



TÉCNICO
LISBOA

INSTITUTO SUPERIOR TÉCNICO

Game Development Methodology
2020/2021
Design Document

Captivity

IST 190631
IST 198072
IST 198811
IST 198823

Rodrigo Carvalho
Miguel Lahera Hervilla
Eduardo Skapinakis
Rui Melo

March 23, 2021

Contents

1	Introduction	3
2	Game Experience Goals	3
3	Game's First Tweet	3
4	Competition and Related References	4
5	Player Personas	6
6	Play Scenarios	9
7	Core Gameplay Loop	9
8	Focus Group	10
9	Other relevant information	13

1 Introduction

In this document we present the main aspects of the game we are developing: *Captivity*. *Captivity* is a 2D, co-op medieval adventure game for Windows PC with a bird's eye view perspective.

We will often use terms of the game to describe certain entities and situations. In the last section of the document we added a **lexicon** with the meaning of these terms.

2 Game Experience Goals

In this section we describe what we want the players to feel and how we want them to interact with the game.

- Goals on the players feelings:
 - The players feel challenged;
 - The players enjoy the diverse design of the game;
 - The players feel like they have the freedom to complete a level using different strategies;
 - The players feel empathy for the spirits they free and feel rewarded when they are granted the power to become an elemental;
 - The players feel that in order to survive they have to fight and defeat the enemies. They can't just run;
- Goals on the way players interact with the game:
 - Players have to think to solve puzzles;
 - Players have to cooperate and find the right combination for overcoming obstacles;
 - Players have to make quick decisions when fighting enemies: take cover and combine powers, fight, run or use the environment to their advantage;

3 Game's First Tweet

Captivity is a co-op game in a bird's eye view perspective. Escape a castle by combining powers, freeing spirits and killing a wizard!

4 Competition and Related References

Captivity was primarily inspired in two games. In this section we will describe these games and what we think are their positive and negative aspects. We also describe what we used from these games and what we introduced in *Captivity* to address the negative aspects we describe.

- **Fireboy and Watergirl:** This is a 2D platformer game, which can be played by two players, each controlling a character, or by a single player, controlling both. The characters are a fire and a water entity, which the player(s) leads through simple mazes and element directed obstacles, in order to escape the room.

The game is fun for its simplicity: the characters have a likable design, they are easy to control and you don't have to think hard to overcome the obstacles. We took from this game:

- The idea of having characters of different elements;
- Levels in which you have to use the character's elements to overcome obstacles;

However, after a few levels, the novelty of the scenarios runs out and the game becomes a bit monotonous. We hope to make *Captivity* more challenging and diverse, by introducing:

- New elements and ways to combine the powers of each elemental;
- Enemies which you can fight;
- A more appealing point of view: a bird's eye view;

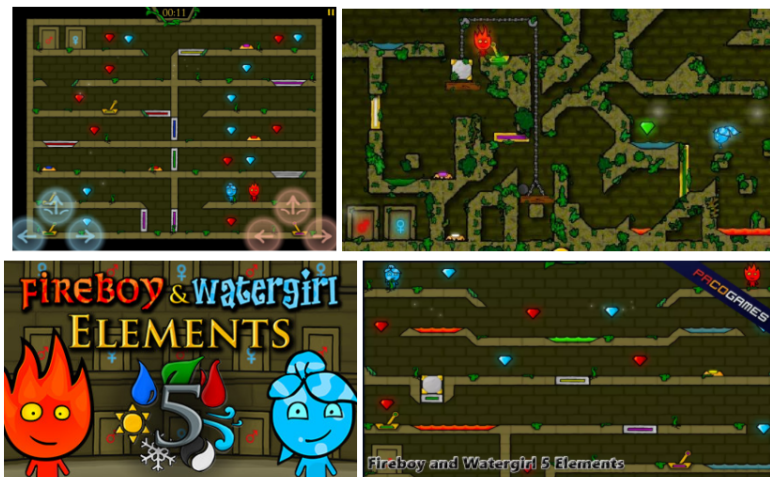


Figure 1: Fireboy and Watergirl: <https://fireboyand-watergirl.co/>

- **The Binding of Isaac:** In this roguelike game, you play a character in a bird's eye view perspective, that progresses through the levels by exploring rooms and defeating bosses. In some rooms you can also pick up items to make you more powerful and you can unlock different endings based on the routes that you take along the levels. This game provides a much more challenging experience and constantly rewards the player for the choices they make and for being skilled while playing it. We took from this game:

- The bird's eye view perspective and the movement of the camera;
- The idea of having different rooms and enemies which you have to fight;

However, because of the game's gory art-style and because of its repetitive nature, it caters to a very specific target audience, so only some people will find it captivating. Also, you'll have to play over and over again, to get all the playable characters and items. We hope to make *Captivity* more exciting and appealing, by:

- Making diverse obstacles, that force the players to find the right combinations of elementals to use;
- Making the game less repetitive, by adding different scenarios and elements, which allows for different ways to solve the same level;
- Making the game cooperative, which increases the replayability and speeds up the pace of the game: two heads think better than one;



Figure 2: The Binding of Isaac: https://store.steampowered.com/app/113200/The_Binding_of_Isaac/

5 Player Personas

In this section we introduce different Personas we imagine playing the game. We use these Personas to, when developing the game, target/address specific aspects of a user and have an idea of how a user would react to the features we implement.

Persona 1

- Name: Henry Oak
- Gender: Male
- Age: 25
- Background: Born and living in Portugal, started playing games very early due to father influence and personal interest
- Profession: Currently working in Customer Relationship Management in IT
- Favourite Games: Action, Shooters, Adventure (Valorant, Genshin Impact..)
- Currently playing: League of Legends, Valorant, Genshin Impact
- Player type: Achiever
- Interests: Video Games, Biology, Technology, Sports
- Context of play: Plays whenever has free time
- Goals: Get more skilled over time
- Activities: Watches series, works out, practices sports
- Knowledge: Familiar with a lot of game genres, including having played "The Binding of Isaac". Right now trying to improve in an FPS game
- Skills: Great Adaptability
- Limitations: Is Impatient

Persona 2

- Name: Angel Lahera
- Gender: Male
- Age: 24

- Background: Born in Spain but he is now finishing his studies in France. He always liked to play games when had some free time
- Profession: Veterinary
- Favourite Games: MOBAs (Multiplayer Online Battle Arena) such as League of legends, Valorant.
- Currently playing: League of Legends and Genshin Impact
- Player type: Teamplay
- Interests: Sports and multiplayer games
- Context of play: He plays for fun
- Goals: To know a little bit of every game genre and find one in particular which can challenge him
- Activities: He plays in a hockey team, which makes him love games to play with a teammate, and he also plays in a competitive team in League of Legends
- Knowledge: He is a guy of all trades and he has knowledge on different games
- Skills: Skilled at games and gets used to the controls and the mechanics fast
- Limitations: No outstanding limitations

Persona 3

- Name: Vincent Vega
- Gender: Male
- Age: 17
- Background: Born in Lisbon and studies economics
- Profession: High School student
- Favourite Games: Action and strategy games
- Currently playing: Grand Theft Auto
- Player type: Achiever, Daredevil
- Interests: Music and sports
- Context of play: Plays when he's at home and has nothing to do

- Goals: Plays to enjoy cool fight scenes and defeat complicated levels
- Activities: Listens to music and practices Judo
- Knowledge: Played Fireboy and Watergirl and plays a lot of Grand Theft Auto
- Skills: Fast reasoning and outside the box thinking
- Limitations: Not very patient

Persona 4

- Name: Yulian Kuzmin
- Gender: Male
- Age: 21
- Background: Born and living in Mira, Portugal
- Profession: Computer Engineering Student in Coimbra
- Favourite Games: Counter Strike and Rainbow Six Siege
- Currently playing: Counter Strike
- Player type: Achiever, Survivor
- Interests: Technology and E-Sports
- Context of play: Plays whenever has a little time to spare with his friends
- Goals: To have fun and achieve higher ranks
- Activities: Running on weekends with his cousin and does skimboard from time to time
- Knowledge: Knows a lot about first-person shooters. Started playing Crossfire and then moved to Counter-Strike and Rainbow Six Siege. Also enjoys playing Dead by Daylight
- Skills: Great aim and quick decisions
- Limitations: Gets irritated easily

6 Play Scenarios

- Angel and his girlfriend are waiting for a plane to visit his family in Madrid and have to stay there for 3 hours. At that moment he decided to play that new game that a friend of his talked about. As it is a game based on levels he thought that it was a good idea to give it a try as they can always stop whenever they have to. They actually could go through some chapters enjoying the game more and more;
- Henry Oak, having a day off work, decides to spend the whole day playing *Captivity* with his brother, speedrunning the game, finding cool ways of going through the levels and seeing how fast they can complete all of them as well as finding every single gem. They have done this before, but this time they improved their personal best, so then they celebrated;
- Vincent and his dad are playing the game together when his dad decides he has to go to the bathroom. Wanting to feel more challenged, Vincent continues the game alone, controlling both characters. Unfortunately, he encounters a horde of skeletons and dies, since he can't control both characters and shoot at the same time;
- Yulian was talking to his roommate about possible games to try out since he wants to try something new. Finally, on his way home, during his train trip, he and his friend decided to play *Captivity*.

7 Core Gameplay Loop

The main Gameplay Loop is:

- Enter a new Chapter;
- Go Through all Levels;
 - Enter a new level;
 - Search the rooms of the level and perform different actions;
 - * Collect gems;
 - * Combine Powers;
 - * Kill enemies;
 - * Overcome obstacles, traps and solve puzzles;
 - Open exit door;
 - Leave;

- Experiment with newly acquired powers;
- Find new power combinations;
- Defeat Chapter Boss;
- Free Chapter Spirit;

8 Focus Group

Our focus group is composed of 8 people, some of which served as inspiration for the player Personas.

Abed

- Gender: Male
- Age: 17
- Profession: High School Student
- Favourite Games: Action Games
- Player type: Daredevil
- Interests: Music and sports
- Goals: Plays to feel adrenaline
- Relationship: Family of a group member

Brenda

- Gender: Female
- Age: 17
- Profession: High School Student
- Favourite Games: Strategy Games
- Player type: Mastermind
- Interests: Music and arts
- Goals: Plays to relax and enjoy the sense of overcoming an obstacle
- Relationship: Family of a group member

Chang

- Gender: Male
- Age: 26
- Profession: Engineering Undergraduate
- Favourite Games: Real Time Strategy Games
- Player type: Achiever
- Interests: Basketball
- Goals: Plays to have fun whenever has time with his friends
- Relationship: Family of a group member

Darcy

- Gender: Female
- Age: 28
- Profession: Biology Graduate Student
- Favourite Games: Multiplayer Online Battle Arena
- Player type: Mastermind, Achiever
- Interests: Cryptocurrencies and Skimboard
- Goals: Plays to achieve higher ranks
- Relationship: Family of a group member

Eobard

- Gender: Male
- Age: 24
- Profession: Studying Veterinary
- Favourite Games: Multiplayer Online Battle Arena
- Player type: Teamplay
- Interests: Sports and multi-player game
- Goals: To know a little bit of every game genre and find one in particular which can challenge

- Relationship: Family of a group member

Floyd

- Gender: Male
- Age: 21
- Profession: Studying business
- Favourite Games: Shooters, MOBAs
- Player type: Achiever
- Interests: Music, sports and videogames
- Goals: Plays to have fun, but also to challenge himself by improving over the days
- Relationship: Friend of a group member

Gregorovitch

- Gender: Male
- Age: 21
- Profession: Working in IT
- Favourite Games: Shooters, Action, Adventure
- Player type: Seeker
- Interests: Sports, Video Games, Technology
- Goals: Constantly wants to improve at every game he plays
- Relationship: Family of a group member

Hella

- Gender: Female
- Age: 21
- Profession: Studying Engineering
- Favourite Games: Action, Adventure, RPG
- Player type: Mastermind
- Interests: Video Games, Music, Content Creation
- Goals: Plays to have fun and to pass the time, but always wants to be good
- Relationship: Family of a group member

9 Other relevant information

In this section we introduce the vocabulary and better explain certain aspects of the game.

The terms we use are:

Character:

- The two humans that the players control to play the game.
Similar to "The Binding of Isaac", the characters can move in every direction in the 2d plane;

Spirits:

- Magical creatures that control a power related to a nature element. Spirits can bestow the player with the ability to control that same power.
The spirits in *Captivity* are of seven different types: Water, earth, fire, air, light, dark and electricity;

Elemental:

- Entity that the characters turn into, to use the powers of a spirit;

Guardians:

- Major enemies with the main goal of keeping the spirits imprisoned;

Room:

- A room containing obstacles, enemies, traps and puzzles;

Level:

- A set of connected rooms, which you have to cross to complete the level;

Chapter:

- Each spirit has a dedicated chapter. A chapter is a group of levels that have the same "theme" as the spirit the players are trying to save. For the dark spirit, for example, the chapter will be placed in the lower dungeons of the castle;

Gems:

- Shiny objects that are spread or hidden throughout the game. They don't serve any crucial role to the game and serve only to add an element of "exploration". When the gems are found, they are added to a log where the players can see which gems they found, which gems are still missing and the levels where they are;

Other important aspects and clarifications:

Camera view:

- Similarly to "The Binding of Isaac", the camera will be in a bird's eye view perspective and will always show the room the players are currently in;

Characters, Spirits and Elementals:

- The players control the characters, which are the two humans who are freeing the spirits. When the players free an imprisoned spirit, it gives the characters the ability to turn into an elemental. Throughout the game, the players can choose to turn the humans they control into the elementals of the spirits they have already freed. When this happens, the characters get a color that matches the elemental they are turning into (for example, the fire elemental is red).

Powers of the elementals:

- When a character turns into an elemental, it gains the ability to shoot projectiles and immunity to its element. The fire elemental, for example, can shoot red projectiles and walk through fire.

Fusing and combining Powers:

- Some elementals can fuse together and some have a combined power. To use these abilities, the elementals must be placed next to each other.
 - **Fusion:** When two elementals fuse, they become a single entity, whose controls are shared by the player: one of the players controls steering and the other controls the firing of projectiles. Here we give two examples:
 - * The water and fire elementals can fuse to turn into vapor, which will allow the players to travel through small holes;
 - * The water and earth elementals can fuse to turn into mud, which will allow the players to slip under a door.
 - **Combinations:** When two elementals combine their powers, they create a construction that can help them overcome obstacles and defeat enemies. Two examples are:
 - * The dark and earth elementals can combine their powers to erect a small army of skeletons to help them in their fight;
 - * The light and earth elementals can combine their powers to erect a plant to walk over a large hole.