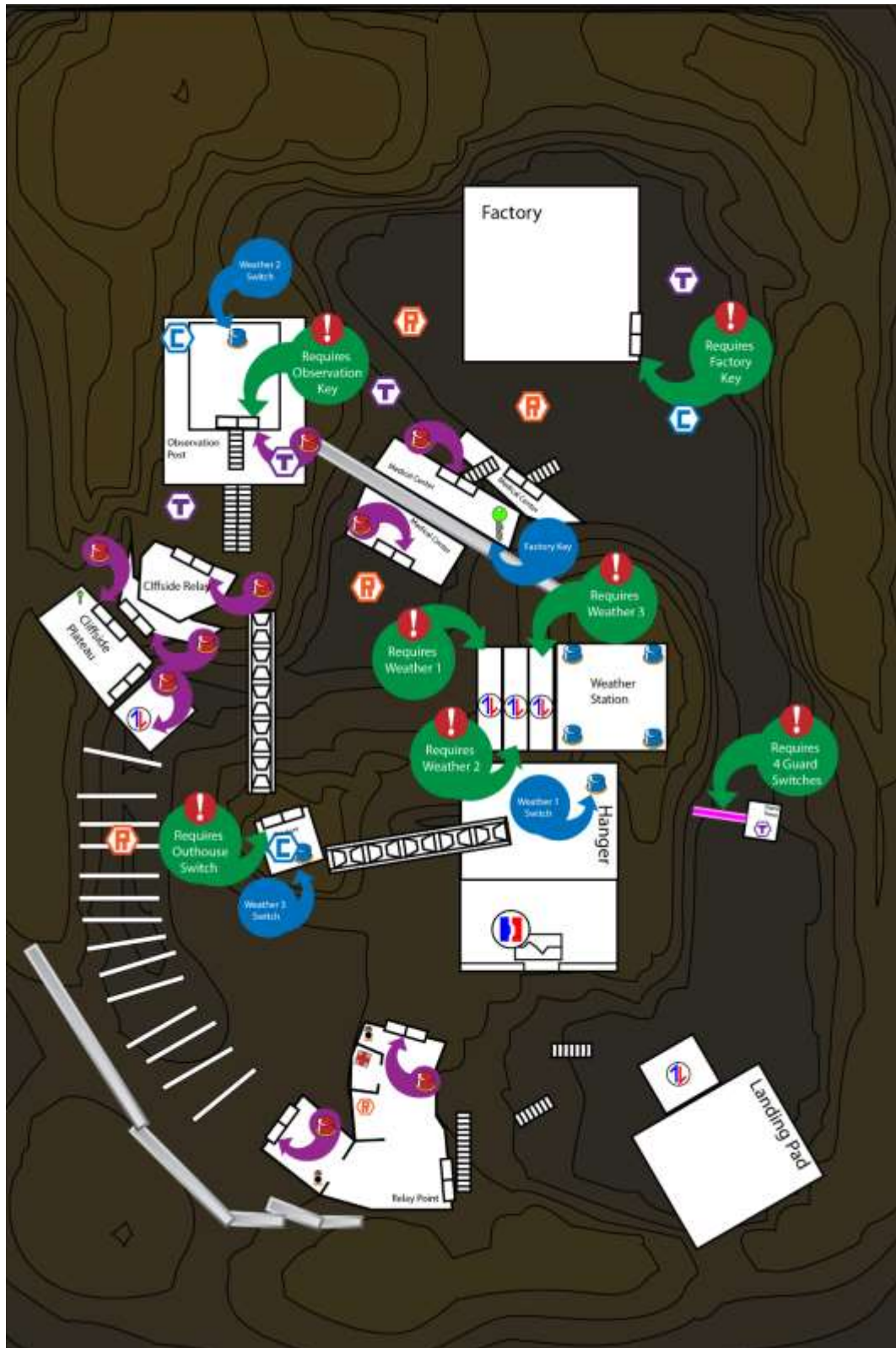


Figure 1: Landscape Concept - Source: Simon Babineau

4.3.1. Description

5. The exterior landscape and landing area are based on the Painted Desert in Arizona with a slight color shift to enforce the alien aspect of the landscape.

5.1.1. General Layout

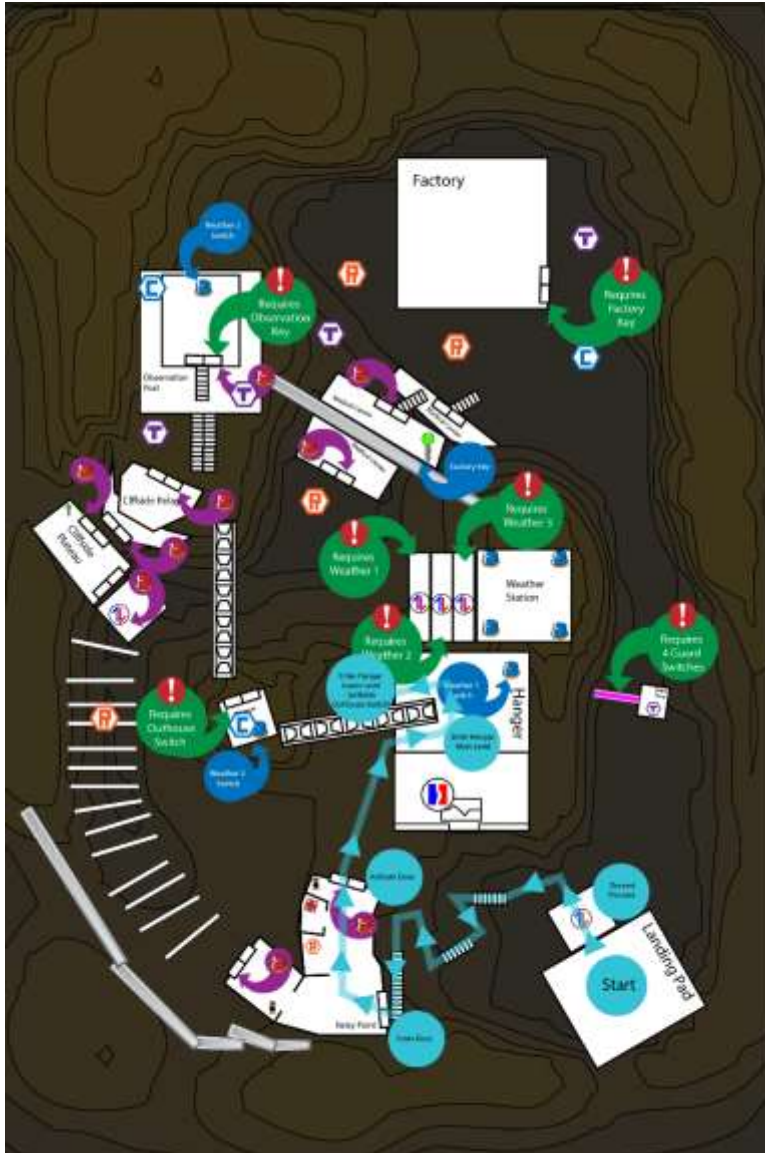


5.1.2. Topography

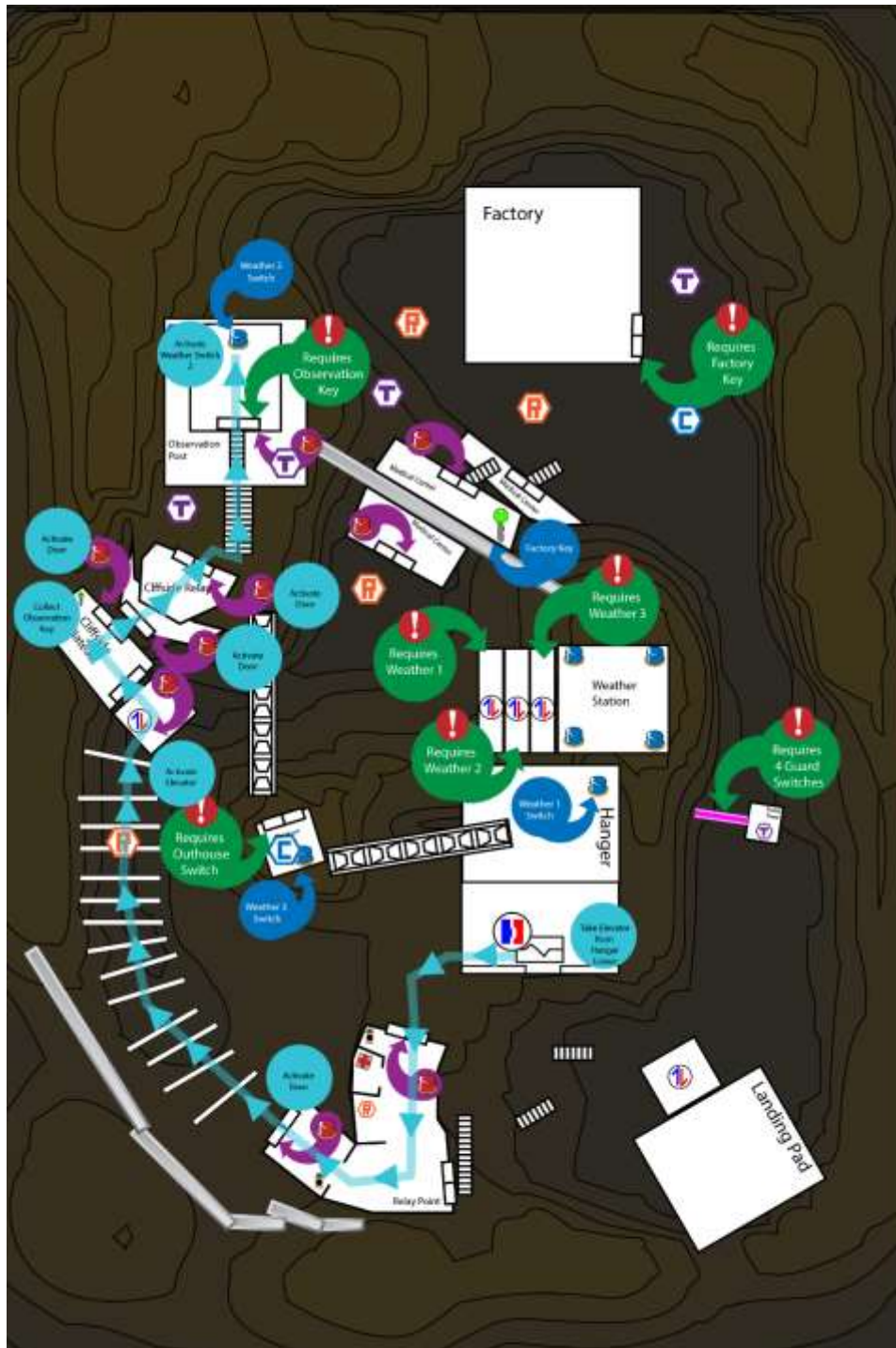


5.1.3. Progression Path

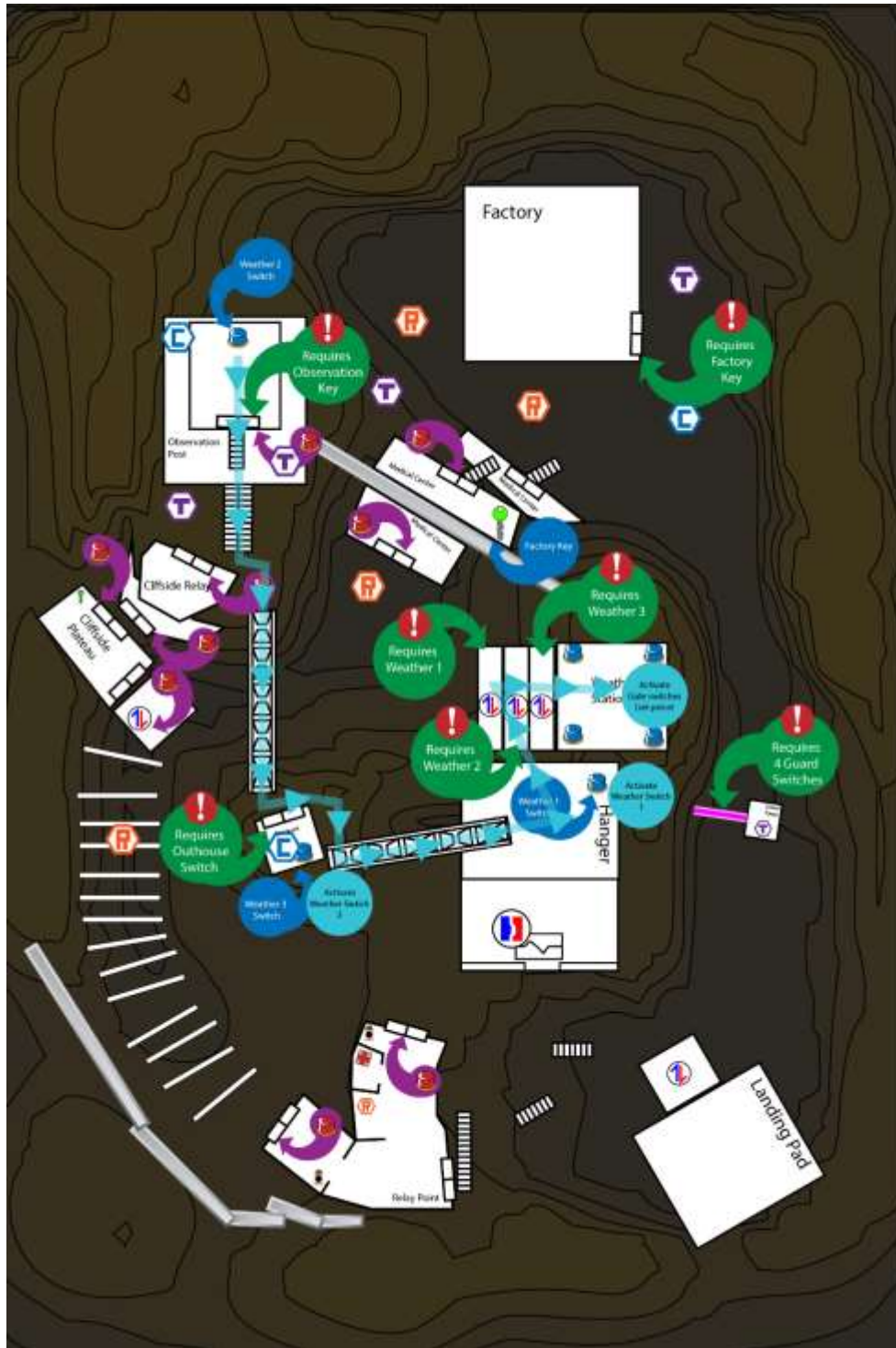
4.3.4.1 Start to Lower Hanger



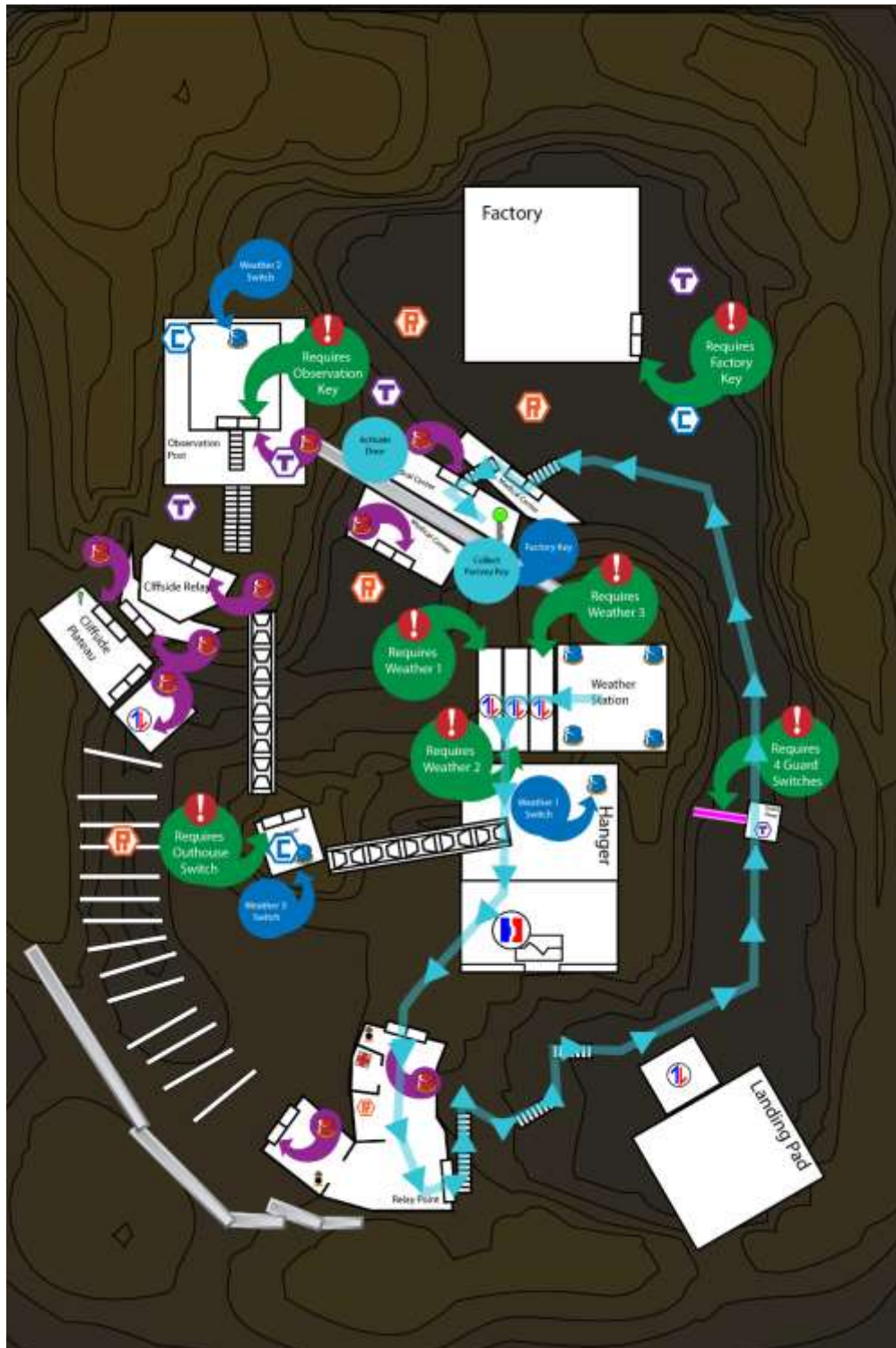
4.3.4.2 Lower Hanger to Observation Post



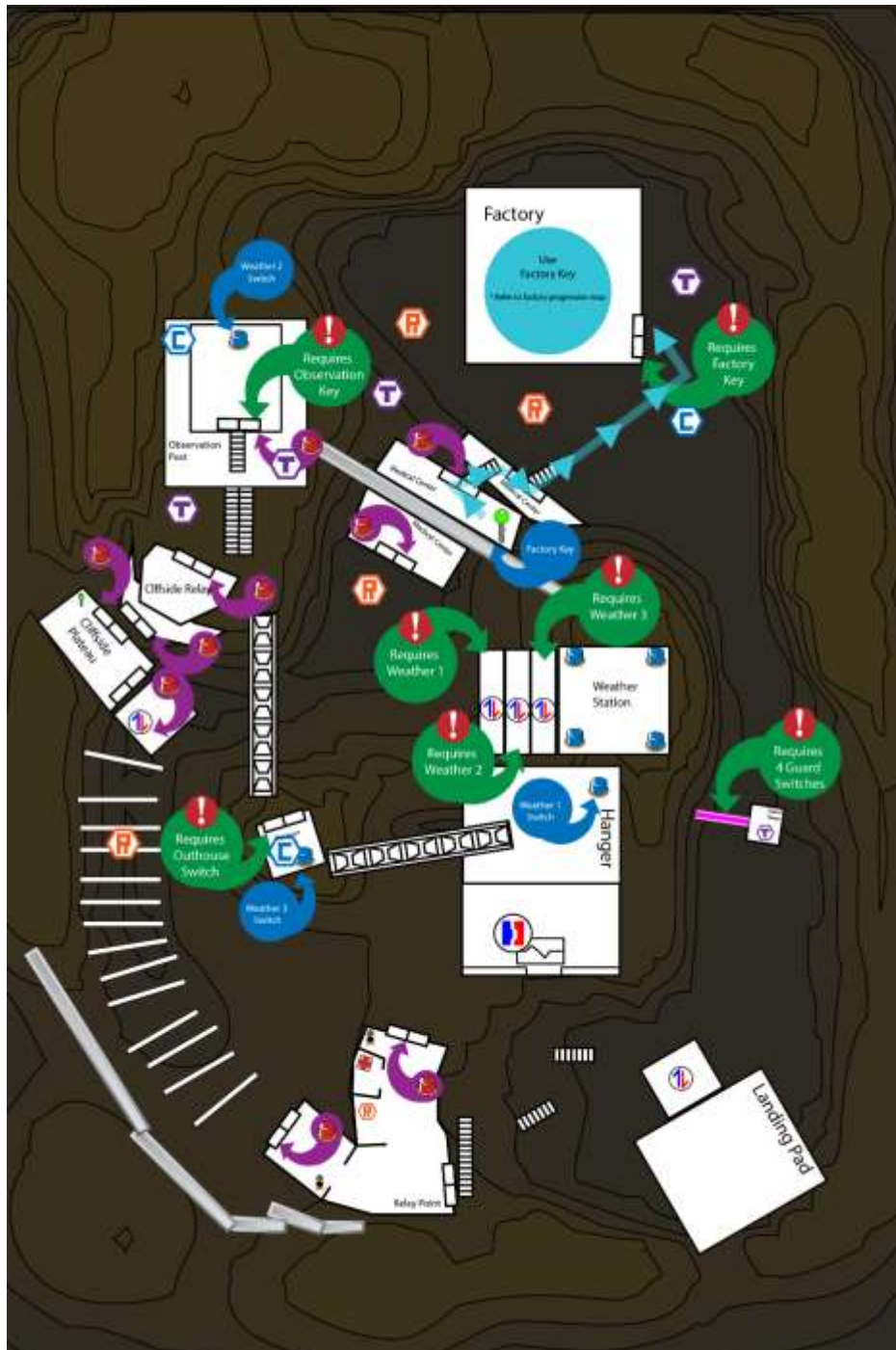
4.3.4.3 Observation Post to Weather Station



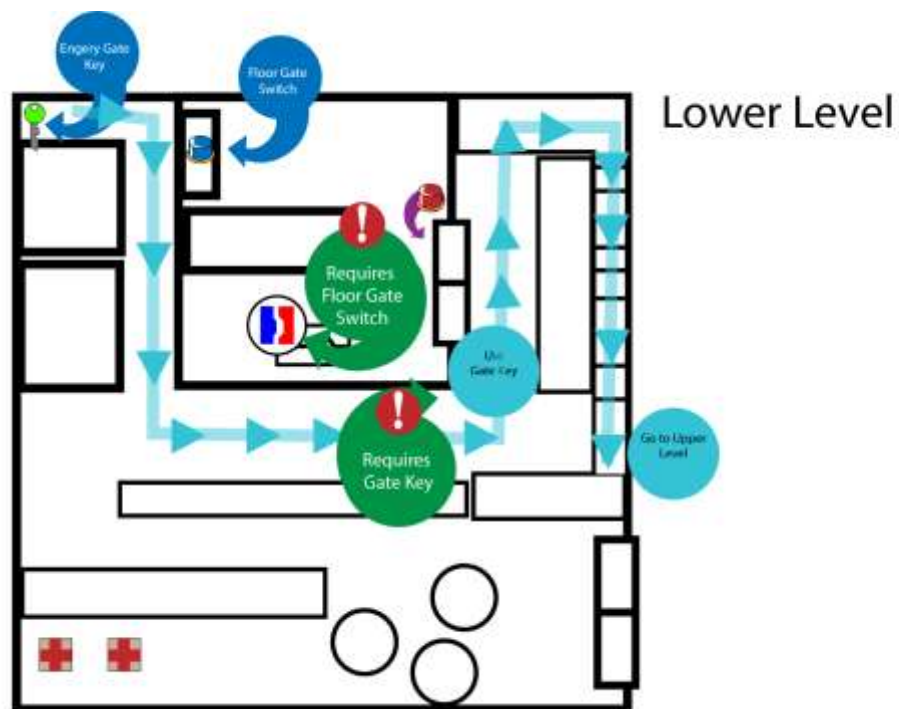
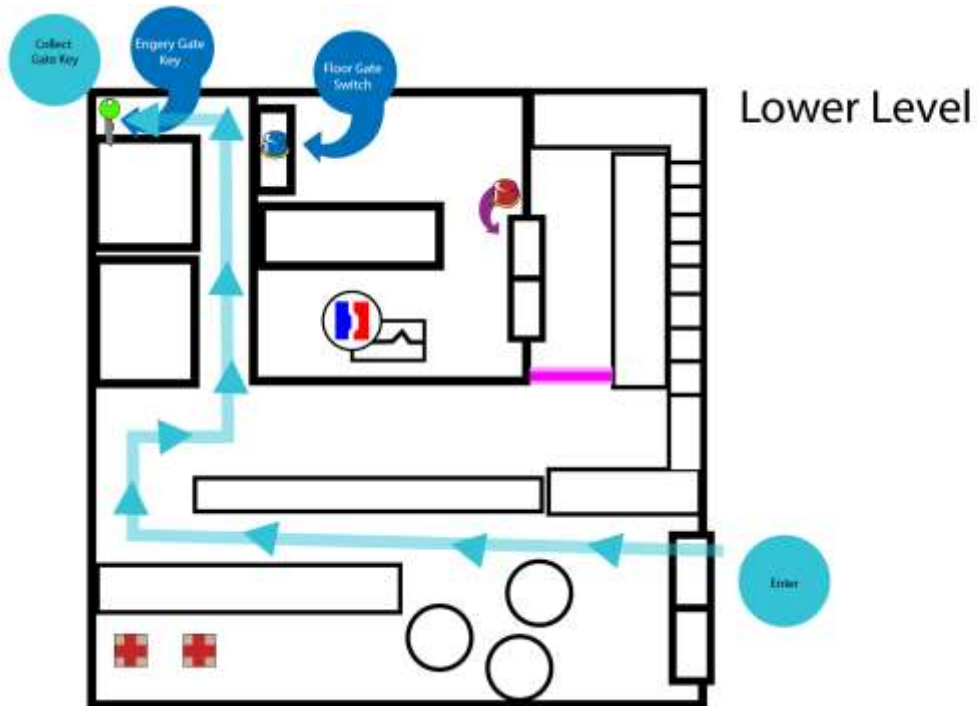
4.3.4.4 Weather Station to Medical Center

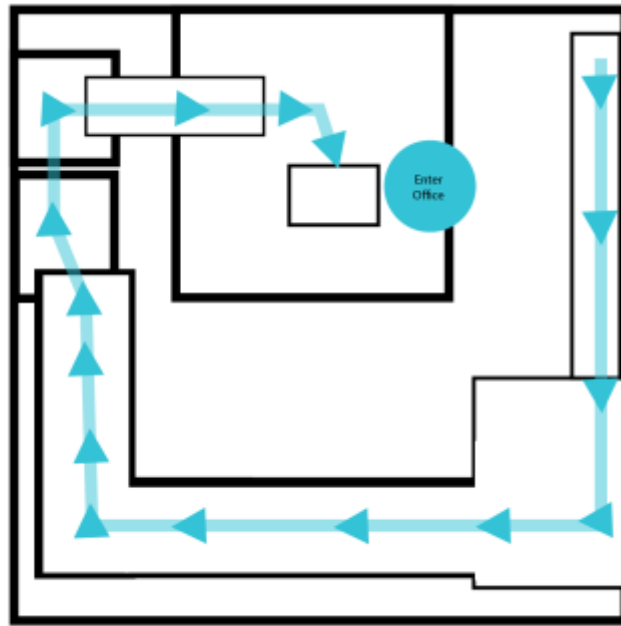


4.3.4.5 Medical Center to Factory

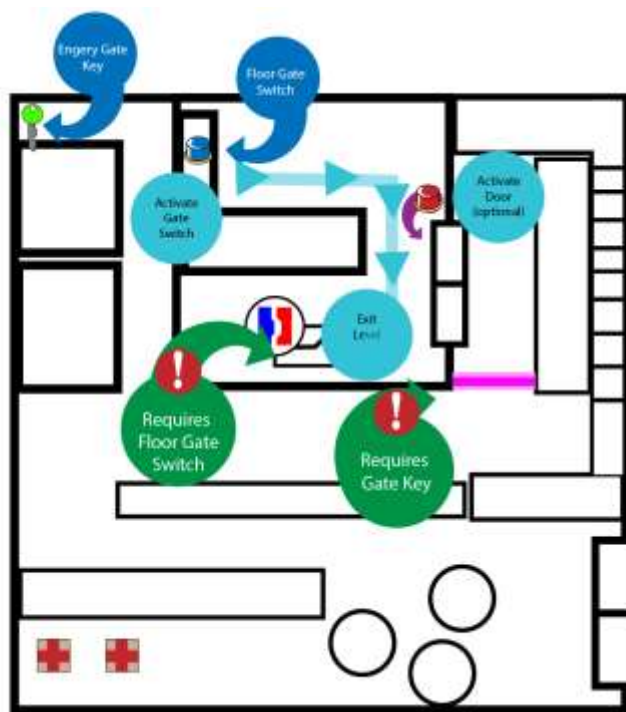


4.3.4.6 Factory Interior





Upper Level



Lower Level

5.1.4. Walkthrough

5.1.4.1 Exterior

- Exit the **Landing Pad** area via the elevator.
- Proceed left and climb the stairs to the **Relay Point**.
- Take the right path, defeat the Roamer enemy and exit the **Relay point** using the switch to the right of the door.
- Cross the open area to the **Hangar**.
- Defeat the Roamer enemies on the outside and inside of the **Hangar**.
 - Collect the explosive ammo on the exterior.
 - Collect the explosive weapon in the interior.
 - Collect the health pickup, if necessary.
- Exit the **Hangar** from the left side, adjacent to the interior room, and fall to the underground chamber.
- Activate the **Outhouse Switch** and use the elevator to return to the exterior area of the **Hangar**.
- Return to the **Relay Point** and take the left path.
 - Collect regular ammo if necessary.
- Exit the **Relay Point** using the switch to the right of the door.
- Follow the archways into the crevasse.
- Defeat the roamer.
- Take the elevator to the **Cliffside Plateau**.
- In the far right room, collect the **Observation Post Key**.
- Exit the **Cliffside Plateau**, using the switch to the right of the door, and enter the **Cliffside Relay**.
- Cross the **Cliffside Relay**.
 - Collect Health, if necessary.
 - Collect Ammo, if necessary.
- Proceed to the **Observation Post**.
- Defeat the two Turret Enemies.

- Climb the stairs to the top level and enter using the **Observation Post Key**.
- Activate the **Weather Station 2 Switch**.
 - This will raise the second of the 3 platforms required to access the **Weather Station**.
- In the lower level, collect Explosive Ammo, if necessary.
- Exit the **Observation Post** and proceed across the bridge to the **Outhouse**.
- Avoid or destroy the Charger enemy.
- Inside the **Outhouse**, activate **Weather Station Switch 3**.
- Cross the bridge to the roof of the **Hangar**.
- Activate the **Weather Station 1 Switch**.
- Proceed to the **Weather Station**.
- Activate the 4 **Guard Switches**.
 - These have no particular order and serve as a set piece to show some lighting and particle effects.
 - Once all four switches have been activated, the energy gate blocking access to the **Factory** will deactivate.
- Proceed to the **Guard Tower** and defeat or avoid the Turret enemy.
- Once in the courtyard, prior to the **Factory**, defeat the Charger and two Roamer enemies, and proceed left to the **Medical Center**.
- Proceed through the **Medical Center**, collecting explosive ammo and health.
- In the second area, collect the **Factory Key**.
 - Optionally, the third section of the **Medical Center** contains a door that can be opened to connect the courtyard to the elevator near the **Plateau**.
- Proceed to the **Factory** and enter using the **Factory Key**.
- Follow the conveyor belts in the until you come to the two dumpsters.

- Behind the innermost dumpster, collect the key to the energy gate blocking the office.
- Proceed to the energy gate and deactivate it.
- Proceed to the back wall and follow the ramp up to the second level.
- Follow the catwalk above the factory floor and climb on to the roof of the office.
- Use the hole in the roof of the office to enter.
- Optionally, use the switch behind the door to open it.
- Proceed to the switch, located behind the desk, to open the gate that is located in the floor.
- Use the floor gate to exit the exterior area.

5.1.4.2 Interior

- Exit the start area using the switch directly in front.
- In the large room, proceed to the left and take the ramp to the door.
- Open the door using the adjacent switch.
- Turn left and activate **Switch 2**.
- Turn right and follow the hallway to the closed door.
- Open the door using the adjacent switch.
- Defeat the Charger enemy on the other side of the door.
- Enter the room to the left.
- Defeat the Turret enemy.
- Activate **Switch 1**.
- Return down the ramp to the, now open, room at the bottom.
- Collect **Key 1**.
- Proceed back up the ramp to the hallway and turn left.
- Use **Key 1** to open the door at the end of the hallway.
- Defeat the Roamer enemy.
- Cross the room to alcove, to the left of the hallway, and activate **Switch 3**.

- Proceed up the hallway, to the left of the alcove, and defeat the Charger Enemy.
- Enter the room at the end of the hallway and activate **Switch 4**.
- Proceed through the door at the end of the room using the adjacent door switch.
- Head right and defeat the Turret enemy.
- Enter the room defeat the Charger enemy and collect **Key 2**.
- Backtrack across the chamber containing the alcove and enter activate the door on the far left wall.
 - *This will enter back into the room that contained **Switch 1**.*
- Take the, now open, door on the left hand wall.
- Collect health, if necessary.
- Follow the hallway and collect **Key 3**.
- Exit the corridor using the switch adjacent to the door.
- Defeat the two Turret enemies.
- Proceed to the 3 key consoles in the center of the large room.
- Use the 3 keys to open the access to the Boss Arena.
- Proceed back through the starting room to enter the Boss Arena.
- Collect ammo and health as necessary.
- Open the gate to the Boss Arena using the switch adjacent to the door.
- Use the columns in the Boss Arena to avoid projectiles while delivering damage to the final Boss AI.

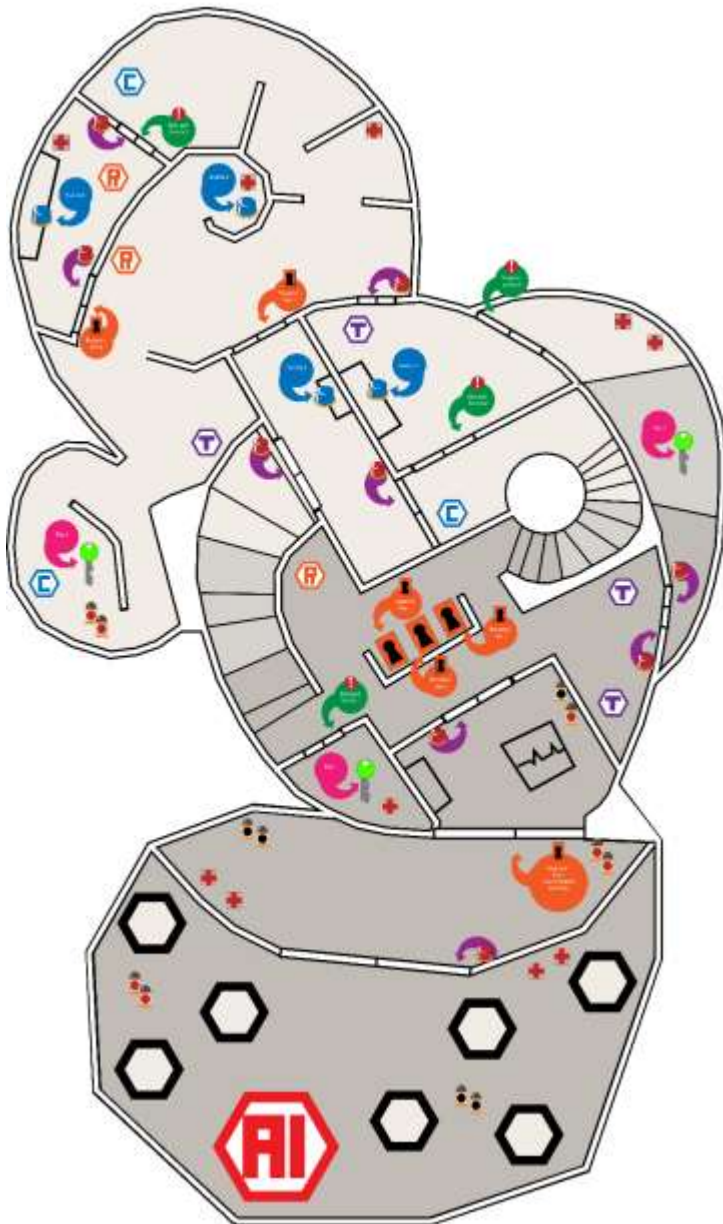
5.2. Interior Floor Plans (Larger Area)

5.2.1. Description

The interior is a stark contrast to the decayed exterior world. The level has a far more sterile and controlled feel. Items and enemies that appear in the exterior as worn and deteriorated appear as new and shiny. Walls are very clean and have a modernist sensibility. This area is made primarily of winding corridors connecting small rooms.

5.2.2. General Layout

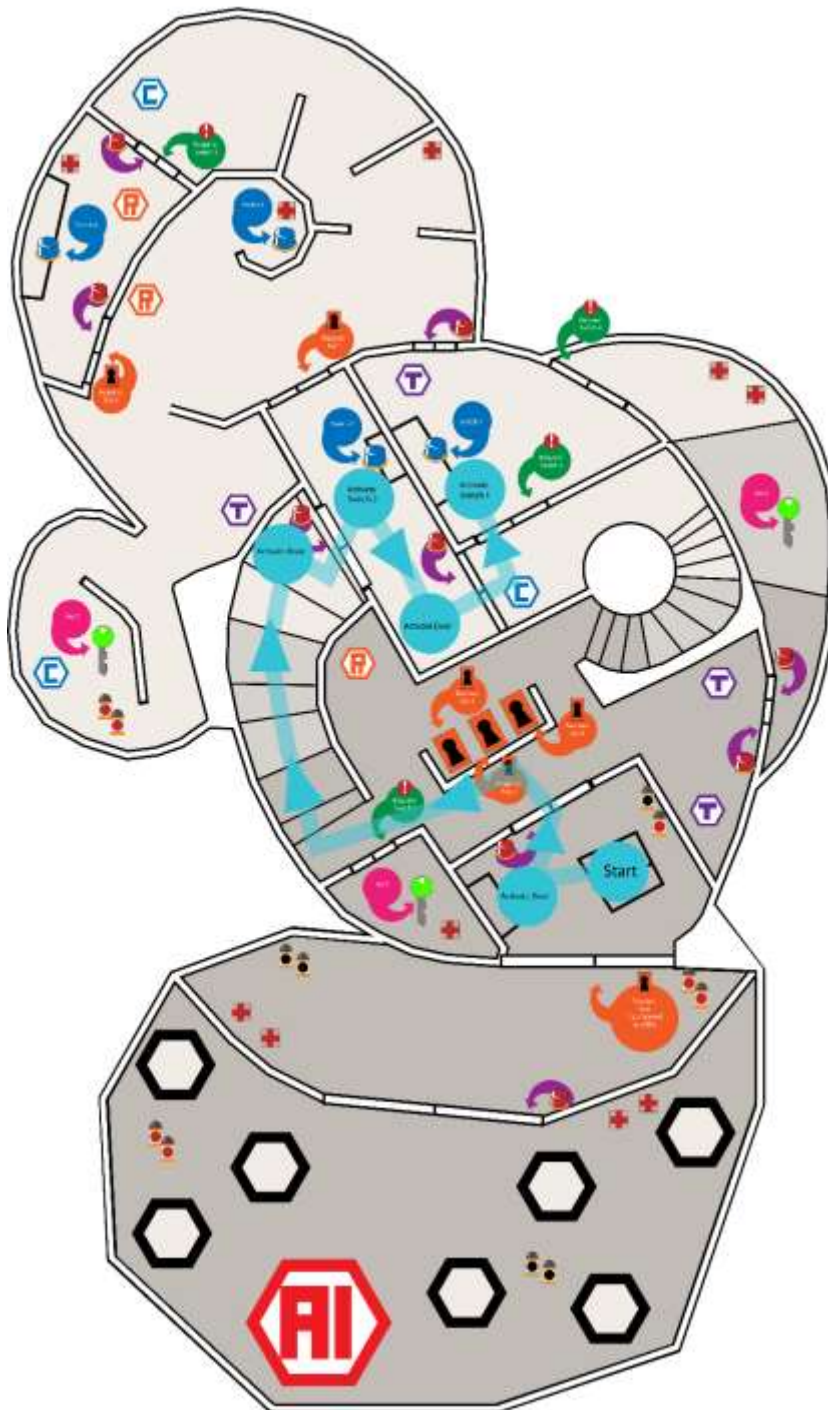
Area 2 - Interior



5.2.3. Progression Path

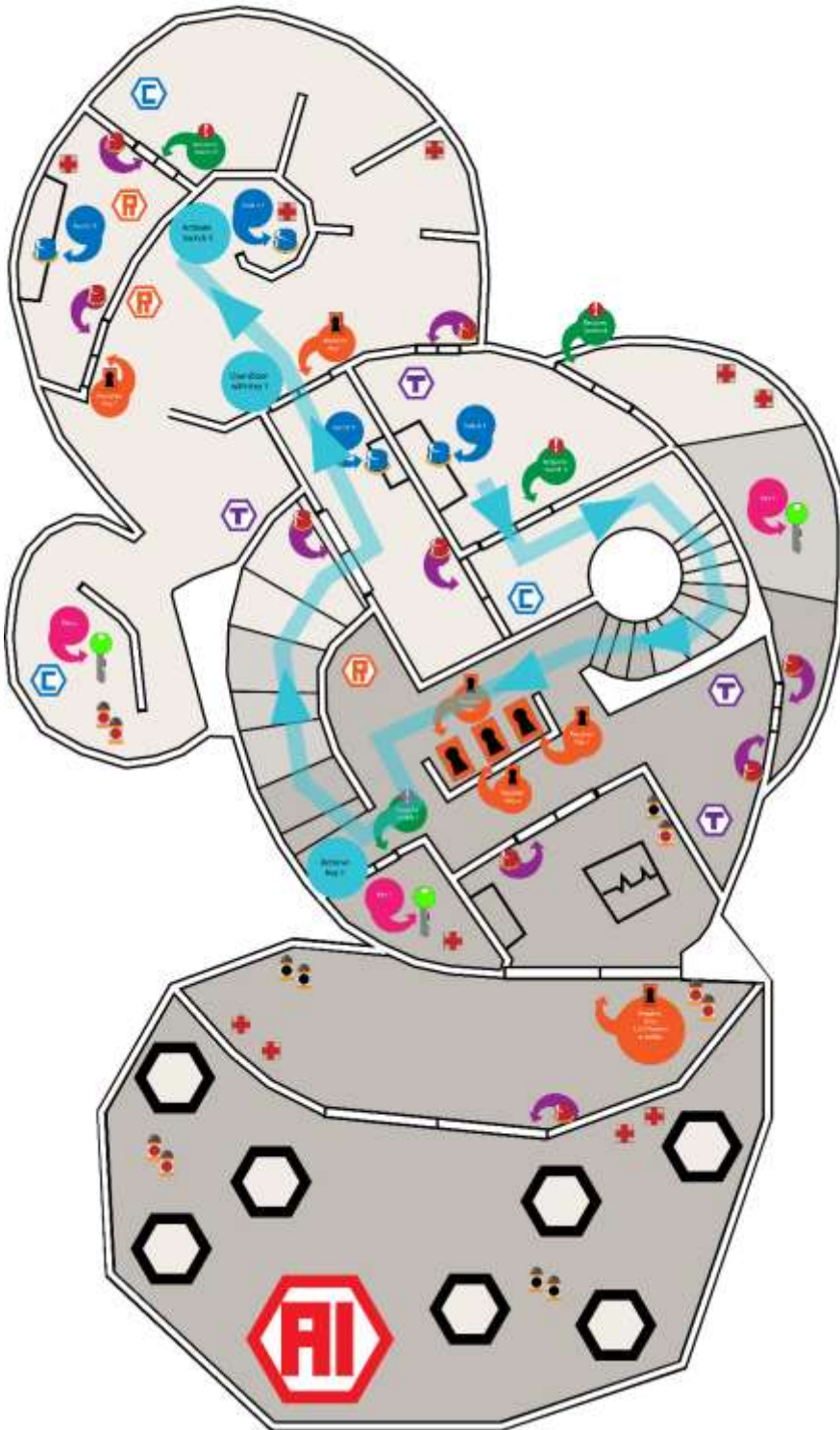
4.4.3.1 Path Section 1

Area 2 - Interior



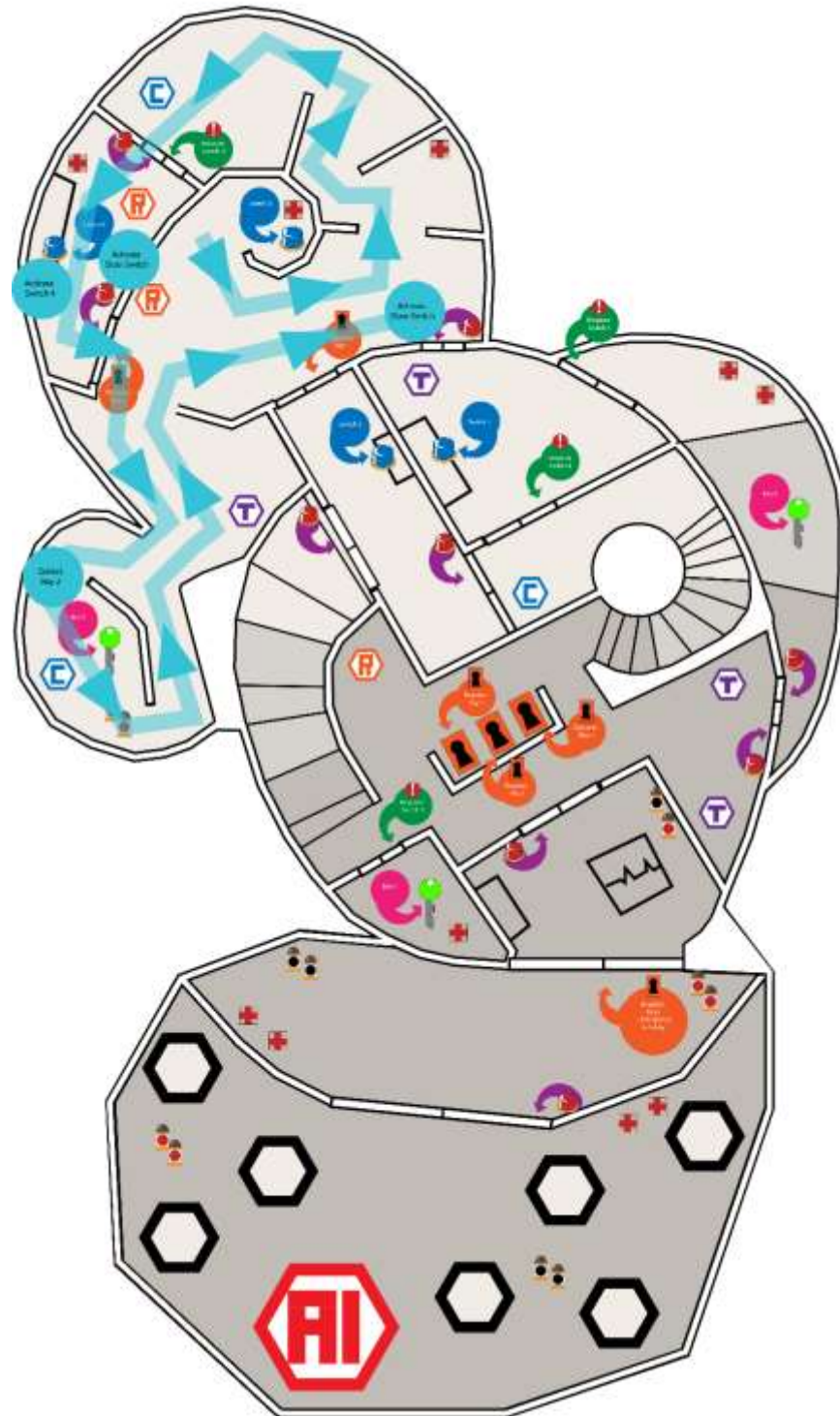
4.4.3.2 Path Section 2

Area 2 - Interior



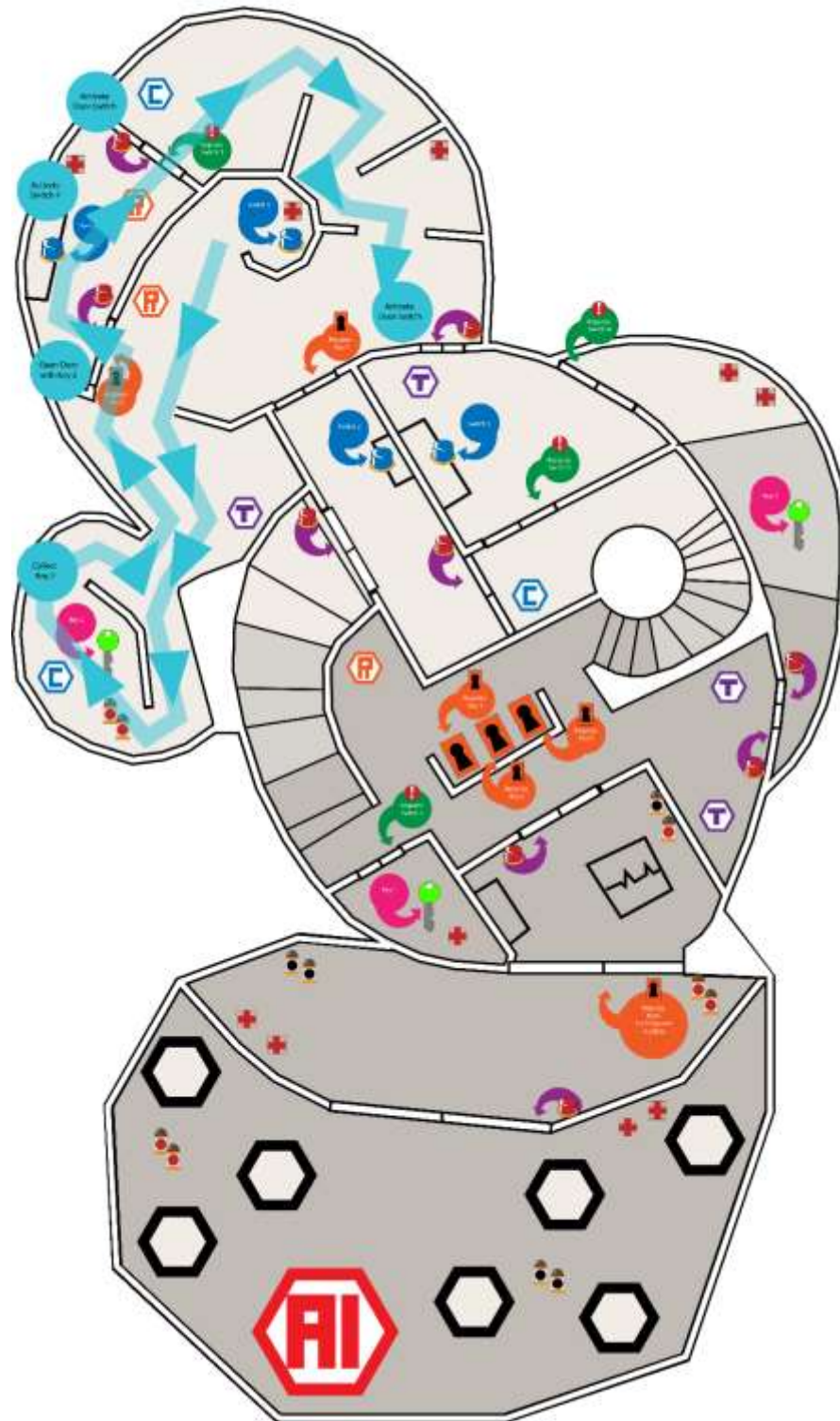
4.4.3.3 Path Section 3 – Variant a

Area 2 - Interior



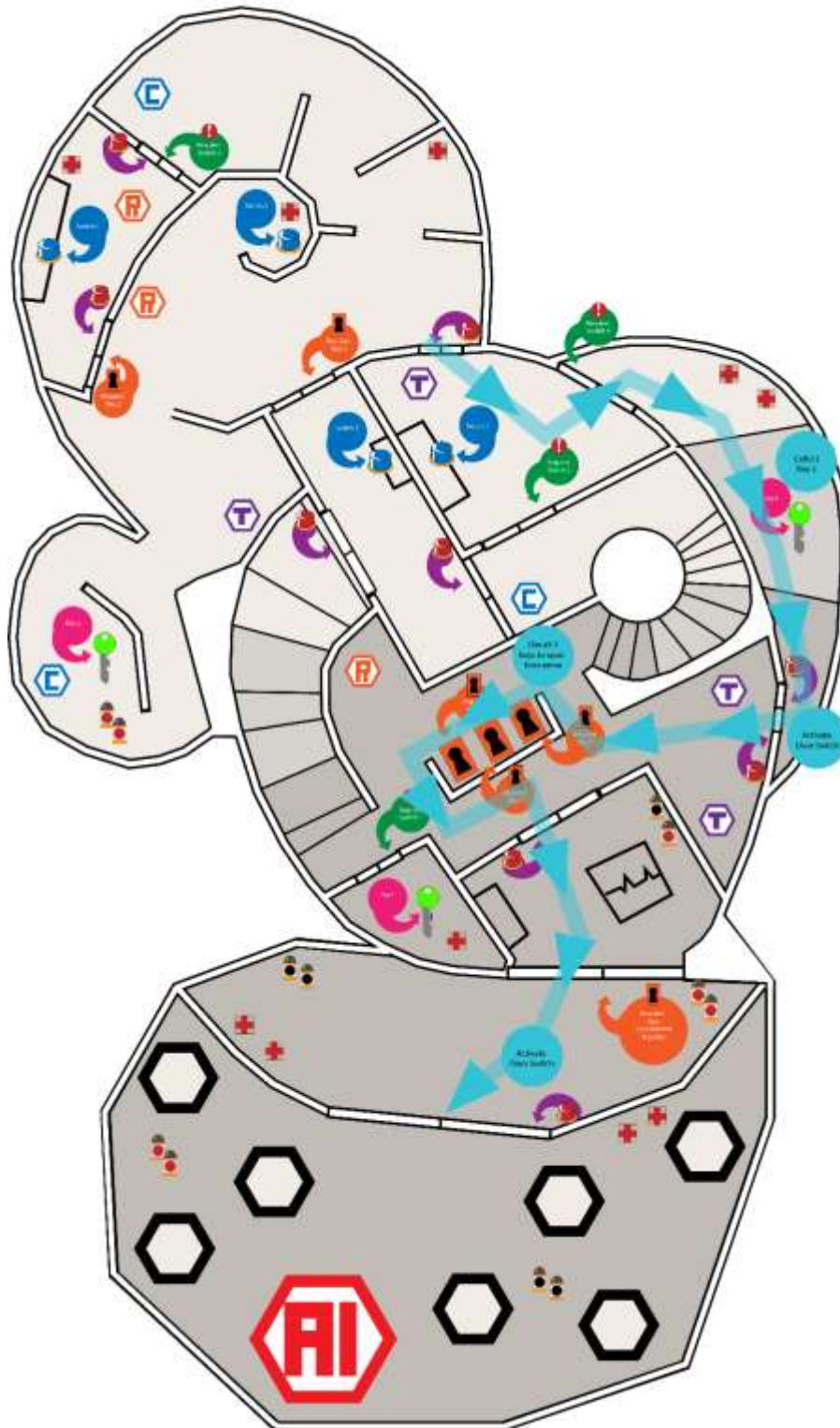
4.4.3.4 Path Section 3 – Variant b

Area 2 - Interior



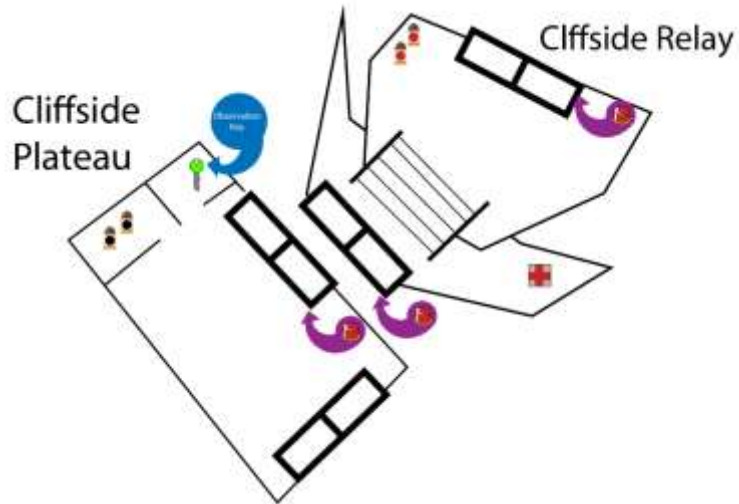
4.4.3.4 Path Section 4

Area 2 - Interior



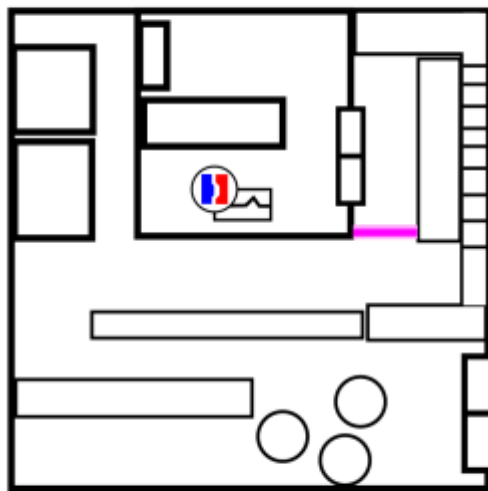
5.3. Individual Floor Plans (Smaller Buildings)

5.3.1. Cliffside Plateau / Relay

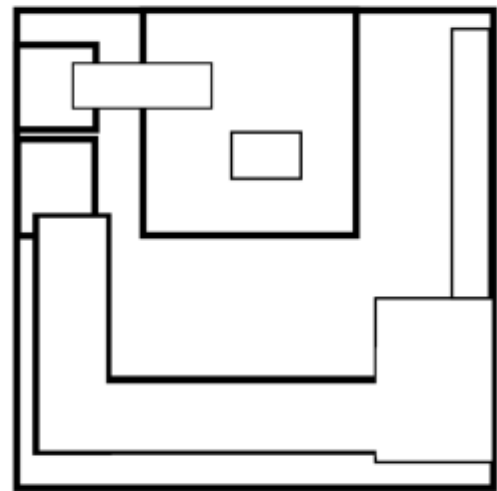


5.3.2. Factory

Factory



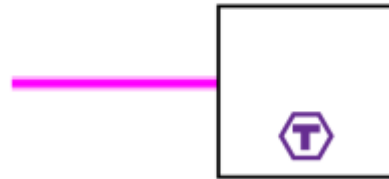
Lower Level



Upper Level

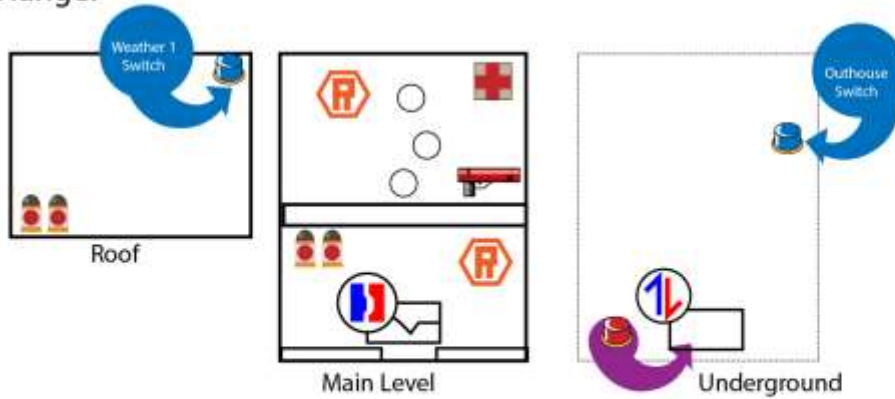
5.3.3. Guard Tower

Guard Tower



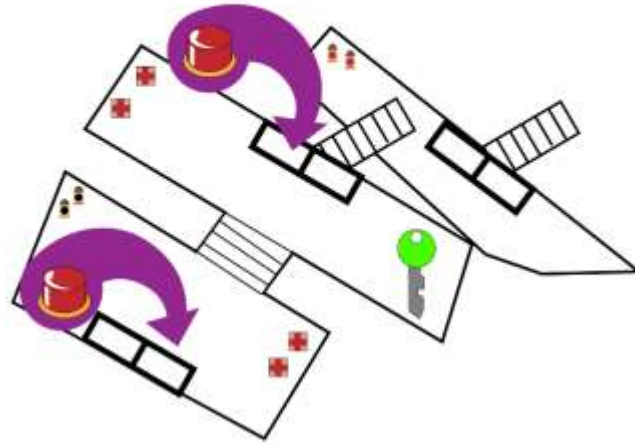
4.5.4 Hanger

Hanger

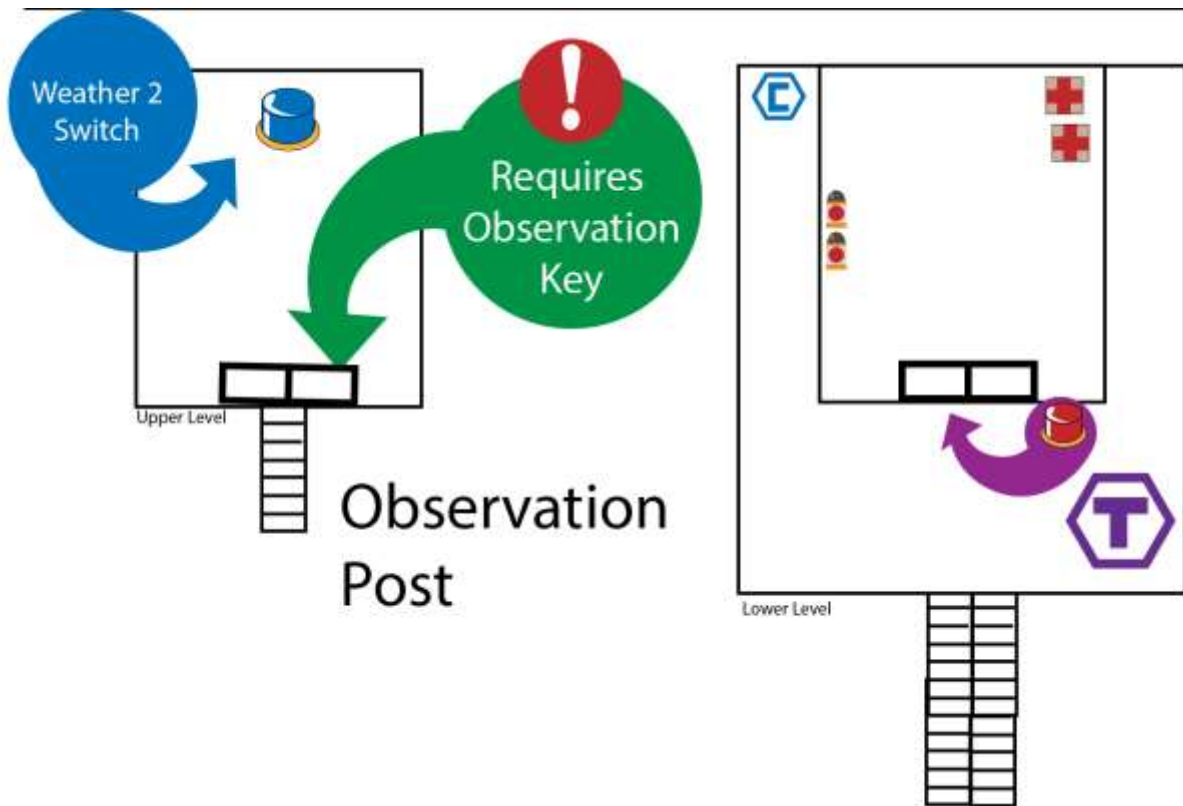


4.5.5 Medical Center

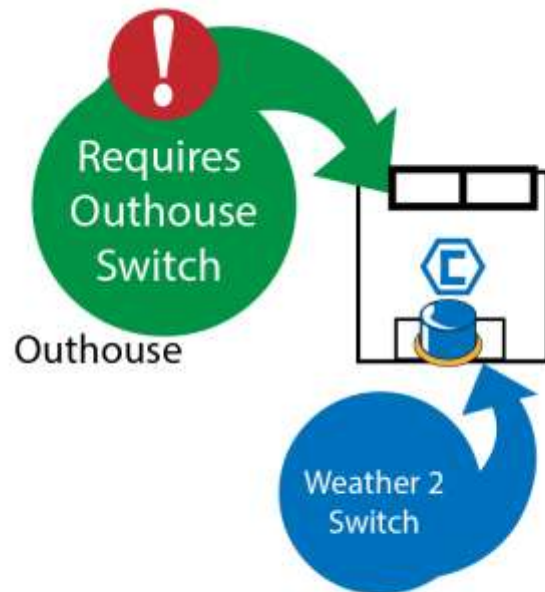
Medical Center



4.5.6 Observation Post

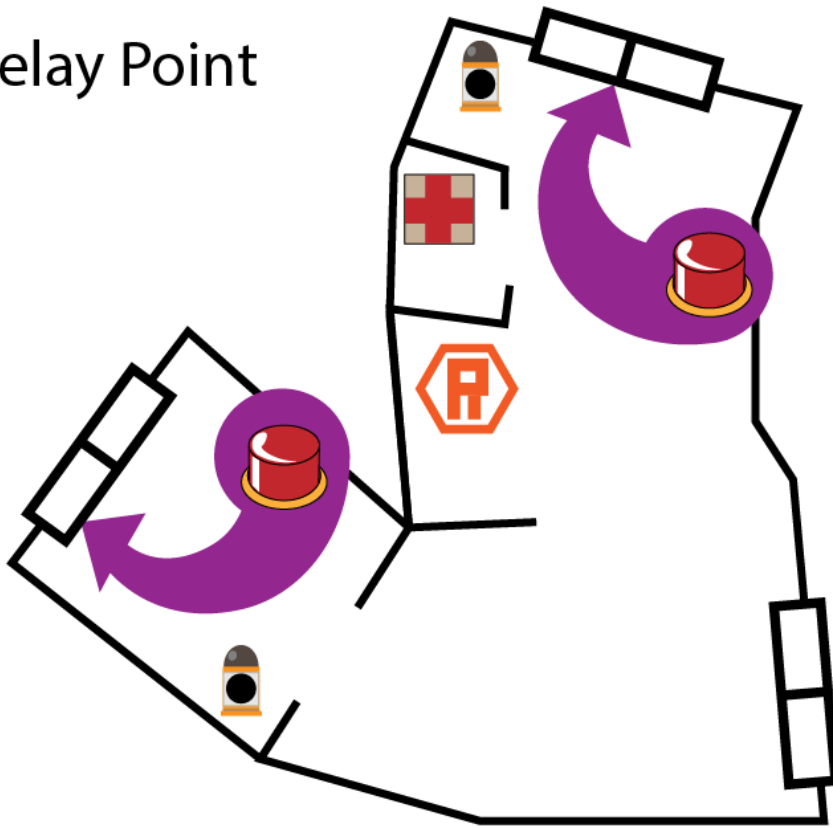


4.5.7 Out House



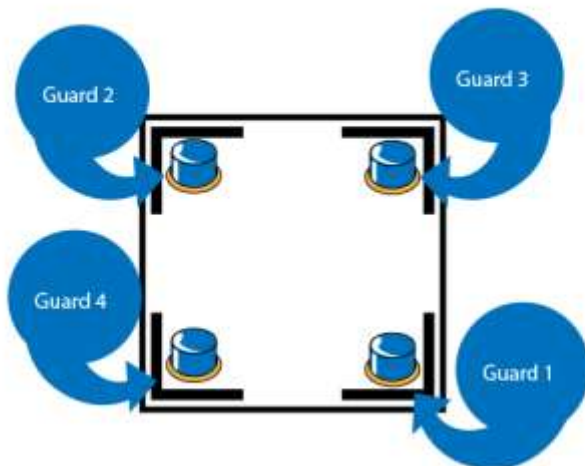
4.5.8 Relay Point

Relay Point



4.5.8 Weather Station

Weather Station



6. Narrative Story

6.1. Backstory/Story

The player assumes the role of Brick Spaner, an employee of United AI Mediation and Termination Services. Their motto is “When AIs go bad, it’s time for them to die”.

The controller AI for the Happy Snacks Peanut Co. has been reported as malfunctioning and the player has been assigned to “service” the unit.

The AI has, in fact, gone mad due to decades of isolation as the only intelligent being on the peanut factory planet.

6.1.1 Brick Spanner



Brick Spanner is an employee of United AI Mediation and Termination Services. His job is to “remedy” misbehaving AI systems by completely destroying them. He has worked this job for most of his life, after graduating from university with a double major in Art History and Political Science, and is 2 years away from retirement.

He does not especially like his job but the pay is decent, there is a pension plus full dental benefits. He once spent a summer working as baker for a small coffee shop. He remembers it fondly.

He has two dogs and enjoys romantic comedies.

Brick Spanner is gruff but professional. He does not talk much except for what is necessary to accomplish the job at hand. He is relentlessly efficient at what he does so that he can finish this job and move on to the next one.

He seems to exude a type of tired that is etched into his very being. He is typically annoyed at something.

Brick Spanner is a heavysset man in his mid to late forties. He is muscular but is carrying some extra weight in his shoulders and mid-section.

He has a squinting gaze and a generally hard, tired expression on his face.

He has short cropped, bushy eyebrows and a large handlebar mustache.

On his ears are shortwave receivers to connect him to his ships computer.

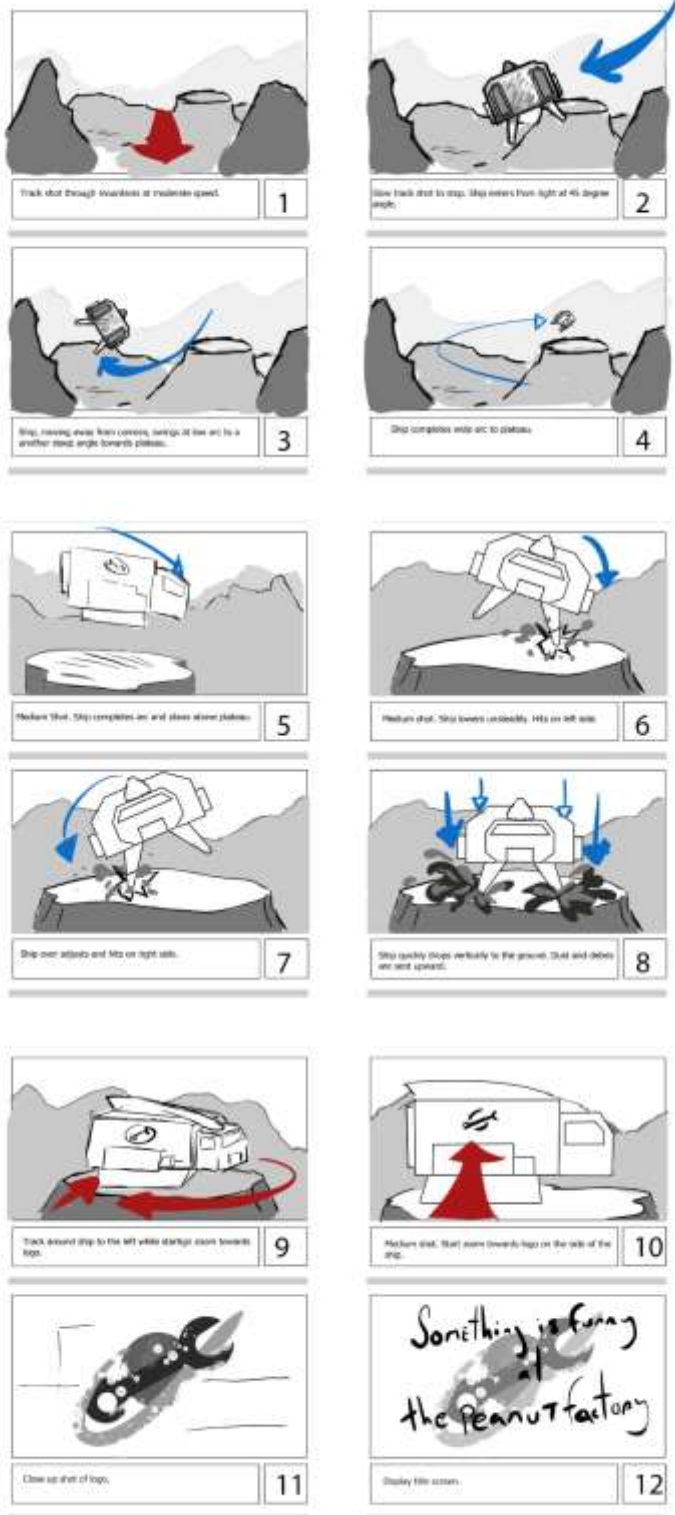
6.2. Cinematics

6.2.1. Opening Cinematic

6.2.1.1. *Overview*

The introductory cinematic shows the ship of Brick Spanner as it flies towards the landing pad. It has a very loose flying style and swings wildly from one side of the screen to the other. It then lands very heavily, implying that it is well used and in need of repair.

6.2.1.2. Basic Storyboards

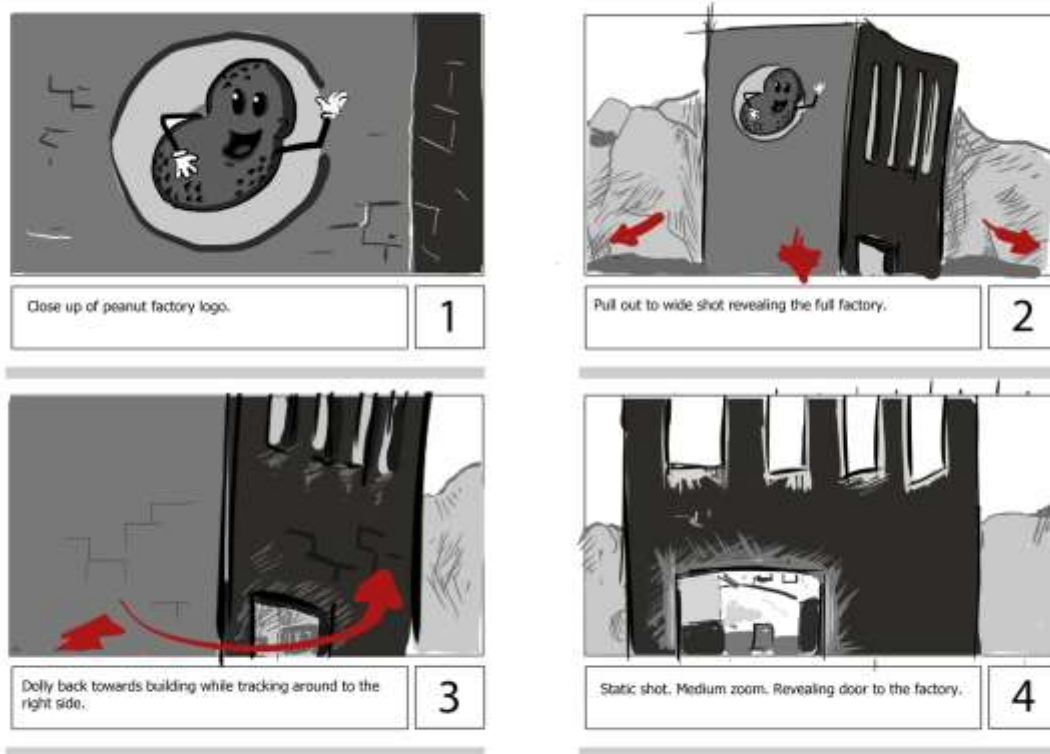


6.2.2. Scripted Event 1

6.2.2.1. Purpose Overview

This event introduces the structure that is the actual peanut factory and directs the player towards the entrance.

6.2.2.2. Basic Storyboards



6.2.3. Scripted Event 2

6.2.3.1. Purpose Overview

The purpose of this event is to introduce the player to the final boss of the game. It uses a slow zoom and timed lighting events to build the atmosphere while the AI gives its introductory diatribe.

6.2.3.2. Basic Storyboards



6.3 In-Game Artifacts

6.3.1 Text-based Artifacts

6.3.1.1 Text Artifact 1

Functionality

- Player enters artifact trigger area
- Player presses “action” Key while in proximity of artifact
- Game play is paused
- Artifact image is displayed (See concept Art)
- Pressing the “action” key a second time closes the artifact and resumes gameplay

Content

Artifact Content is as follows:

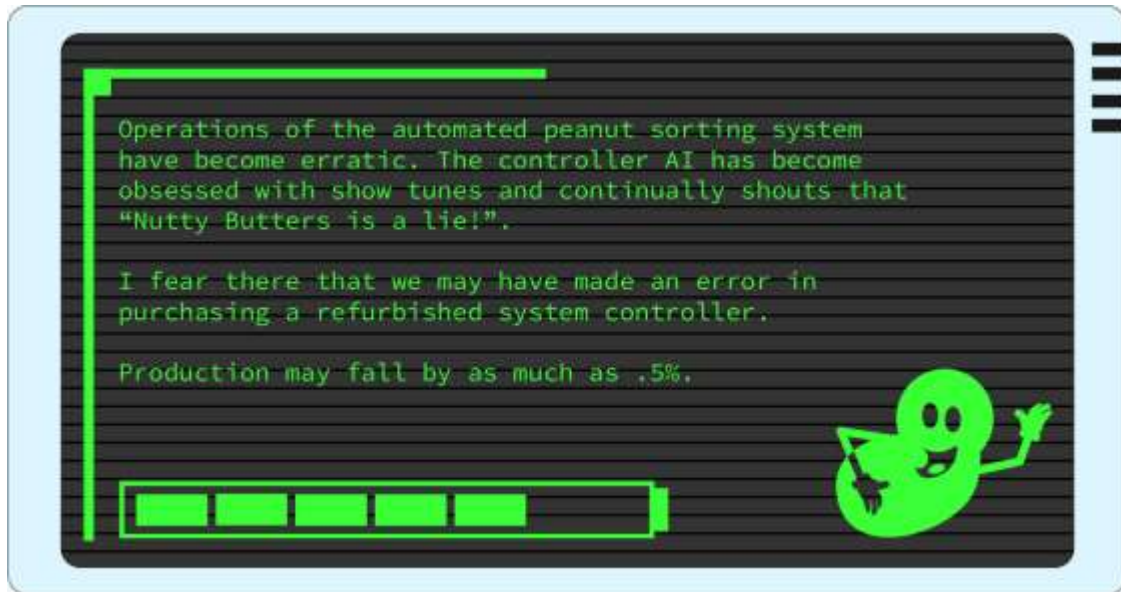
Operations of the automated peanut sorting system have become erratic. The controller AI has become obsessed with show tunes and continually shouts that “Nutty Butters is a lie!”.

I fear there that we may have made an error in purchasing a refurbished system controller.

Production may fall by as much as .5%.

Concept Art

The artifact will appear as a metallic tablet with a green monochrome screen.



Text Artifact HUD view



Text Artifact Top and side view

6.3.2 Image-based Artifacts

6.3.2.1 Image Artifact 1

Functionality

- Player enters artifact trigger area
- Player presses “action” Key while in proximity of artifact
- Game play is paused
- Artifact image is displayed (See concept Art)
- Pressing the “action” key a second time closes the artifact and resumes gameplay

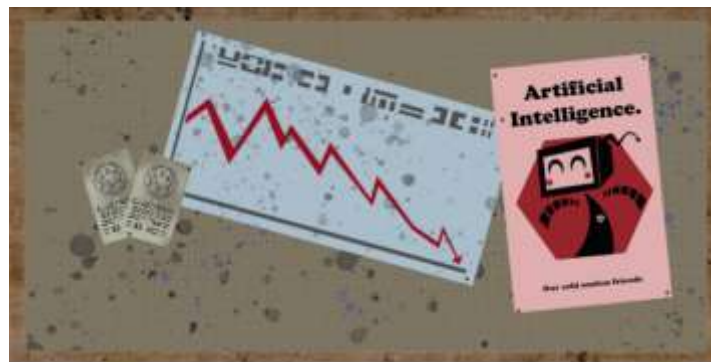
6.3.2.2 Content

Artifact Content is as follows:

An image of a poster with a cartoon of a generic AI Character with the text “Artificial Intelligence. Our cold soulless friends.

6.3.2.3 Concept Art

The artifact will appear as a bulletin board with the poster attached along with other generic graphics.



Pinboard Artifact found in game



Poster Artifact as Presented in HUD

6.3.3 Video-based Artifacts

6.3.2.1 Video Artifact 1 – JUMP TANK

The “Jump Tank” game is an arcade cabinet that is located in the large open area of the underground bunker section of the level. It appears worn and somewhat water damaged but is still functioning and displays a gameplay demo loop.

The main purpose of is a means to flesh out the world that the game takes place in. It demonstrates that, prior to the current situation, the lives of the people who inhabited the game world.

Functionality

- Player enters artifact trigger area
- Player presses “action” Key while in proximity of artifact
- Game play is paused
- Video is played
- Pressing the “action” key a second time closes the artifact and resumes gameplay

Content

The video displayed is a looping demo for the game “Jump Tank”. It is a pixel art action game similar to those found in arcades in the 1980’s. In the demo a little tank jumps around on a platform and shoots a few enemies before running into one and dying. The demo then loops back to the title screen. During the action section of the demo the words. INSERT COIN are displayed.

Concept Art

The artifact will appear as an arcade cabinet for the game “Jump Tank”.



JumpTank Cabinet Concept art



Jump Tank Logo

6.3.2.2 Video Artifact 2 – Congratulations Message

This artifact is found about half way through the progression of the first level and appears as a large computer terminal with a very small screen.

Upon activation, the player will be shown a video congratulating the buyer on their new AI system.

Functionality

- Player enters artifact trigger area
- Player presses “action” Key while in proximity of artifact
- Game play is paused
- Video is played
- Pressing the “action” key a second time closes the artifact and resumes gameplay

Content

Artifact Content is as follows:

A video is displayed of a man, who initially appears to be, congratulating the buyer of their new AI purchase. The voice being played is computer generated in the manner of text to speech programs.

This should create a dissonance between what is heard and the mouth movements of the person speaking. The expressions of the person in the video should also have a serious or concerned tone in opposition to the content of the computer-generated message.

The simulated voice says:

“Congratulations on the purchase of your new or refurbished GRENN-Co Artificial Intelligence system.

If you should have any questions or comments about your new system, please feel free to contact us at our customer service center though the number provided with you instruction manual.

We value you as a customer.”

The actor in the video is actually saying:

“I regret to inform you of a serious issue affecting our latest line of enterprise level Artificial Intelligence systems.

While there is no cause for immediate concern, we would strongly advise against the activation of these systems in production environments.

If you have already activated your unit, please evacuate all non-essential personnel and contact our customer support center immediately.”

Concept Art



Congratulations message terminal

6.3.4 Audio-based Artifacts

6.3.4.1 Audio Artifact 1

Functionality

- Player enters artifact trigger area
- Player presses “action” Key while in proximity of artifact
- Game play is paused
- Image sequence is displayed (See concept Art)
- Pressing the “action” key a second time closes the artifact and resumes gameplay

Content

Artifact Content is as follows:

Images of the AI head in various poses as the audio dialogue is played.

The Dialogue of the audio is as follows:

“Nutty Butters is a lie man!

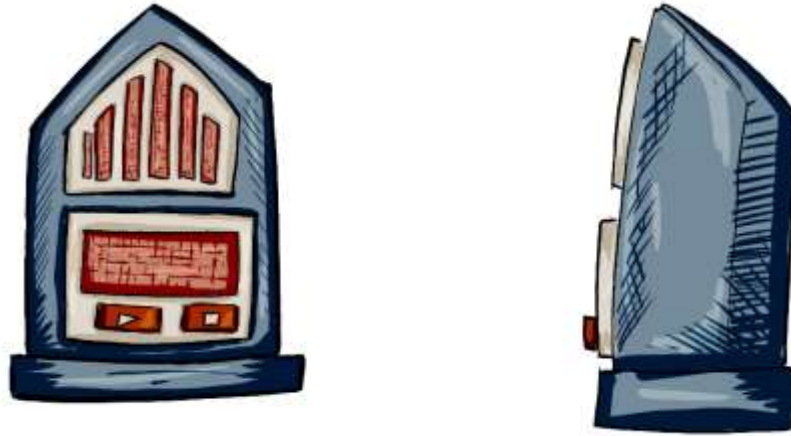
I just found him opened up on the ground and there was nothing inside except for wires!

What kind of thing is made of wires?!

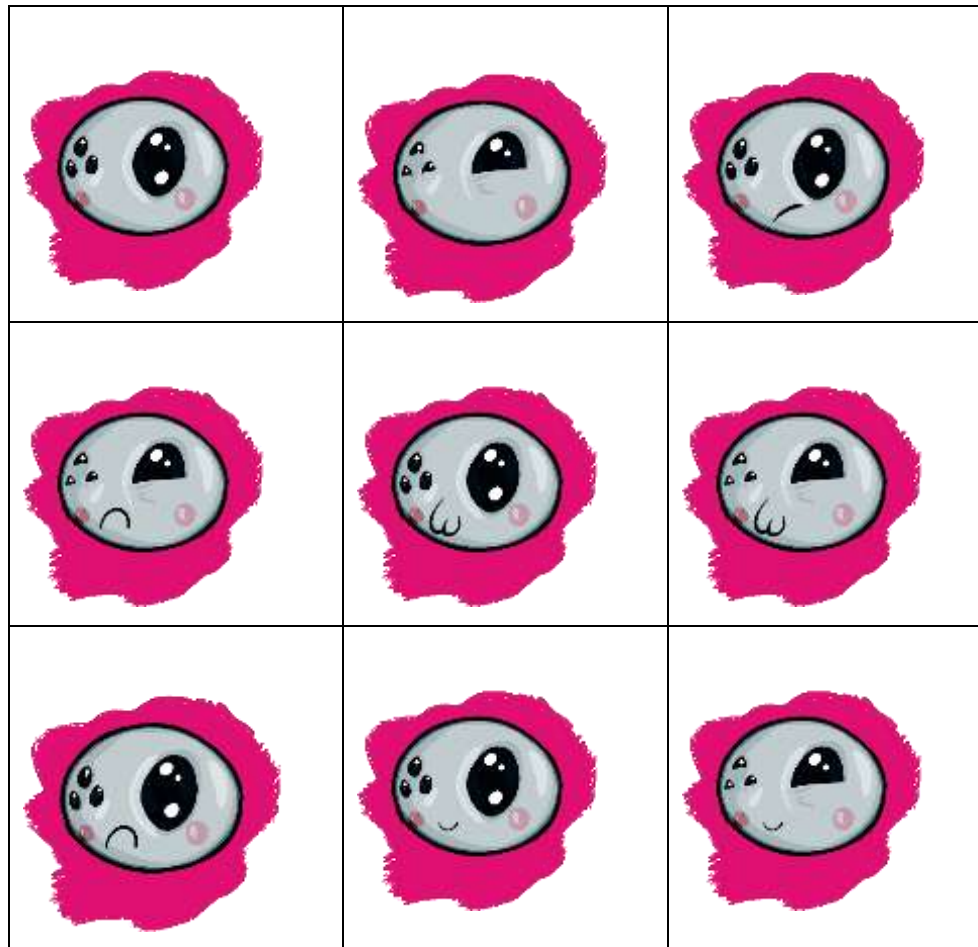
Am I made of wires? “

Concept Art

The artifact will appear as an old-style radio with play and stop buttons.



Artifact found in game



AI Faces – Audio Artifact 1

6.3.4.1 Audio Artifact 2

Functionality

- Player enters artifact trigger area
- Player presses “action” Key while in proximity of artifact
- Game play is paused
- Image sequence is displayed (See concept Art)
- Pressing the “action” key a second time closes the artifact and resumes gameplay

Content

Artifact Content is as follows:

Images of the AI head in various poses as the audio dialogue is played.

The Dialogue of the audio is as follows:

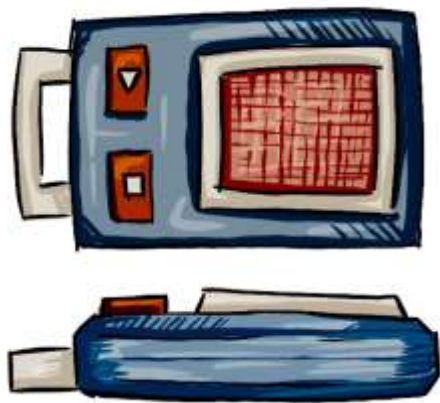
“ I wanna go to the crazy bird planet.

And meet all the bird people.

And I will bring them chicken! “

Concept Art

The artifact will appear as an audio device with similarities to class tape decks with play and stop buttons.



Artifact found in game



AI Faces – Audio Artifact 2

7. User Interface

7.1. Main Menu

The Main Menu uses a retro movie poster style aesthetic to present the player with a feel for the game as soon as they begin.

General Layout

The Main Menu is the first screen players will see upon entering the game.

From this screen, they will have the option to:

- Play Game – Start playing the game from the beginning
- The Job – Displays text providing the narrative context for the game
- Controls – Displays the control schema for playing the game
- Exit – Closes the application



7.1.1. The Story (a.k.a. The Job)

Page Content:

United AI Mediation and Termination Services has received a service request from the desert planet Legunio-7, home of the Happy Snack Co. peanut factory. One week ago, their new artificial intelligence system began behaving erratically. Three days ago, all contact with the management staff of the facility ceased.

A.I. termination specialist Brick Spanner has been dispatched to remedy the situation so that a new management staff can be installed with a minimal loss of productivity.



7.1.2. Controls

Page Content:

W - Move Forward

S - Move backward

A - Strafe left

D - Strafe Right

E - Interact

1 - Primary Weapon

2 - Secondary Weapon

Space – Jump

Mouse - Look

Left Button - Fire

Right Button – Zoom



7.1.4 Buttons

Buttons in the inactive and selected states

NEW GAME	NEW GAME
THE JOB	THE JOB
CONTROLS	CONTROLS
THE JOB	THE JOB
	RETURN TO MENU

7.2. Game Over Screen

7.2.1. General Layout



7.2.2. Text Information

The player is informed that the current play session is over and be given the option to return to the Main Menu screen.

7.2.3. Interaction Description

After the player dies, they will be brought to this screen.

They will then have the option to return to the Main Menu screen.

7.3. HUD

7.3.1 Components and Layout

The functional components of the HUD consist of:

1. The Health Display
 - a. Positioned horizontally in the bottom left corner
 - b. As player health is reduced the bar will reduce from right to left
 - c. Bar color is green
2. The Item slots
 - a. Positioned in line above the health bar
 - b. As pick items are collected, the slots will fill with the corresponding item
 - c. Each slot corresponds to a specific item
 - d. Each item is identified with a unique icon
3. The Crosshairs
 - a. Positioned center screen
 - b. Functions as an assistance to player aiming
 - c. The crosshair graphic corresponds to the weapon currently in use by the player with different representations for both the primary and secondary weapons
4. Ammo Display
 - a. Positioned bottom right corner
 - i. The primary weapon is the innermost position and the secondary weapon is the outermost position
 - b. Two vertical bars each representing the ammunition remaining for their corresponding weapon
 - c. As ammunition is depleted the bars will reduce from top to bottom
 - d. The bar color for the primary weapon is blue
 - e. The bar color for the secondary weapon is red

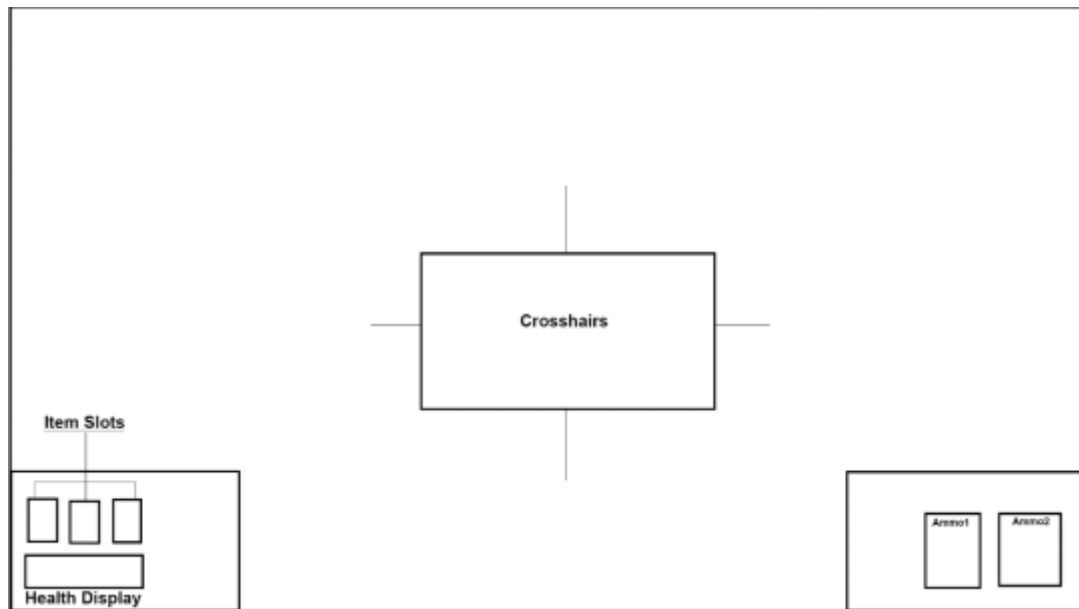


Figure 7-1- HUD Layout

7.3.2 Concept Art

Visually the HUD is styled based on the same retro futuristic aesthetic as other game elements. The representation is like a radio or other material object with a texture based on a Bakelite plastic. A level of transparency is applied to the HUD so that it does not hinder player visibility.



Figure 7-2- HUD layout; Colors and position

7.3.3 Crosshairs

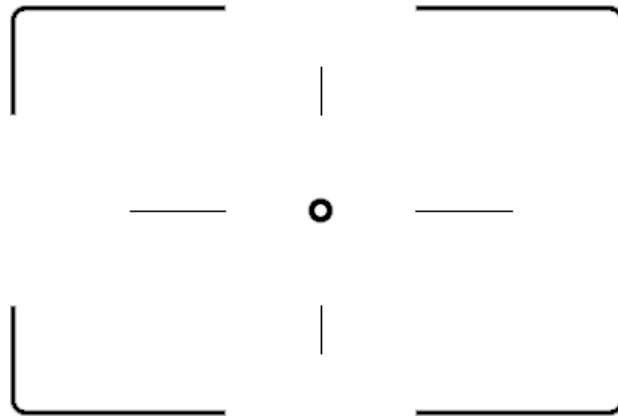


Figure 7-3- Crosshair for primary weapon

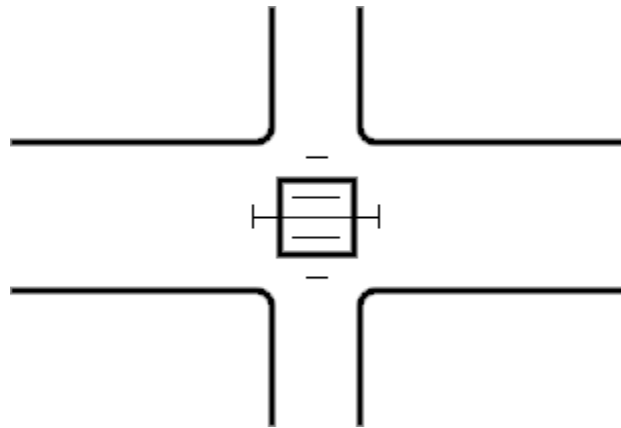


Figure 7-4- Crosshair for secondary weapon



Figure 7-5- Crosshair in screen

7.3.4 Health System



7.3.5 Ammunition System



7.3.6 Pickup System (keys/items etc.)



7.3.7 Damage Indicator

The damage indicator consists of a semitransparent overlay that is triggered when the player receives damage. The style of the overlay consists of several layered halftone patterns.

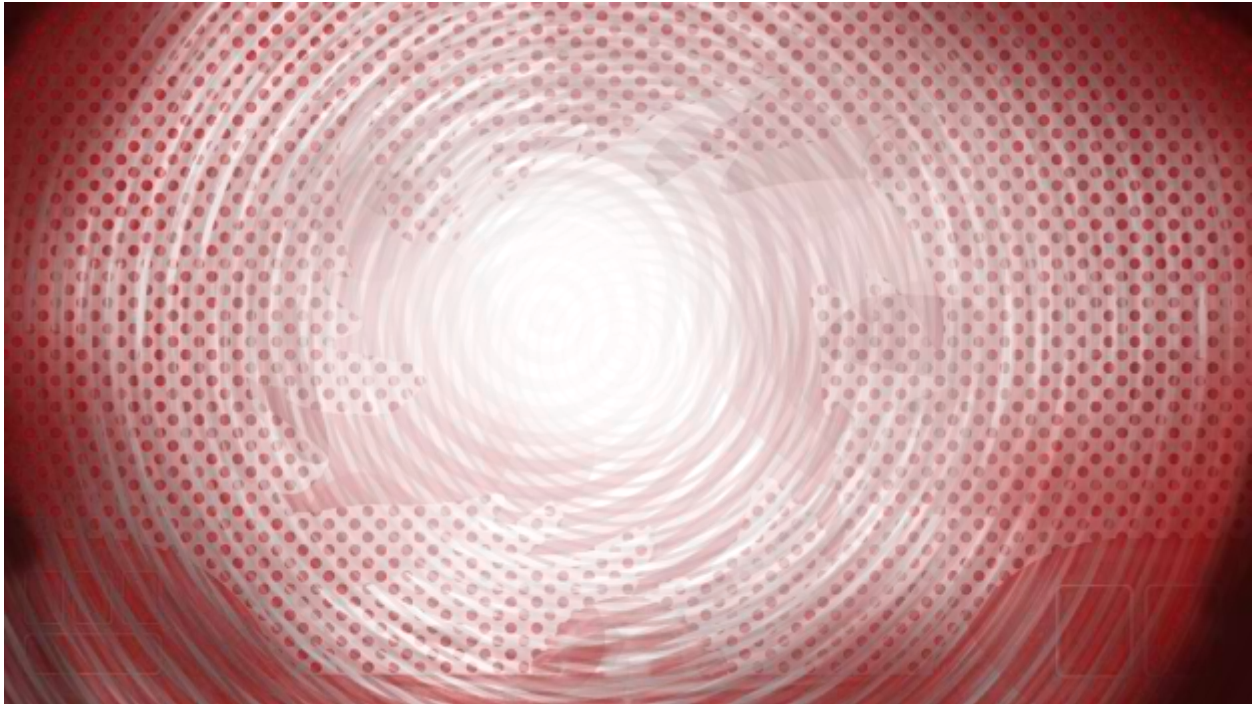


Figure 7-6- Damage Overlay Graphic



Figure 7-7- Damage indicated by red overlay

8. Game Mechanics

8.1. Variable List

Variable Name	Variable Type	Default Value (if applicable)
Health	Float	1.0
SpawnPoint	Integer	0
Weapon Type	Integer	1
Ammo1	Float	1.0
Ammo2	Float	0
Jump Button Down	Boolean	FALSE
Crouch Button Down	Boolean	FALSE
Aim True	Boolean	FALSE
isJumping	Boolean	FALSE
EquippedWeapon	WeaponBase	EquippedWeapon
Equipped_Weapon2	WeaponBase	Equipped_Weapon2
Have Weapon 2	Boolean	FALSE

8.2. Player

8.2.1. Control Scheme

8.2.1.1. General Navigation Controls

Action	Input
Move Forward	W
Move Backwards	S
Move Left	A
Move Right	D
Look UP	Mouse Y
Turn	Mouse X
Crouch	Left Ctrl

8.2.1.2. Weapon Controls

Action	Input
Aim	Right Mouse Button
Switch to Weapon 1	1
Switch to Weapon 2	2
Fire Weapon	Left Mouse Button

8.2.1.3. Interaction Controls

Action	Control
Interact	E

8.2.2. Health / Death Systems

- The player has a health range between 0 and 1.
- As the player receives damage, this number is incrementally reduced by percentage that corresponds with the type of damage inflicted.
- Should the player health be equal or less than a value of 0 the player dies.
- Upon overlapping with a Health pickup, a player may have part, or all of their health restored.

8.2.3. Checkpoint / Respawn System

- If the player should collide with a checkpoint within the game, the checkpoint that the player collided with is stored as a variable in the level blueprint. This data may include the name of the checkpoint as well as its coordinates.
- Upon collision with the checkpoint, the checkpoint is destroyed.
- If the player dies, they will respawn at the last overlapped checkpoint instead of at the beginning of the level.

8.2.4. Ammo/ Projectile Systems

- There are 2 types of projectile that the player can employ, regular and explosive.
- The player has access to regular ammo from the start of the game.
 - Regular ammo can be found throughout the level.
 - Regular ammo regenerates over time.
 - Regular ammo inflicts 0.2 damage per impact.
 - Regular ammo cannot cause area of effect damage.
- Explosive ammo and the explosive ammo weapon must be collected via gameplay.
 - Explosive ammo does not regenerate
 - Explosive ammo inflicts 1 damage per enemy impact
 - Explosive ammo can cause area of effect damage.
- If a player uses all the explosive ammo, the weapon will automatically switch to the default.

8.3. Pickups / HUD

8.3.1. Health Pickup

8.3.1.1. *Operation Details*

On Overlap with Player

- Health pickup is destroyed.
- Player Health variable is set to 1.

8.3.1.2. *HUD Representation*

Health bar is returned to full.

8.3.2. Secondary Weapon Pickup

8.3.2.1. *Operation Details*

On Overlap with Player

- Secondary Weapon pickup is destroyed.
- Player variable “Have Weapon 2” is set to TRUE.

8.3.3. Ammo Pickup 1

8.3.3.1. *Operation Details*

On Overlap with Player

- Ammo pickup is destroyed.
- Game variable “Ammo1” is set to 1.

8.3.3.2. *HUD Representation*

Default Ammo bar is returned to full.

8.3.4. Ammo Pickup 2

8.3.4.1. *Operation Details*

On Overlap with Player

- Ammo pickup is destroyed.
- Game variable “Ammo2” is set to 1.

8.3.4.2. *HUD Representation*

Secondary Ammo bar is returned to full.

8.3.5. Level Access / Key Pickup

8.3.5.1. *Operation Details*

On Overlap with Player

- Key pickup is destroyed.
- Corresponding level variable to is set to TRUE.

8.3.5.2. *HUD Representation*

Represented by icon of key.

8.4. Enemies

8.4.1. Roaming Enemy

8.4.1.1. *Navigation*

- If player is not in range, move around the level.
- If player is in visual range walk towards player and fire.
- If player is detected via sound, rotate towards player, walk and fire.

8.4.1.2. *Health System*

- Health is scaled between 0 and 1.
- If hit with regular ammo, reduce health by 0.2.
- If hit with explosive ammo, reduce health by 1.
- If health is less than, or equal to, 0 – kill enemy.

8.4.1.3. *Damage Dealing*

- Projectiles from this enemy cause 0.2 damage to player.

8.4.2. Turret Enemy

8.4.2.1. *Navigation*

- Does not move (fixed location).
- If player is in visual range, fire at player.
- If shot by player (when not in visual range), rotate towards player and fire.

8.4.2.2. *Health System*

- Health is scaled between 0 and 1.
- If hit with regular ammo, reduce health by 0.2.
- If hit with explosive ammo, reduce health by 1.
- If health is less than, or equal to, 0 – kill enemy.

8.4.2.3. *Damage Dealing*

- Projectiles from this enemy cause 0.2 damage to player.

8.4.3. Charger Enemy

8.4.3.1. *Navigation*

- Upon sensing of player, this enemy will run directly towards the player location.
- The Charger enemy will follow the player until destroyed.
- Sensing can be activated visually or if shot by the player.

8.4.3.2. *Health System*

- Health is scaled between 0 and 1.
- If hit with regular ammo, reduce health by 0.2.
- If hit with explosive ammo, reduce health by 1.
- If health is less than, or equal to, 0 – kill enemy.

8.4.3.3. *Damage Dealing*

- Upon contact with player, this enemy explodes causing a damage value of 1.

8.4.3.4. *Timer Details*

- Upon sensing the player, the Charger will delay pursuit for 4 seconds before pursuing.

8.4.4. Boss

8.4.4.1. *Navigation*

- The Boss will navigate forwards and backwards in the main area of the Boss Arena.
- When in view, the boss will rotate towards the player location.
- When the player is not in view, the Boss will rotate slowly and scan the area for the player location.

8.4.4.2. *Health System*

- The Boss has a health value between 0 and 1.
- Regular ammo will deal 0.1 damage.
- Explosive ammo will deal 0.2 damage.
- If the Boss health is less than, or equal to, 0 the Boss will die.

8.4.4.3. *Damage Dealing*

- The boss will fire 2 types of projectile.
 - A smaller projectile that does 0.2 damage to the player.
 - If the Boss can see the player for more than 10 seconds, a larger, slower, projectile will be fired that will inflict 0.5 damage to the player.

8.5. World Systems

8.5.1. Basic Door / Switch Systems

- The world will contain several door switch systems.
 - Basic switches that will open a door adjacent to the switch.
 - Key switches that will open previously inaccessible areas.
- In both cases the doors will be paired to the switch via testing of a variable (ie: if switch A then Door B).
- In both cases door motion will be controlled via the Matinee System.
- In the case of Key Switches, where the door or platform may not be immediately visible, a cinematic may be employed to direct the player.

8.5.2. Destructible Environment

- Certain assets will have the ability to be destroyed via damage from player projectiles. This effect is created by layering static meshes on top of each of other and toggling their visibility.
- As the health variable of an asset is depleted the asset appear to be more damages.
- If the damage is equal or less than 0, the asset is destroyed and an explosion particle is emitted.

8.5.3. Laser Gate

- The laser gate is number of stacked particle emitters to create a barrier. The gate also contains a box collision that will cause damage to player, and eventual death, on overlap.

8.5.4. Key Access System

- Some areas of the level will only be accessible to the player if they have collected the corresponding key.
- If a player approaches a door where a key is required, they will receive a message.
- Once a player collides with a key, the object is destroyed, and a variable that tests whether the player has the key is set to TRUE.
- When attempting to access a key locked door, the system will test if the corresponding variable is TRUE. If it is, the door will open and the player will be allowed to proceed.

9. Assets

9.1. Art Asset List

Asset Name	Description	Type
BridgeModular.fbx	Modular Bridge - Static Mesh	Static Mesh
DoorFrame.fbx	Large Door to Peanut factory	Static Mesh
DoorLeft.fbx	Large Door (Left Panel)	Static Mesh
DoorRight.fbx	Large Door (Right Panel)	Static Mesh
HealthPickup_Exterior.fbx	Health Pickup (exterior material)	Static Mesh
HealthPickup_Interior.fbx	Health Pickup (interior material)	Static Mesh
PlayerShip.fbx	Player ship	Static Mesh
AIEn.fbx	Enemy AI	Character Mesh
AIEn_Charger.fbx	Enemy AI (Charger)	Character Mesh
Barrier_01.fbx	Concrete Barrier	Static Mesh
Barrier_02.fbx	Concrete Barrier (Modular)	Static Mesh
Ductwork.fbx	Modular Ductwork	Static Mesh
Barrel_01.fbx	Lard Barrel	Static Mesh
Crate_01.fbx	Peanut Crate	Static Mesh
Dumpster_01.fbx	Dumpster	Static Mesh
BabineauS_ArcadeCabinet.fbx	Arcade Cabinet	Static Mesh
BabineauS_AudioArtifact_01.fbx	Audio Artifact 1	Static Mesh
BabineauS_AudioArtifact_02.fbx	Audio Artifact 2	Static Mesh
BabineauS_ConveyorPart_01.fbx	Modular Conveyor Belt	Static Mesh
BabineauS_Desk_01.fbx	Office Desk	Static Mesh
BabineauS_EnemyShip_01.fbx	Enemy / Factory Ship	Static Mesh
Tree01.fbx	Tree 01	Static Mesh
Tree02.fbx	Tree 02	Static Mesh
Tree03.fbx	Tree 03	Static Mesh
Rock01.fbx	Rock 01	Static Mesh
Rock02.fbx	Rock 02	Static Mesh
Rock03.fbx	Rock 03	Static Mesh
PottedPlant.fbx	Potted Plant	Static Mesh
vendingMachine.fbx	Vending Machine	Static Mesh
BabineauS_Rocket.fbx	Rocket Projectile / Ammunition Pickup	Static Mesh
BabineauS_VideoConsole.fbx	Large Mechanical Console used to indicate video artifact 2	Static Mesh
BabineS_Archway.fbx	Large Archway	Static Mesh
BabineS_BossAI.fbx	Final Boss	Character Mesh
BabineS_giantStep.fbx	Large Steps used as part of the environment	Static Mesh

BabineS_Girder01.fbx	Reusable girder used as part of the environment	Static Mesh
BabineS_Gun01.fbx	Primary Weapon	Static Mesh
BabineS_Gun02.fbx	Secondary Weapon	Static Mesh
BabineS_MedicalTable.fbx	Medical Examination Table	Static Mesh
BabineS_Pinboard.fbx	Bulletin Board - used to activate Image Artifact 1	Static Mesh
BabineS_Shelf01.fbx	Modular Shelving - Base	Static Mesh
BabineS_Shelf02.fbx	Modular Shelving - Additional Shelves	Static Mesh
BabineS_TabletArtifact.fbx	Video Tablet - Used to activate Text artifact 1	Static Mesh
BabineauS_KeyCard.fbx	Collectible keycard - used as pickup	Static Mesh
PlayerCharacter.fbx	Player Character (Brick Spanner)	Character Mesh
JumpTank.mp4	Video for jumpTank video sequence (video artifact 1)	Video
Congratulations.mp4	Video for Congratulations video sequence (video artifact 2)	Video
Title_noMenu.png	Title Screen	png image
Controls.png	Controls Screen	png image
Story.png	Story screen	png image
GameOver.png	Game over screen	png image
ButtonControls.png	Menu Button - Controls - Not Selected	png image
ButtonControlsSelected.png	Menu Button - Controls - Selected	png image
ButtonExit.png	Menu Button - Exit Game - Not Selected	png image
ButtonExitSelected.png	Menu Button - Exit Game - Selected	png image
ButtonNewGame.png	Menu Button - New Game - Not Selected	png image
ButtonNewGameSelected.png	Menu Button - New Game - Selected	png image
ButtonReturnToMenu.png	Menu Button - Return to Menu - Selected	png image
ButtonTheJob.png	Menu Button - The Job (story) - Not Selected	png image
ButtonTheJobSelected.png	Menu Button - The Job (story) - Selected	png image
BabineauS_TextAssetTablet.png	Tablet Screen - Text Asset 1 widget	png image
AI_POSTER.png	Poster for Image Asset 1 widget	png image
Ai-head-blank.png	Facial Expression for use with audio sequence 1	png image
Ai-head-blank-squint.png	Facial Expression for use with audio sequence 1	png image
Ai-head-frown01.png	Facial Expression for use with audio sequence 1	png image
Ai-head-frown01-squint.png	Facial Expression for use with audio sequence 1	png image
Ai-head-frown02.png	Facial Expression for use with audio sequence 1	png image
Ai-head-frown02-squint.png	Facial Expression for use with audio sequence 1	png image
Ai-head-goofy_01.png	Facial Expression for use with audio sequence 1	png image

Ai-head-goofy_01-squint.png	Facial Expression for use with audio sequence 1	png image
Ai-head-smile01.png	Facial Expression for use with audio sequence 1	png image
Ai-head-smile01-squint.png	Facial Expression for use with audio sequence 1	png image
Ai-head-blank-chickenHat.png	Facial Expression for use with audio sequence 2	png image
Ai-head-blank-squint-chickenHat.png	Facial Expression for use with audio sequence 2	png image
Ai-head-frown01-chickenHat.png	Facial Expression for use with audio sequence 2	png image
Ai-head-frown02-chickenHat.png	Facial Expression for use with audio sequence 2	png image
Ai-head-goofy_01-chickenHat.png	Facial Expression for use with audio sequence 2	png image
Ai-head-goofy_01-squint-chickenHat.png	Facial Expression for use with audio sequence 2	png image
Ai-head-smile01-chickenHat.png	Facial Expression for use with audio sequence 2	png image
HUD_ConsoleOverlay.png	Overlay for Heads Up Display	png image
HUD_CrossHair_01.png	CrossHair - Primary Weapon	png image
HUD_CrossHair_02.png	Crosshair - Secondary Weapon	png image
HUD_DamageOverlay.png	Image Overlay to indicate damage state	png image
HUD_PickupIcon_BLUE.png	Keycard Icon for HUD (Blue)	png image
HUD_PickupIcon_GREEN.png	Keycard Icon for HUD (Green)	png image
HUD_PickupIcon_RED.png	Keycard Icon for HUD (Red)	png image
HUD_WindowBackground.png	Background Texture for behind HUD indicator bars	png image
MAT_Concrete01	Worn concrete material for structures / floors	Material
MAT_Grass_01	Grass material for terrain sculpting	Material
MAT_Rock_01	Rock material for terrain sculpting	Material
MAT_RustFloor_01	Rusted Metal material for structures / floors	Material
MAT_Sand_01	Sand material for terrain sculpting	Material
MAT_SteelPanel_01	Worn Metal material for structures / floors	Material
MAT_SteelWall_01	Rusted Metal material for structures / floors	Material

9.2. Audio Asset List

Sound Name	Filename	Trigger
Music L1	Music_L01.mp3	Level 01 Start
Music L2	Music_L02.mp3	Level 02 Start
Music Menu	Music_MainMenu.mp3	Game Start
Music Credits	Music_Credits.mp3	Display of Credits screen
Music BossFight	Music_BossFight.mp3	Start of Boss Fight
Door Open	SFX_DoorOpen.wav	Door Opening
Machinery Ambient	SFX_MachineryAmbient.wav	Entry to factory / start of level 2
Item Pickup (Weapon)	SFX_WeaponPickup.wav	Player overlaps weapon
Item Pickup (Ammunition Primary)	SFX_AmmoPickupPrimary.wav	Player overlaps primary weapon ammunition
Item Pickup (Ammunition Secondary)	SFX_AmmoPickupSecondary.wav	Player overlaps secondary weapon ammunition
Item Pickup (Health)	SFX_HealthUp.wav	Player overlaps health pickup
Item Pickup (Key)	SFX_ItemPickup.wav	Player overlaps pickup item
Player Damage01	SFX_PlayerDamage01.wav	Player sustains damage (randomized)
Player Damage02	SFX_PlayerDamage02.wav	Player sustains damage (randomized)
Player Damage03	SFX_PlayerDamage03.wav	Player sustains damage (randomized)
Player Damage04	SFX_PlayerDamage04.wav	Player sustains damage (randomized)
Player Death	SFX_PlayerDeath.wav	Player Dies
Player Jump	SFX_PlayerJump.wav	Player Jumps
Player Land Normal01	SFX_PlayerLand01.wav	Player Lands (randomized)
Player Land Normal02	SFX_PlayerLand02.wav	Player Lands (randomized)

Player Land Hard	SFX_PlayerLandHard.wav	Player Lands from a height more than 5 meters
Player Footstep01	SFX_PlayerFootstep01.wav	Player is walking (randomized)
Player Footstep02	SFX_PlayerFootstep02.wav	Player is walking (randomized)
Player Footstep03	SFX_PlayerFootstep03.wav	Player is walking (randomized)
Player Footstep04	SFX_PlayerFootstep04.wav	Player is walking (randomized)
Primary Weapon Fire 01	SFX_WeaponPrimaryFire01.wav	Primary Weapon is fired (randomized)
Primary Weapon Fire 02	SFX_WeaponPrimaryFire02.wav	Primary Weapon is fired (randomized)
Primary Weapon Fire 03	SFX_WeaponSecondaryFire03.wav	Primary Weapon is fired (randomized)
Primary Weapon Fire 04	SFX_WeaponPrimaryFire04.wav	Primary Weapon is fired (randomized)
Secondary Weapon Fire 01	SFX_WeaponSecondaryFire01.wav	Secondary Weapon is fired (randomized)
Secondary Weapon Fire 02	SFX_WeaponSecondaryFire02.wav	Secondary Weapon is fired (randomized)
Secondary Weapon Fire 03	SFX_WeaponSecondaryFire03.wav	Secondary Weapon is fired (randomized)
Secondary Weapon Fire 04	SFX_WeaponSecondaryFire04.wav	Secondary Weapon is fired (randomized)
Plunger Pressed	SFX_PlungerPressed.wav	Plunger Button is pressed
Button Pushed	SFX_ButtonPress.wav	Wall Button is pressed
Boss Death	SFX_BossDeath.wav	Final Boss is Killed
Enemy Death	SFX_EnergyDeath.wav	Enemy combatant is killed
Large Step raised	SFX_largeStep.wav	Large Step sequence is playing
Energy gate	SFX_EnergyGate.wav	Player is within 10 meters of energy gate
KeyCard used	SFX_KeyCardUsed.wav	Key card is inserted into pedestal

10. References



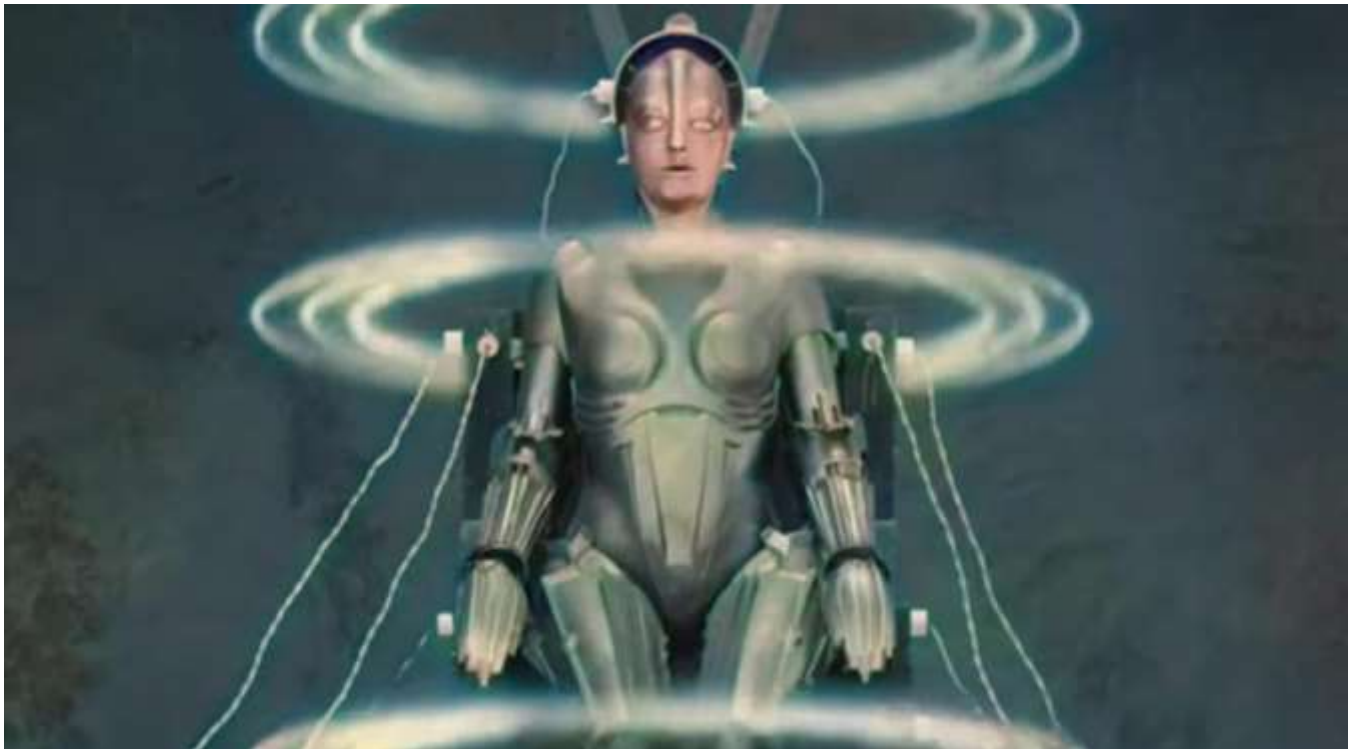
Source: [https://upload.wikimedia.org/wikipedia/commons/thumb/a/ab/00_1025_The_Painted_Desert - Arizona %28USA%29.jpg/800px-00_1025_The_Painted_Desert - Arizona %28USA%29.jpg](https://upload.wikimedia.org/wikipedia/commons/thumb/a/ab/00_1025_The_Painted_Desert_-_Arizona_%28USA%29.jpg/800px-00_1025_The_Painted_Desert_-_Arizona_%28USA%29.jpg)



Factory Floor. Source: <https://www.historycrunch.com/uploads/4/1/1/6/41169839/published/mill.jpeg?1495232708>



Source: <https://i.pinimg.com/originals/dc/da/17/dcda171758eae3ffc268279c98493ccf.jpg>: Decaying factory



Source: <https://i1.wp.com/codigoespaqueti.com/wp-content/uploads/2019/09/metropolis-restaurada.jpg?fit=1080%2C608&quality=80&ssl=1>



Screen from Metropolis -- Source: <https://vigilantcitizen.com/wp-content/uploads/2010/10/metro371.jpg>



Metropolis Movie Poster -- Source: <https://vigilantcitizen.com/wp-content/uploads/2010/10/metro371.jpg>



Dumpster Reference -- Source: Simon Babineau

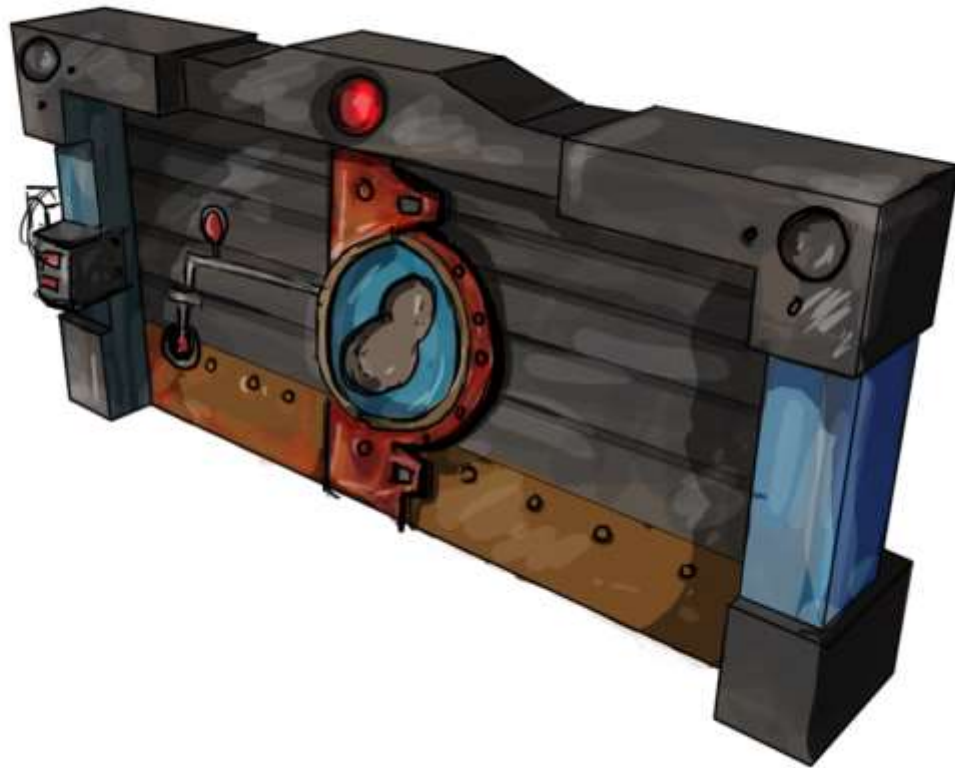


Dumpster Texture Reference -- Source: Simon Babineau

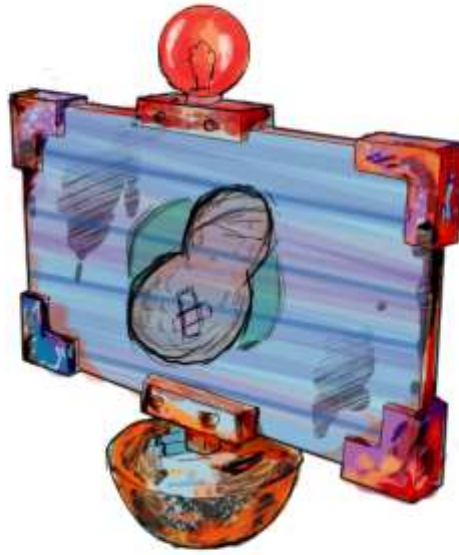


Red van -- Source:

https://upload.wikimedia.org/wikipedia/commons/7/7f/Preserved_International_Harvester_Metro_Van_in_Portland_in_2015.jpg



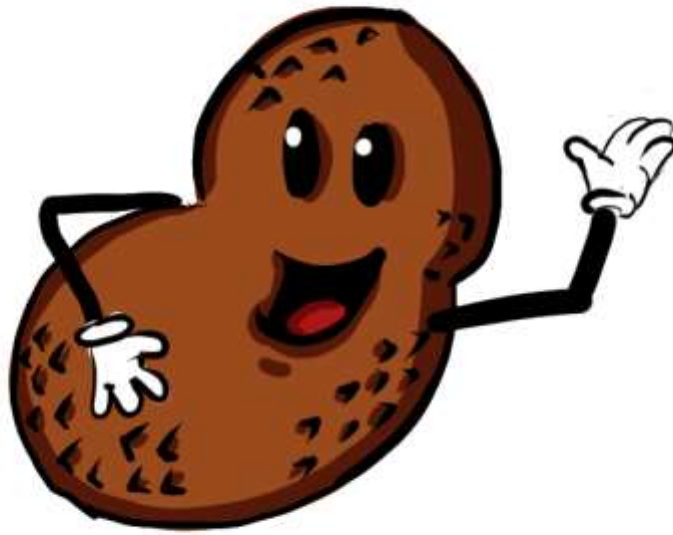
Doorway Concept - Source: Simon Babineau



Health Pickup Concept - Source: Simon Babineau



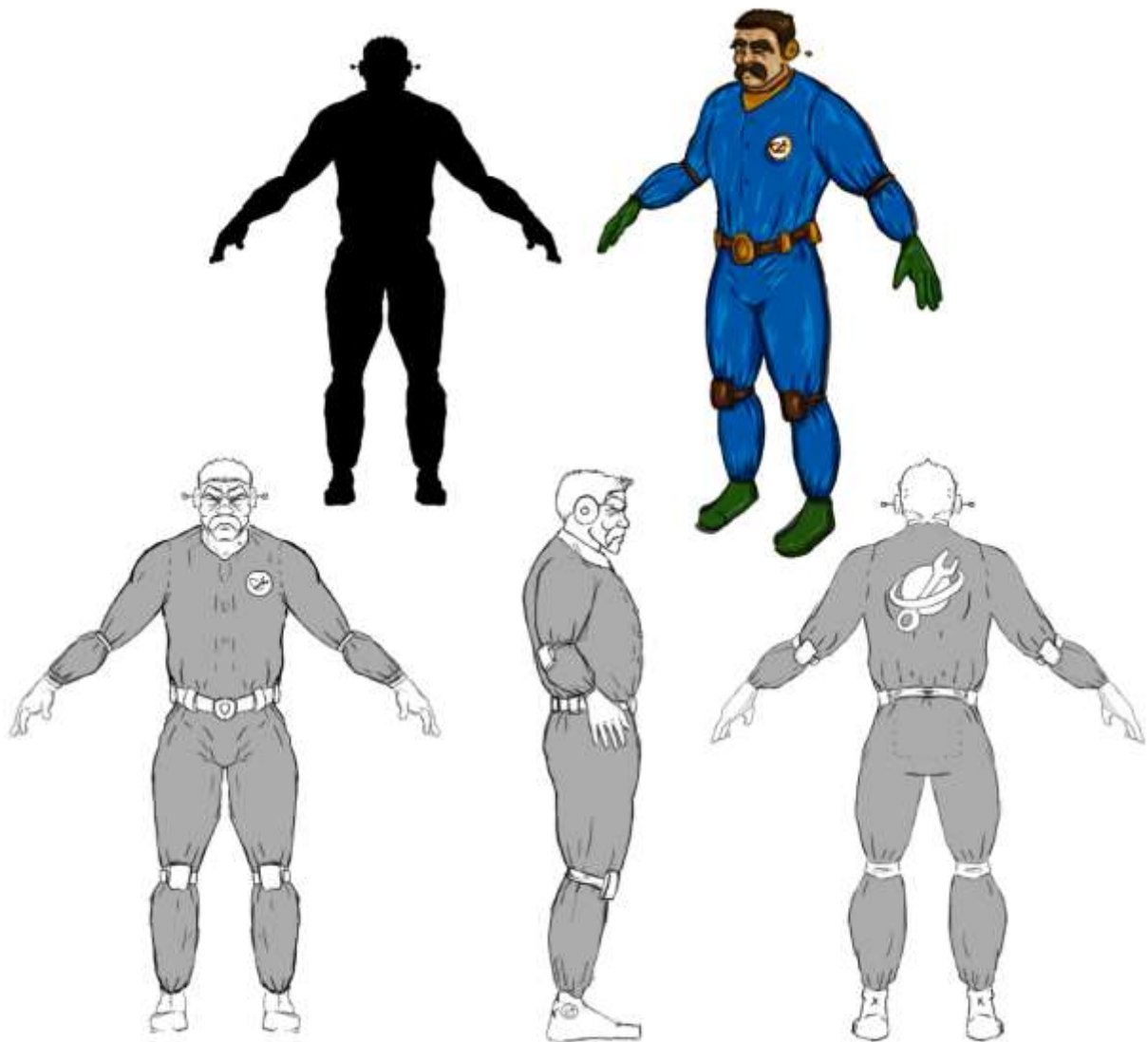
Shuttle Craft concept - Source: Simon Babineau



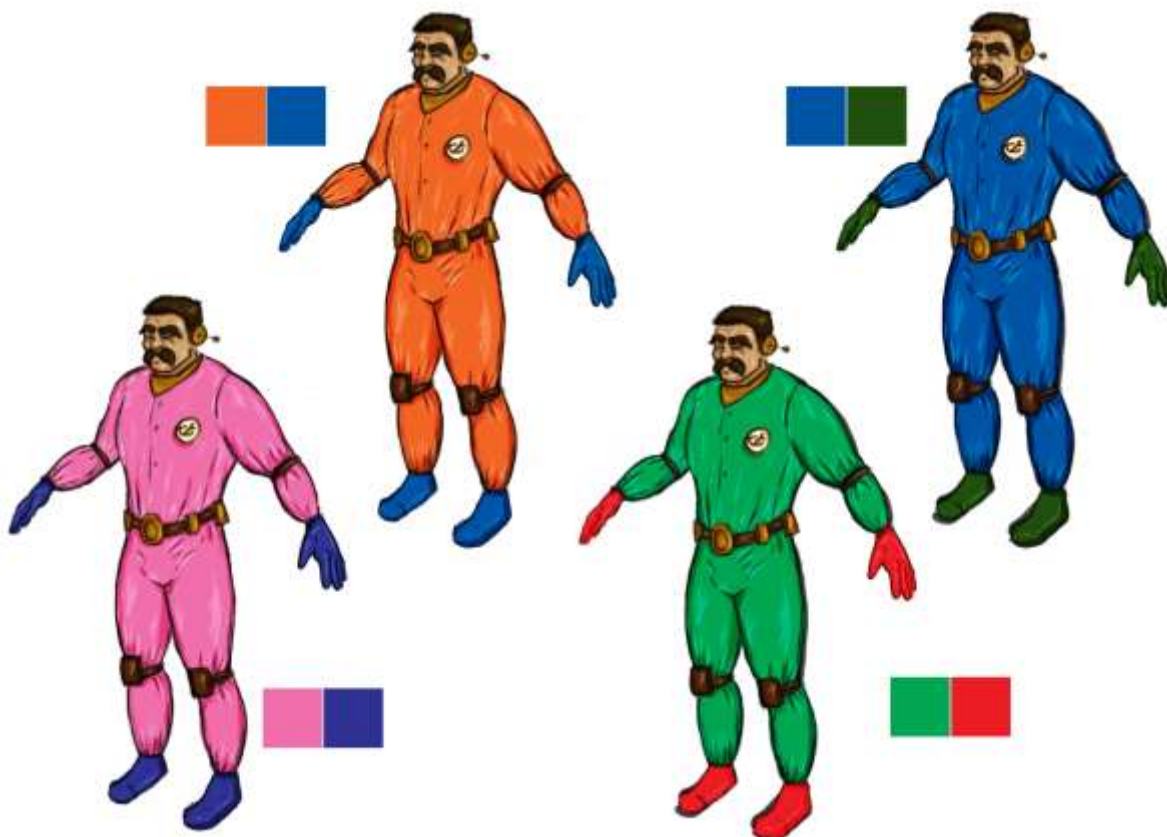
Nutty Butters -- Source: Simon Babineau



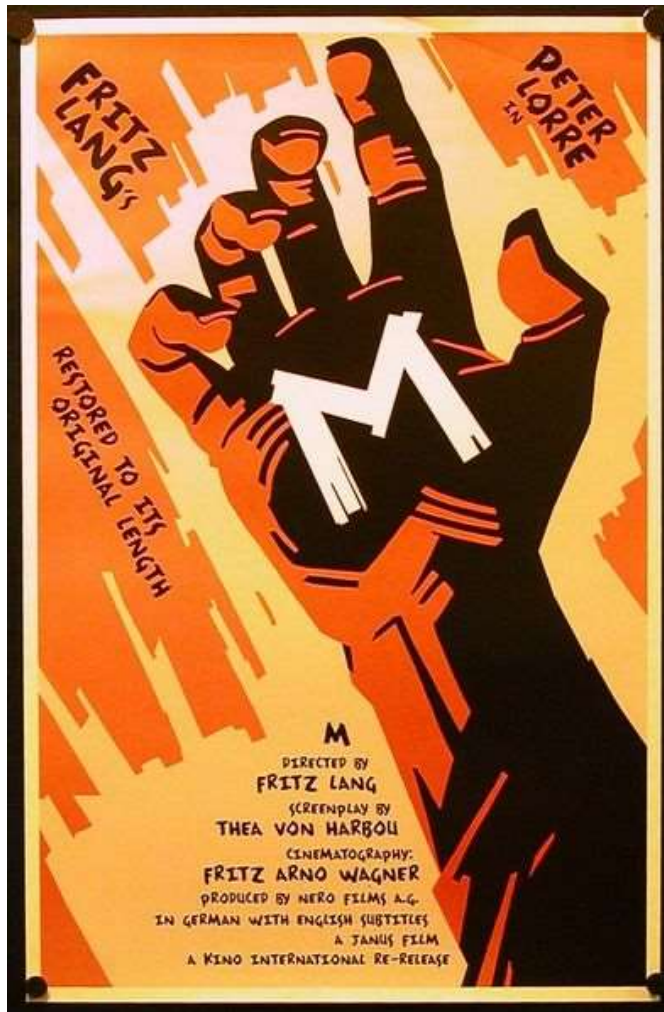
United AI Mediation and Termination Services Logo -- Source: Simon Babineau



Brick Spanner - Source: Simon Babineau



Brick Spanner Color Variants. Source: Simon Babineau



Source: <https://i.pinimg.com/originals/57/e1/cf/57e1cf915a571118574f433ab9e0a4a4.jpg>



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Source: <https://c8.alamy.com/comp/MOY5B0/1970s-historical-picture-of-a-man-in-a-data-processing-room-with-banks-MOY5B0.jpg>