

CMD2223. 2.4 | EL2 Game Design
Game Design Document of “Crystalline Warfare”

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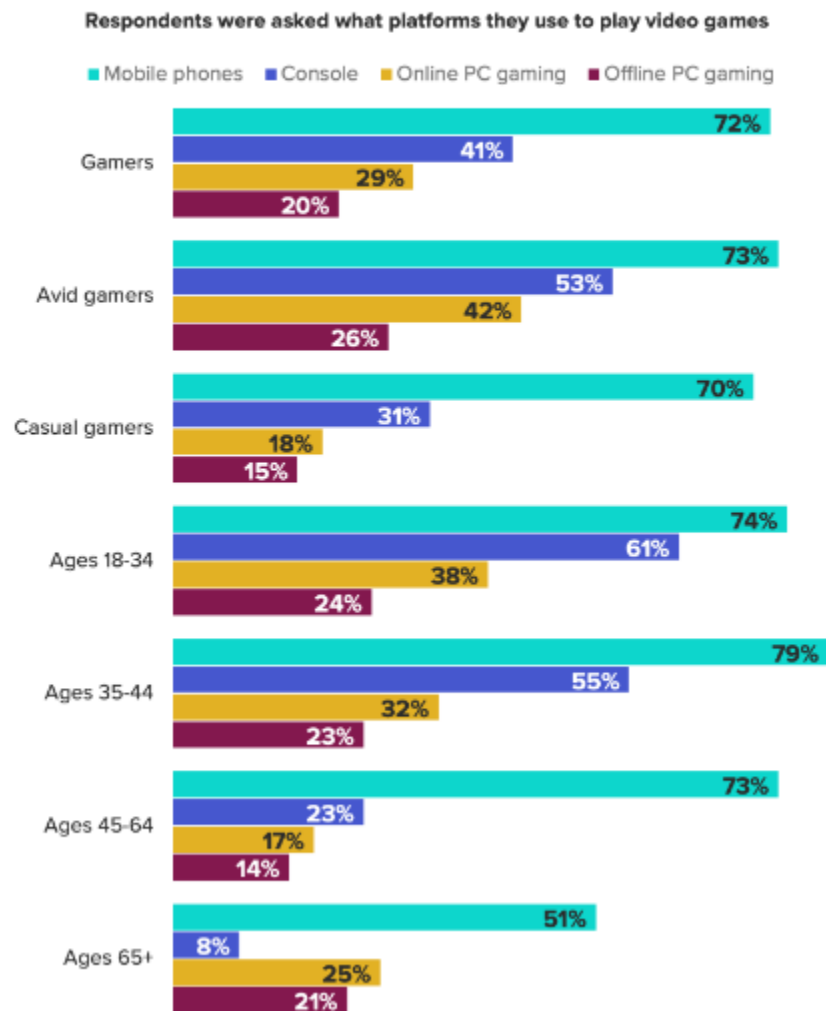
Genre

Fast paced, 3D tactical FPS.

Game platform

The main focus of the game is to be released on PC, with later future plans of being released on consoles and mobile devices, since the majority of gamers nowadays prefer consoles & phones over PC's. (Halvorsen, 2022)

Cellphones Reign Supreme, But 3 in 5 Young Gamers Are Using Consoles



Target audience

The target audience is people between the age of 16 and 35 and that's because we need to take in consideration that most multiplayer fps games are bound to become a part of the esports (which is one of the best ways to make revenue off your game and to also get it promoted to bigger audience) scene if successful and the target audience that watches esports is usually between the age of 18 and 34. (2022)

Internal goals

- Players should feel excited and “cool” when experiencing the dynamic movement and fast paced gameplay.
- Players should feel curious and intrigued about the world they’re in.
- Players should feel that the game is balanced and enjoyable when playing from both the side of the ATTACKERS and DEFENDERS.

External goals

During the creation of this game I set out goals for myself, which are to:

- Design a balanced FPS Level. This part I think I nailed and I describe each of my design choices further down in the Level Design section.
- Design an interesting and intriguing FPS Level. I took a lot of inspiration from Valorant when designing my level, that’s why I decided to do it with stylized assets, mimicking the style of art style Valorant. One other thing that Valorant does amazingly good is creating points of interest on the maps that are connected with the lore of the champions or the map. I tried doing that in my level too, to keep the player intrigued and immersed when playing on this level.
- Develop a dynamic movement system. Unfortunately, I couldn’t do that because I lack the programming knowledge.
- Improve my Level Design skills. Compared to my past self I’ve acquired tons of knowledge on designing a level and now I know that it’s a complex thing to do and every design choice has to have a meaning and purpose behind it.
- Analyze what makes a good Multiplayer FPS level. I did that by watching videos of professional level designers, GDC talks about level design and playing & comparing different FPS games and the levels within them.

User experience

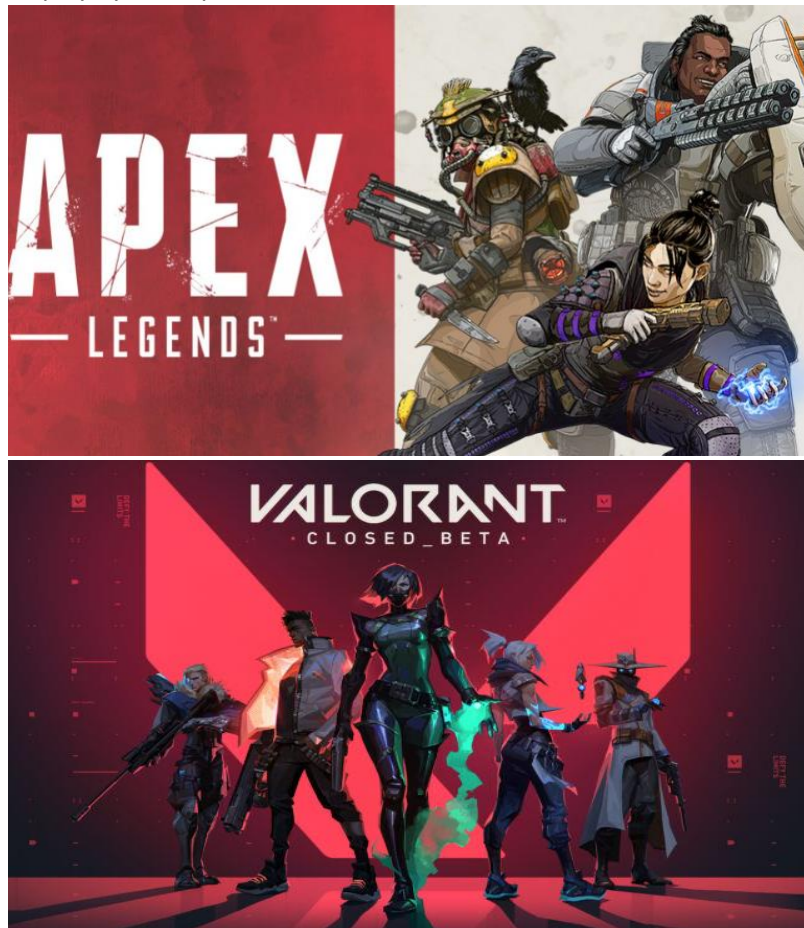
The player gets to choose from a variety of character and weapons that would best suit their playstyle. The player can interact with the map using it to his advantage against the enemy team. The player will always feel on the edge, because of the fast paced gameplay and dynamic movement that offers unique and creative ways of engaging in combat with your enemies, making unexpected encounters more likely to happen. (in my game you “will be able to” climb on walls, slide, b-hop, crouch, run, walk, lay etc.)

Market research

First person shooters are globally dominated by youngsters including hardcore and casual players, which means they are always in high demand. One of the most popular games from this genre are Apex Legends, Valorant, CS:Go and Call of Duty. There are several aspects that make those games so popular. One of which is the dopamine rush, caused because of the fast-paced gameplay and rewards in the game, for example when outsmarting and killing an enemy, successfully defusing a bomb at the last second or landing an impossible shot either by skill or luck. Leaving those examples aside, the main reason that those games are so popular nowadays are because of e-sports. The e-sports market reached over 1 billion dollars in 2020 and it has been rising with over 20% each year. E-sports is one of the greatest way, to promote your game and attract audience to it, when talking about the multiplayer FPS genre. (Emergen Research, 2023) (2022)

Competitor games

The main competitors are Valorant and Apex Legends, since I'm aiming to have a game with the art style of Valorant, but the playstyle of Apex.



Inspiration

I'm a person who doesn't enjoy single player games. I only find fun in multiplayer games, because of the unpredictable outcomes that can occur when playing a game that requires a lot of teamwork and strategizing. One of my favorite genres are FPS's and strategic games. That is why I decided to create a level for a multiplayer FPS. I enjoy creating meaningful experiences, that is why when I was designing the level of my game, I always put myself in the shoes of the player, just to see how the player would feel like when playing the level, and if something was off, I would immediately correct the level. My main inspiration for my level was Valorant. I really enjoy playing it, and I like how simple is it to get into and yet hard to master. I also really like the way they do environmental storytelling by adding elements of interest, such as the keycard with which you can interact on the "Fracture" map.

Concept & gameplay goal

The goal of the game is to win 15 rounds. The first team to do that is victorious. To accomplish this the player must:

For ATTACKERS - Plant the bomb/Protect the bomb till the timer runs out/Eliminate the DEFENDERS.

For DEFENDERS – Defuse the bomb/Prevent the ATTACKERS of planting the bomb/Eliminate the ATTACKERS.

Plot summary

The story takes place on another fantasy planet. The 2 factions named ATTACKERS and DEFENDER are dependent on each other's crystals. To acquire them they need to face each other in a deadly match.

USPs

- Fast paced
- Dynamic movement system
- Unique weapons, abilities & characters
- Different playstyles
- Fantasy shooter
- Variety of melee weapons
- Maps with different themes and mechanics

Mechanics

The only implemented mechanics currently in the game are moving (WASD), jumping (Space), crouching (Ctrl), running (Shift).

Gameplay loop

Player queue's up and finds a game -> chooses team -> game start -> first team to get to 15 rounds wins the game -> winners get greater rewards in the end of the match -> repeat

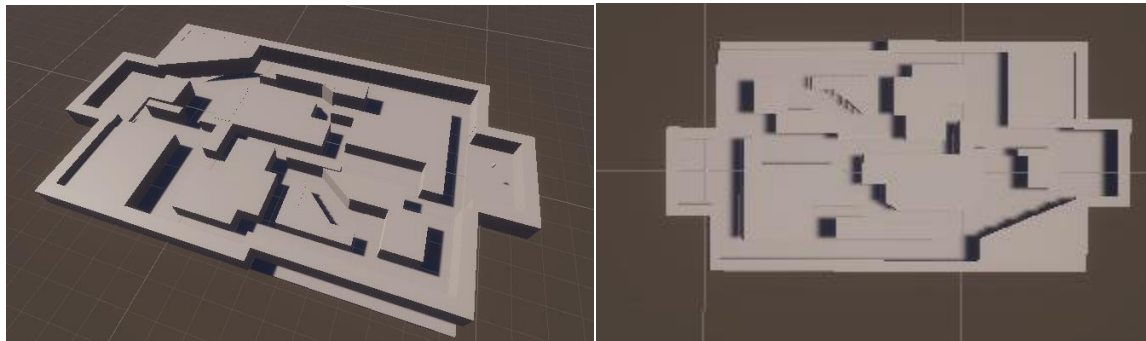
The core of the gameplay loop revolves around replay value, by getting presented with unique situations every game, and the reward in the end of game, which is the main incentive that drives the player to get better at the game in order to win more games and rewards.

Gameplay Flowchart

<https://www.figma.com/file/KNNiwghOQVycNNummfJQOR/Untitled?t=pWRE9M54apoyzT19-0>

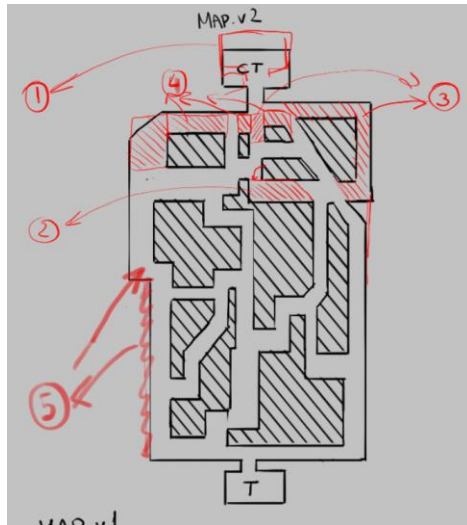
Level Design

My inspiration for the level I created was the level “Bind” from Valorant. I started off with a simple sketch, and marked the main spawns, the choke points, bomb sites and also the available paths (as seen in “Annotated map”). I was careful with placing the paths. There needed to be enough paths for the DEFENDERS to be able to rotate to the next side, and for the ATTACKERS to have more options for strategies and tactics. I designed the bomb side to have no more than 3 entry points, more than that and the things get complicated for both of the teams, making the bomb side too vulnerable. While designing the map I kept in mind that players have different playstyles. Some like long range guns, other like to knife people for fun, that’s why when creating the map I made sure to include areas to fit all of those playstyles. The map has long range areas designed for AWP users, semi-long for assault rifle users and really hollow spaces for shotgun users and knife players. After that I double checked the map I was sure that I have a lot of mistakes to correct, but I wanted to try it in real 3D space, to get a glimpse of how the map feels like to play from both the DEFENDERS and ATTACKERS. I made a 1 to 1 block out of the map using ProBuilder and ProGrids in Unity.

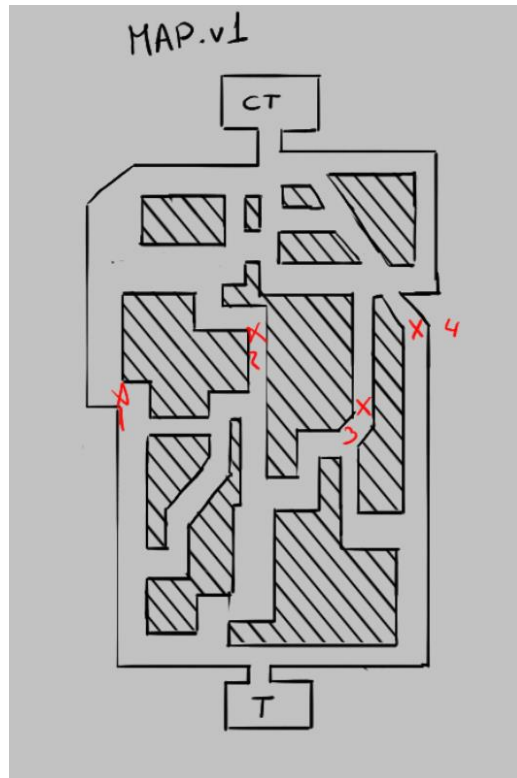


After doing several playtesting sessions I discovered that the map has some flaws, so I had to quickly readjust them.

These are the things I adjusted:



1. DEFENDER spawn was pushed backwards, because the defenders were able to get to the choke points faster than the ATTACKERS and were too near the bomb sides.
 2. Building allowed the DEFENDERS to have more than 3-4 entry points, which would result in advantage over the ATTACKERS when the bomb side is getting pushed/rushed by DEFENDERS. Also the building was taking too much space, leaving too much clear ground for the bomb to be planted.
 3. Too many entry points for the DEFENDERS, which gives them advantages over the ATTACKERS when contesting the bomb side.
 4. Big negative unused space between the DEFENDERS base and the Building. Doesn't follow the design flow of the map.
 5. The whole outer wall was pushed in, because the players were able to see each other before reaching the choke point.
- After those adjustments were done I had to run a test for the choke points. In FPS games it is essential that the team meet in the chokepoints at the same time (with the defending side having a few seconds advantage to prepare for the attack). The test are as follow:



Choke point 1 – ATK(10sec) , DEF (9sec).

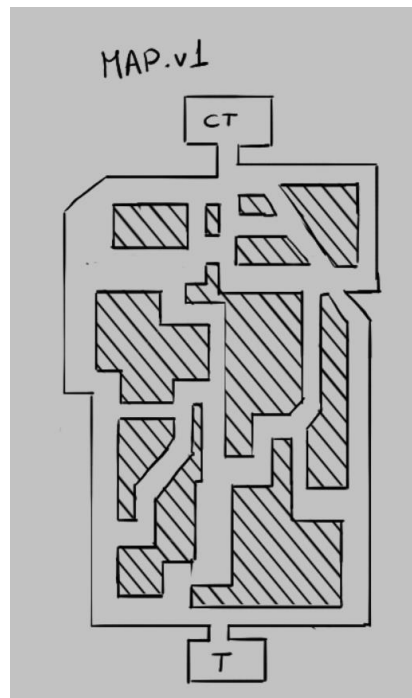
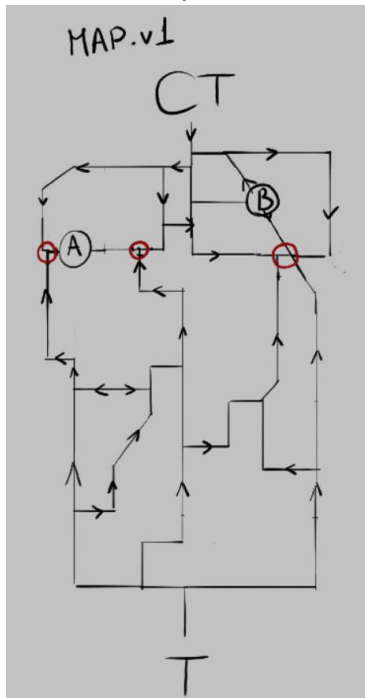
Choke point 2 - ATK(8.5sec) , DEF (7.3sec).

Choke point 3 - ATK(8.3sec) , DEF (7.7sec).

Choke point 4 - ATK(6.6sec) , DEF (5.1sec).

The results were good, so I didn't have to change anything on the map anymore. It was time to replace the blocked out building with actual art models. While using the assets I kept in my mind that I needed to add points of interest to intrigue the player about the story of the level and the world. While doing that it came to my mind that professional level designer use those points of interest not only for that, but also to make the players remember the map easier. A great example is Inferno's iconic banana spot. We all know that place, and its easy to remember because it's shaped like a banana. Keeping in mind that I started creating other points of interest, hoping that when the players play my map they will come up with something easy that resembles the spot. I also added marks that show where the bomb sides are, which is common in FPS games, in case the player gets lost (although now that I think of it I should've added more all over the map not only in the spawn).All that was left now is to add low and high grounds so the map doesn't look that flat, and to also give the players yet another strategic element that they can use to their advantage or disadvantage, depending on their positioning and the situation. And after some finishing touches, I ended up with the current level.

Annotated map



World Building & Story telling

I've used the same idea that Riot Games, the creators of Valorant, use. They add random points of interest that provoke curiosity in the players mind. I've added a couple of those points in my game to make the player feel immersed into the world and to leave him wonder about the story of fantasy world he is in. Those points are also a great way to have a more interesting level overall, instead of covering your level with boring assets of walls.

Theme

The level is fantasy themed.

Mood

The mood is set to be magical.

Visuals

The art of the level is supposed to mimic the style of Valorant. I found assets that are semi-similar to the art of Valorant, a more stylized and simple style.

Mood board



Challenge

The challenge of the game is to beat the enemy team and get to 15 round wins first. The players must engage in a battle, that can be won with either skills, tactics or pure luck. The winner team gets greater rewards in the end of the game.

Reward

The winner team is granted a reward in the end of the game for successfully beating the enemy team and securing the objective of winning 15 rounds. The rewards will vary, from bonus experience, to character and weapon cosmetics and in-game currency that can be exchanged for greater goods.

Prototype

The whole prototype of the level/game was made in Unity. Unity is the perfect engine for small projects such as this, because of all the available tutorials out there and also because of the Unity Asset Store, where you can easily find the assets that suit the art style you're going for.

Future Improvements

In the future development of the game there are several things I want to implement. First the dynamic movement system is a must that needs to be implemented as fast as possible and play tested. Then adding the actual weapons, shooting, and making a server, so the game can be played online. Afterwards the whole UI needs to be done and all that's left is some finishing touches, and a way to monetize the game, which would most likely happen through monthly battle passes and in-game shops that require in-game currency.

Playtests

I had 3 of my friends, playtest the game to see if I've managed to achieve what I had in mind. The feedback I got was a mix of negatives and positives. They really liked the art direction of the game, the way the level looks and the overall idea (after I explained it to them), however they didn't like that the game was unfinished and some mentioned that it was just a walking simulator for now, on which I can completely agree.

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Shooting games market size, share, trends, Opportunities & Forecast. Verified Market Research. (2022, March 11). Retrieved March 31, 2023, from <https://www.verifiedmarketresearch.com/product/shooting-games-market/>

Assets

<https://assetstore.unity.com/packages/3d/environments/fantasy/dreamscape-nature-bundle-stylized-open-world-environment-232630>

Code

https://www.youtube.com/watch?v=f473C43s8nE&ab_channel=Dave%2FGameDevelopment