

CS 3540 – Game Design Document

Lost in Time

1. CHARACTERS

The main character of our game is a nameless time traveler. They come from the very far future with highly advanced technology, even higher than your typical cyberpunk-style future tech. The details about this character and the age they come from are kept intentionally vague and secret to highlight just how far in the future they come from.

The other supporting characters will be various peoples from different ages across time. From the medieval age, there are knights who slay dragons and serve a king, and wizards that can brew fantastical potions and create magical artifacts. From the age of the samurai, there are ninjas who act as assassins in the shadows, samurai who serve as a military force for the emperor, and civilians who live peaceful lives tending the fields. From the modern age, there are office workers who begrudgingly work their 9-5 jobs, cops patrolling the city blocks, and other city dwellers who busily walk around the streets. From the sci-fi age, there are a slew of different types of people, ranging from aliens to robots to cybernetically enhanced humans. Most of these individuals are looking to make money in some way or another, either legally or illegally.

2. STORY/NARRATIVE

After a sudden malfunction, the main character's time machine breaks apart, sending them hurtling through space-time and opening time rifts. Lost in time, the time traveler realizes their time machine is in complete disrepair. They cannot return to their own time without first fixing the time machine.

The various pieces of the time machine have fallen through the time rifts and into different lands and ages. The time traveler must enter these time rifts and head into four different ages to find the missing machine parts and use them to fix the time machine.

Throughout the adventure, the time traveler meets various people from each age and helps to solve their problems in exchange for time machine parts. They will also find time machine parts scattered in those ages in hard to reach places. Eventually, once enough parts are collected, the time traveler fully repairs the time machine, allowing them to close the time rifts and travel back to their own time.

A potential stretch goal we have in mind extends the story's ending. Upon returning back to their own time, the time traveler learns that an evil entity used the time rifts to travel through time and intends to destroy this time period. The time traveler must utilize the abilities obtained from the adventure to defeat the monster and save their age. This plot point will only be added if we have enough time to implement it. Otherwise, the time traveler will peacefully return to their own time period after fixing the time machine.

3. GAME WORLD

The game world takes place in four main worlds / ages, with two extra worlds added as stretch goals. The first main world takes place in the medieval age, with mountains, craggy cliff sides, and a large castle. The second main world takes place in the age of the samurai, with flat plains and Japanese architecture. The third main world takes place in the modern age, with a bustling urban city environment with tall buildings, concrete streets, and cars. The fourth main world takes place in a sci-fi cyberpunk age, with a futuristic urban environment filled with neon lights, tall futuristic buildings, and sci-fi technology.

If time permits, we would also like to add a fifth world to act as the hub world. This world will be where the time machine is located as well as the time rifts that connect the player to the different ages. This world will have a very surreal theme, with a rift-like, void-like quality that feels almost like outer space. Another stretch goal would be adding the sixth world, which would be the time traveler's original time period. This world might be so far in the future as to be incomprehensible, with white walls and confusing architecture.

4. GAMEPLAY

The gameplay of our game will be based on 3D platforming with elements of collectathons and Metroidvanias. Specifically, the player will move and jump around to clear platforming challenges and get time machine parts. Each world will have one powerup for the player to collect that will grant them a new ability. The player can use these abilities to better traverse the worlds and find more time machine parts. The game is also nonlinear, as the player can visit the worlds in any order.

The player's long term main goal is to collect time machine parts in each world in order to return to their original age. To win the game, the player must collect at least one of every type of machine part. While each world has several machine parts, there are multiple parts of each type, so the player does not need to collect every single machine part scattered throughout the ages, just a subset of those parts. In each world, the player's short term goal is to complete platforming challenges or NPC quests to receive machine parts.

5. GAME MECHANICS

The core game mechanics immediately available to the player include walking around, jumping, talking with NPCs, stomping on some enemies, and picking up items (such as the powerups, machine parts, or items that NPCs request for). The player can pick up the powerups in each world to obtain more abilities, such as slash-dashing using a sword from the samurai age, double-jumping using "pegasus boots" from the medieval age, seeing secrets and hidden passages with X-ray goggles from the sci-fi age, and shooting targets and objects with a BB gun from the modern age.

Non-player characters will likely be of two varieties. Some NPCs will be stationary, named characters that can talk to the player and ask them to perform a quest for them, in which case they will reward the player with a powerup or time machine part. Other NPCs will be nameless characters that simply walk around the world and serve to make some of the worlds feel more alive.

Some of the enemies will patrol a certain area and chase after the player when spotting them. Other enemies might be completely stationary to allow the player to platform off of them.

6. ITEMS, LOOTS, AND POWER-UPS

As previously stated, each world will have a power-up that the player can collect to gain a new ability. Once the powerup is collected, the associated ability is gained permanently, and can be used in any world thereafter.

The medieval age has "pegasus boots" that allow the player to double-jump by jumping once and jumping again in midair. This ability would allow the player to reach platforms higher up and farther away, and would be essential for some platforming challenges in the medieval age.

The samurai age has a sword power-up that allows the player to perform a slash-dash. This action sends the player a set distance forward horizontally. This move serves as a platforming tool for the player to cross large gaps as well as an attack that can defeat some enemies or cut some objects that are dashed into.

The modern age has a BB gun power-up that allows the player to shoot at objects or enemies. These projectiles can stun certain enemies and activate certain objects (for example, shooting a raised ladder can lower it, allowing the player to climb it).

The sci-fi age has X-ray goggles that can be toggled on and off. This ability can reveal areas of interest in the world to give the player hints on where to go to get time machine parts. It will also reveal certain enemy weak spots and may also cause invisible platforms to appear or secret entrances to be revealed.

7. GAME RULES

The win condition for the game as a whole is to collect at least one of each type of time machine part, which will allow the player to return to their own time period. There will be duplicates of different types of time machine parts, so the player does not need to collect every single machine part in each world. For each time period, the objective is to beat platforming challenges and solve NPC requests to get singular time machine parts for each challenge beaten.

The losing condition of the game is running out of health. The player starts with a maximum of 3 health points, and they lose 1 health point whenever an enemy deals damage to them or they are hurt by an environmental trap or hazard. When the player's health points reach 0, they faint and the level is reloaded. This will reset some of the progress that the player has made with some NPC quests, but the power-ups and machine parts they have collected will not be reset. The player's health is restored to max when the player collects a power-up or machine part, or when they leave and enter a new time period.

8. TARGET AUDIENCE

This game is primarily for people who enjoy 3D platformers like Super Mario 64, or Metroidvanias like Hollow Knight. We are planning to target a younger audience with our game, as we expect our game to have a rating of E for everyone. The game should provide players a decent amount of challenge while still being accessible to most people. Since some time machine parts are optional, players who want an easier game can choose easier platforming challenges to complete to beat the game, while players who want a challenge can try and collect every single machine part.

9. ARTWORK

Our game will mostly utilize 3D model assets for our environments, characters, and items. We are planning on using the polygon assets from the asset packs provided to us by the course, since those environments and models are made in the same art style and provide good aesthetic cohesion, even among the different time periods. We also plan to utilize free online 3D assets to supplement these asset packs as necessary, and may consider creating our own 3D assets or alter existing assets if necessary.

10. GDD PROCESS

We prepared our GDD by meeting through Discord throughout the week. In each meeting, we brainstormed different genres, game mechanics, and story beats that we enjoyed and wanted to turn into a game, eventually settling on 3D platforming and Metroidvania-style power progression. A large motivator for our game idea was the list of assets available to us in the provided asset pack. This was the basis for the time travel concept, as the asset pack contained many disparate aesthetics and genres. We thought that a game based on time travel would allow us to utilize a lot of assets from the pack while allowing for unique and interesting environments for each level / world.