

Research Abstract of Minor Project: Caver

Junzhe Yan s3848212

Abstract

How do immersive games work? The Legend of Zelda (Nintendo, 1986) and Genshin Impact (miHoYo, 2020) allow players to discover and observe new things they encounter in the game, often making these open-world exploration games popular with the masses. Like Caver, players engage in fun puzzles and adventures in an open exploration environment. With simple keyboard operations, and searching for crystals and restorations, you can defeat any threat you encounter along the way, almost without a problem in the game. The game is based on Unity's programming and rendering visuals.

During the game, players need to collect all the crystals on the map and fight against the monsters they encounter to ensure their health. The game uses puzzle solving to connect adventure games with real-time combat, tapping into the potential of open-ended adventure games.

Rationale: Intention

My wish in this project is to explore the concept of the game design, and in the past, I had always to show animation videos by Maya such old-fashion way. Through this project, I will learn more about program skill and make progress in Visual Studio. At the same time, I will further learn post-production techniques such as 3D game design and development software like Unity. In this practice, I would design some character by using Zbrush modeling, Substance Painter and MAYA to produce and little, short animation clips and also attempt to create simple game in Unity.

Context: Field

Open-world exploration games have always been popular with the public and discovering and observing new things has always been human nature. Nowadays many online games are in pursuit of a competitive, players are keen on all kinds of competition, such as League of Legends, Overwatch and so on. The networking of games makes it easier for people to find opponents in games but less likely to find companions. There's no richness in terms of gameplay, and what's worse is that coordination as an important element of esports makes it feel like a sport. However, many single-player games like Zelda and Pokémon can be truly immersive experiences. As Genshin Impact did, players can jump right into map exploration, engaging in fun puzzle solving, and creating an open exploration environment while retaining RPG mechanics.

Method: Conceptual, Technical, Craft & Management

Game Design (Gameplay Design, Character Design, Scenery Design)

Game Programming(AI Design, Puzzle Design)

2D Art(draft) 3D Animation (for games)

Sound Design(BGM, Effects)

Production Details(Tools)

Gameplay Design:

The project aims to design an open adventure exploration environment, as well as a collection and combat game. The player carries on the simple positioning operation and the attack through the keyboard, can be unimpeded in the game. The game is based on visuals rendered in Unity, characters and their actions are created in Maya and Zbrush, and textures are done in Substance Painter. In the course of the game, players need to collect all the crystals on the map, to ensure their health in the battle, in the case of low health can look for the recovery of the map to supplement the health.

Character design:

The Chimer character in the game is consistent with arcane powers. The maze game left a deep impression on me. I also looked for a lot of references, combined with some impressions of the characters, the mechanics... I think the five body characters fit the game well.

The game is 3D visual, using the top view, it is the offspring of the monster. The glow around the body is a symbol of the defensive instinct, representing resistance to the unknown.

Monster Design:

The first idea that came to my mind was that the monster in Super Mario Bros. the shape of its four teeth, the sharp spikes representing the monster's claws and toes, and the red crown were derived from the Roman crest, and the overall image was typical of the original style of Turkey. At first, I thought the little monsters in the game were straight from a simple shape, but later I thought it should start from a variety of structures. So, I'm going to design a monster that is a mixture of both creatures and a combination of characters. This also fits with the current theme of monsters, highlighting the wildness of nature. The ability to detect and track monsters adds excitement and challenge to the game.

Landscape Design:

At first, I thought dungeons were popular mazes in the common style. Later, I combined the characteristics of the temple site and designed the patterns of columns

and low walls with bricks or rubble. At the same time, the whole environment directly affects the player, giving a cool sense of character detection. Its overall tone is mainly dull colors, light and warm colors, and due to the big head of Chimers, it is given some blocks as obstacles.

Production Details:

Audition was used for editing the sound effects.

Maya was used for scene modeling, complete the character animation, like rigging the character and key frame.

Substance painter was used for character texturing, compare, and analyzed the integrated material, divide the styles of different animation character

ZBrush was used for character modeling by designing, sculpt the models, there is no overly complicated content, and sculpture models are used heavily.

For Unity and Programming, query, I collected and sum up related data for integration, conduct research and analysis, and determine the picture frames.

Meanwhile, organize classic case videos found on the Internet for learning. Finalize each component of the game.

Summarize the weekly progress every week and carry out planning and arrangements according to the master plan. Overall, programming and the operation of Unity are the most time-consuming, which are completely new and unfamiliar to me who focused on animation before, and I should try my best and energy to learn them.

Impact of Project:

Through this game, I want to convey even in adversity, do not lose the hope of survival. Instead, face the challenge positively and trust that through this ability, you will discover the rewards you will get one day. In short, aesthetics, rationalization, and human-orientation are emphasized.

Open world exploration games are popular, and its human nature to discover and observe new things. However, in today's increasingly anxious social competitive environment, there are many games that are too competitive to be truly immersive. In an open exploration environment, like Caver does, players can jump right into the map to explore and engage in fun puzzles and adventures. Games that link adventure games with real-time combat through puzzle-solving have the potential to tap into the potential of open-ended adventure games.