

Cosmic Cadence- Game Design Doc



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Background

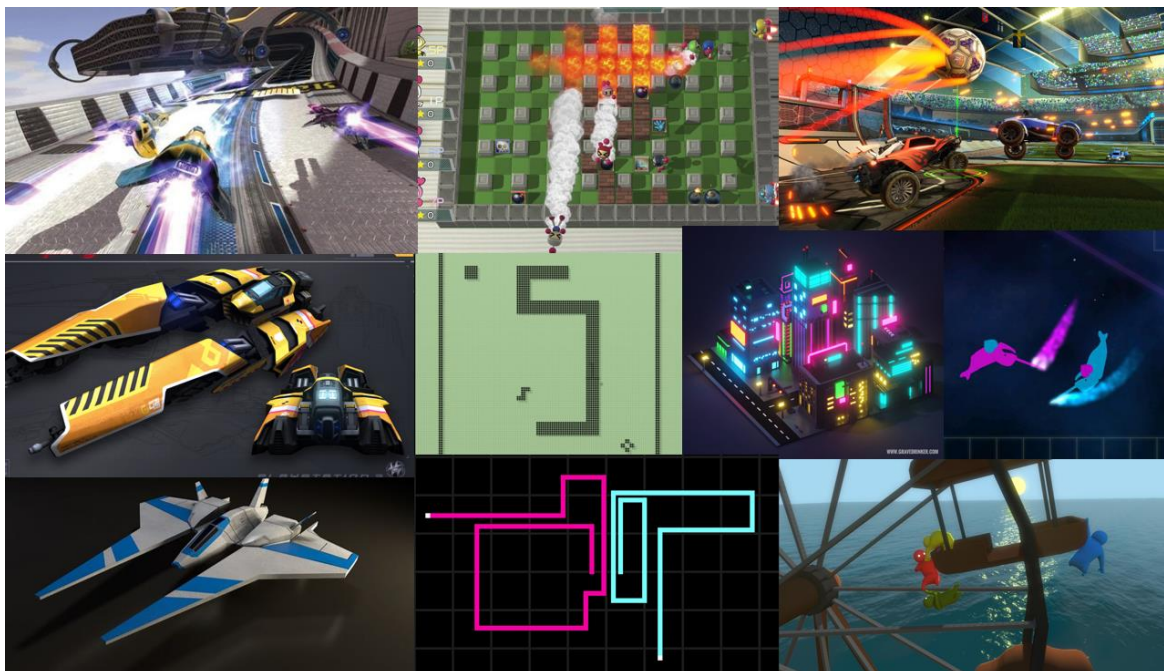
Sound Bound is a UK radio station, based in London, Angel. Established in 2017 – it is focused on playing: electronic dance music, Hip-Hop and R&B. In the late 2017, it commissioned several students from the City University to produce a video game, that would serve as means of playing the radio station and promoting new music. The Idea is that – games can be used for the music promotion. Historically, a lot of songs became popular by being included in the soundtracks of different games. [1][2][3] Additionally the game will cover a wide range of platforms that support multiplayer input (such as PC, PS3, PS4, XBOX 360, XBOX One and others). The gameplay should be fun and accessible for as many people as possible, and not limiting the experience to people who enjoy discovering music.

Gameplay overview

Cosmic Cadence is a local multiplayer game, played on a single screen with game controllers. Each player controls a little spaceship, with movement reminiscent to the game Snake [4]. Players can use rechargeable boost to momentarily increase the speed and attempt to out maneuver the opponent. The goal is to hit the other player on the side or the back to win the round, best of 5 rounds wins the match. Before the game starts, players can select their spaceships, customize them and select a battle arena. Each battle arena has dynamic obstacles, which are triggered with sudden death (30 seconds into the round), for example in the Icy Waters Arena, a sea dragon will start moving across the arena. If a player will get hit by a sea dragon, the round win is accredited to the other player. Finally, it is possible to play the game alone, by replacing the second player with an AI opponent.

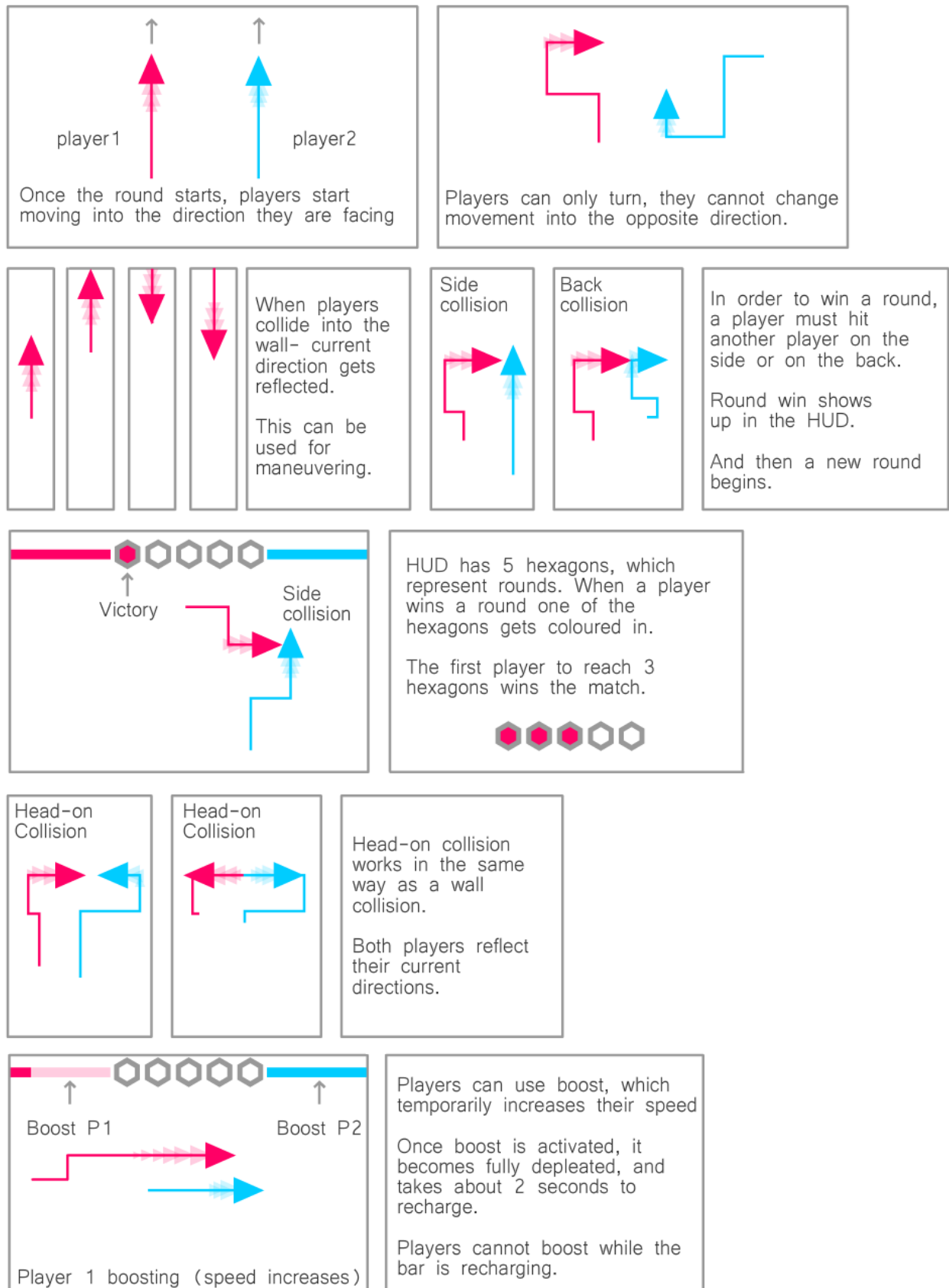
Moodboard

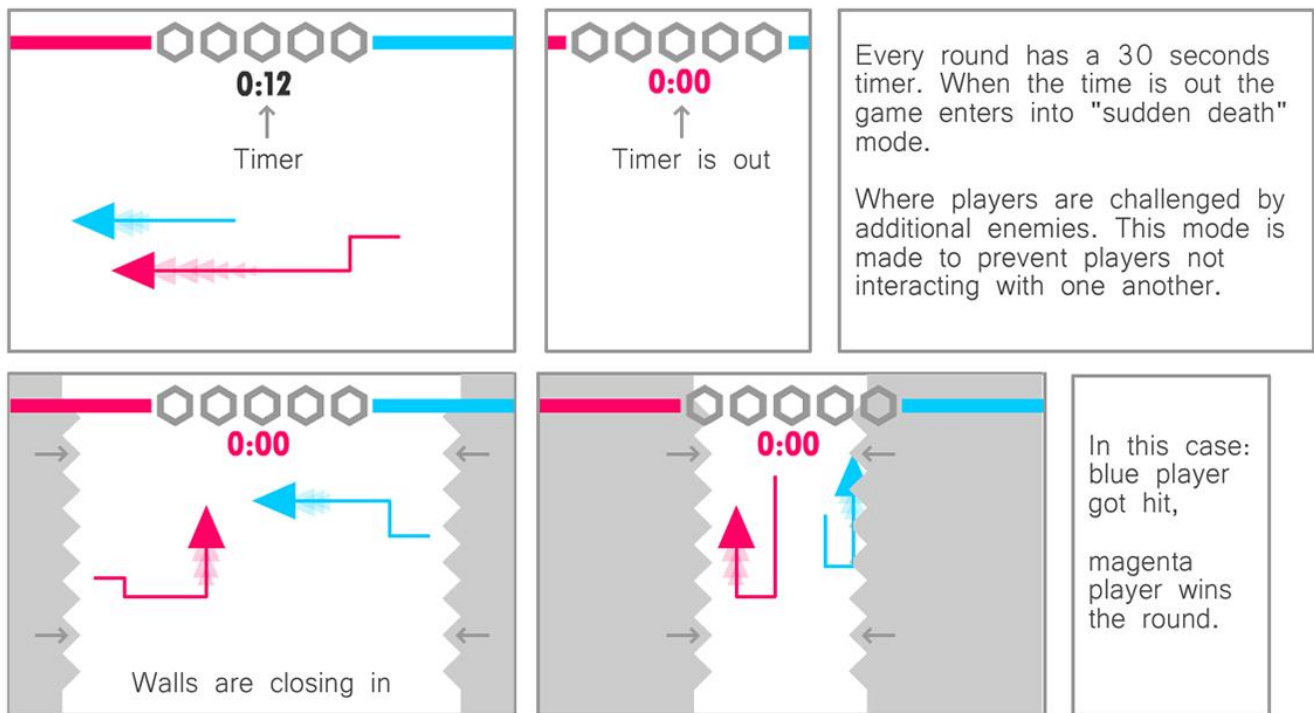
This moodboard was used early on in development, to get some inspiration and a general feeling for the gameplay. This moodboard can be split into 3 parts. Left side illustrates the aesthetics- the game will take place in a futuristic setting, where players will navigate spaceships- at this stage the game didn't have a particular art style. The middle part, demonstrates similar gameplay found in other grid-based games. And the right side attempts to capture the feeling of playing a local multiplayer game. Moodboard image references - [5][6][7][8][9][10][11][12][13][14]



Rules of Play

I have used storyboards to describe game rules. They cover main mechanics: player's movement, collisions, boost, in-game UI and victory and death conditions.





Screenshots

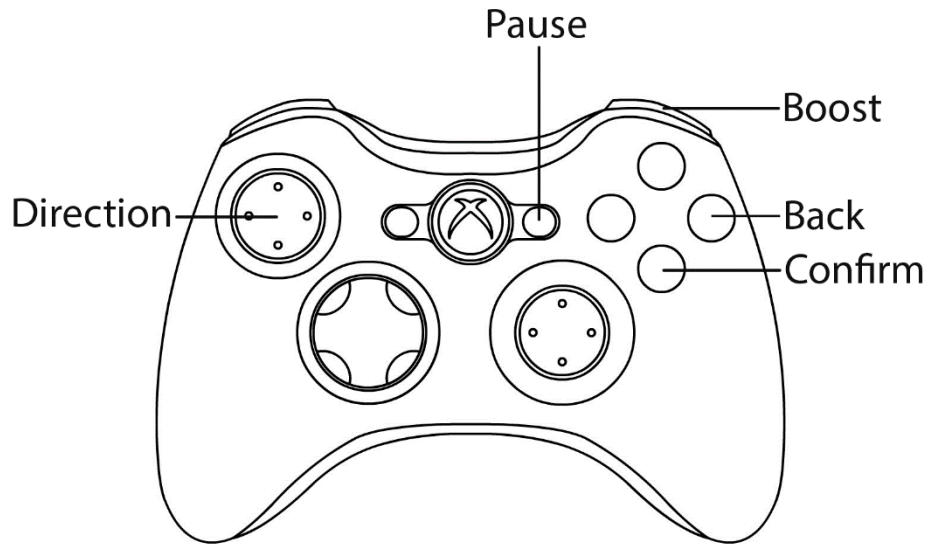
These are arena mock-ups. On the left – Icy Waters and on the right Sky City. Each player has a different spaceship, their spaceship colours correspond with their trail and their UI elements. Additionally, there is another boost (which appears like a cone of light behind each player) – it signifies when the boost can be used.



Controls

The game currently supports two different input devices. On PC players can interact with the game using keyboard, or Xbox 360 joysticks.

[15]

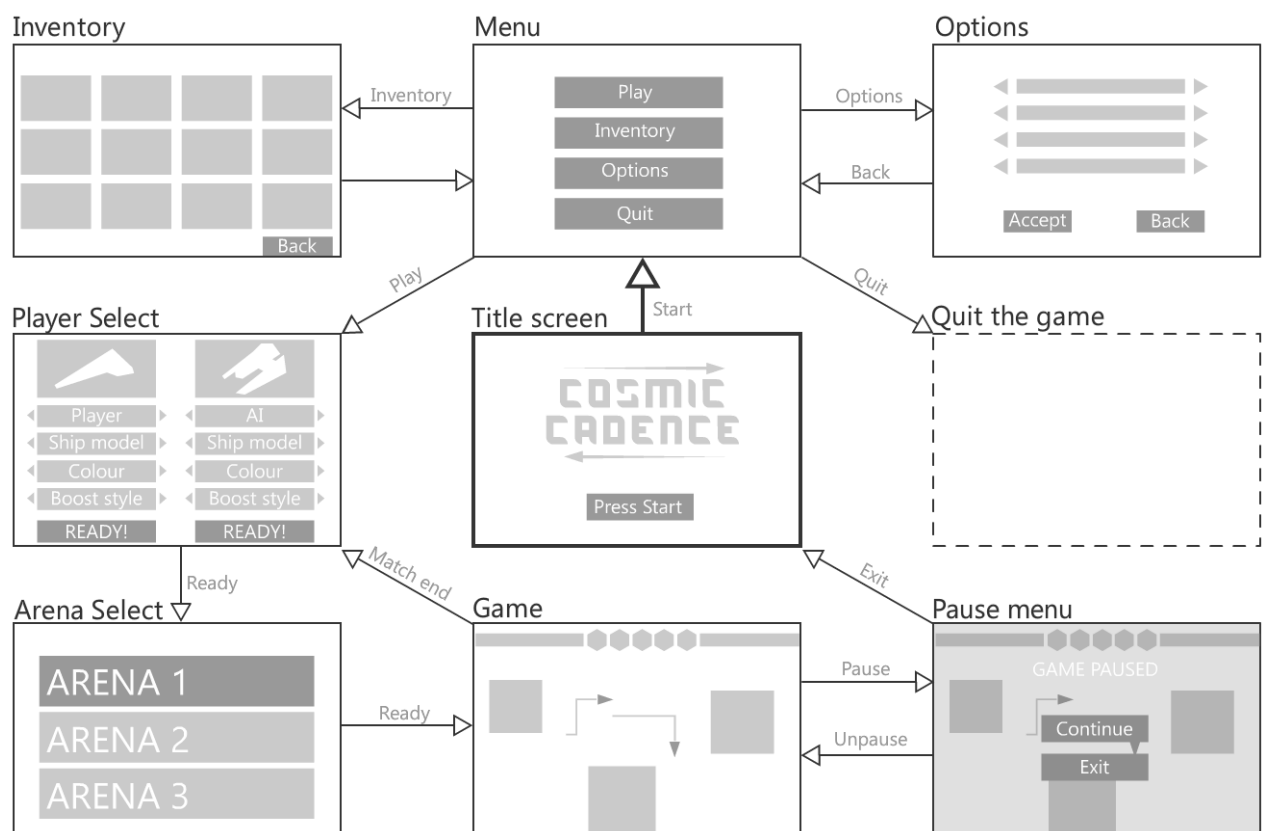


The table below elaborates how each input is mapped for a given peripheral. Later on, the game will support other controllers (such as ps3 and Nintendo switch and so on), the input will be mapped in a similar way when possible, however for the prototyping stage the game will only support keyboard and pc joystick input.

Input:	Keyboard P1	Keyboard P2	Xbox 360 Joystick P1/P2
Left	[A]	[Left arrow]	[Left button] / [Left analogue – left]
Right	[D]	[Right arrow]	[Right button] / [Left analogue – right]
Up	[W]	[Up arrow]	[Up button] / [Left analogue – up]
Down	[S]	[Down arrow]	[Down button] / [Left analogue – down]
Boost	[Left shift]	[Right arrow]	[A button]/ [Left trigger]
Pause	[Escape]	[Escape]	[Pause button]
Confirm	[Enter]	[Enter]	[A button]
Back	[Backspace]	[Backspace]	[B button]

Game shell

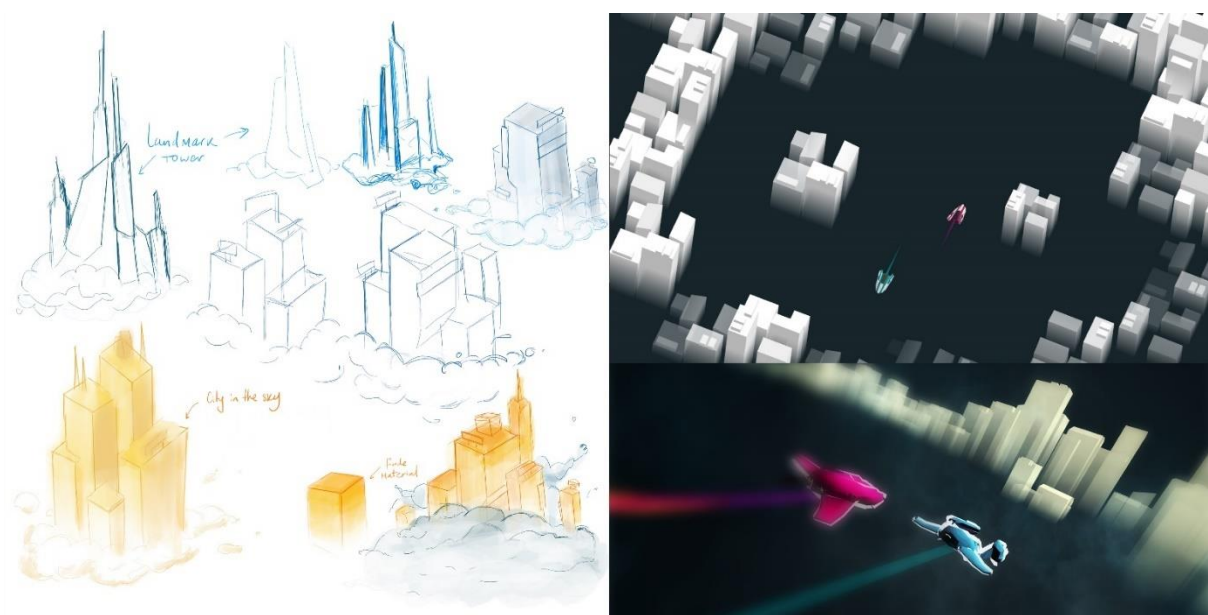
The game shell demonstrates navigation between all menu and game windows. Each screen represents a particular menu, or a game state that can be accessed. The arrow direction shows how to navigate to a particular screen, and the text above the arrow signifies the choice taken, or the game state that lead to that screen. Note, that the middle screen is slightly highlighted, this is because the player is likely to start the interaction with the game at the **Title screen**. Quit the game screen has dashed outline because it is the final state, that closes the game, it cannot be seen. It simply, leads the player to the system's native dashboard or desktop depending on the operating system.



Concept and design

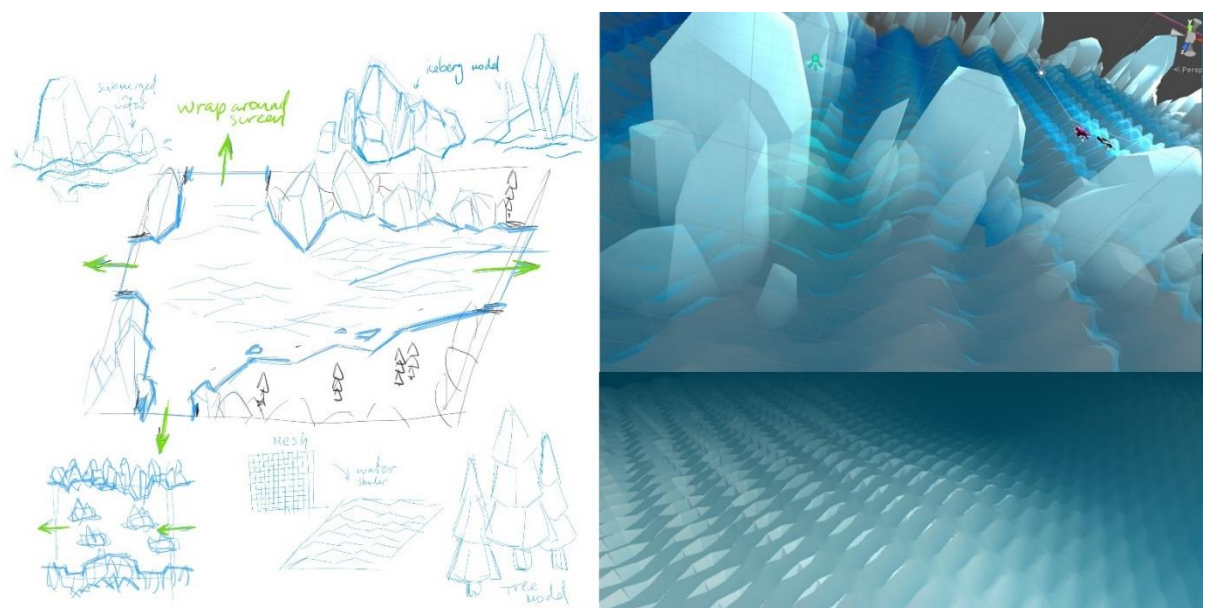
Sky City Arena

The idea behind this arena is to give players open space for the conflict. I thought that city grid would look very natural in that context. I've modelled generic city blocks that can be used as game assets. It quickly became apparent that tall buildings obstruct players' vision, so I decided to make buildings smaller and add clouds as if the buildings are protruding from the clouds. Then I've created a material (shader) that gradually fades out, this gave the blocks seamless transition into the clouds.



Icy Waters Arena

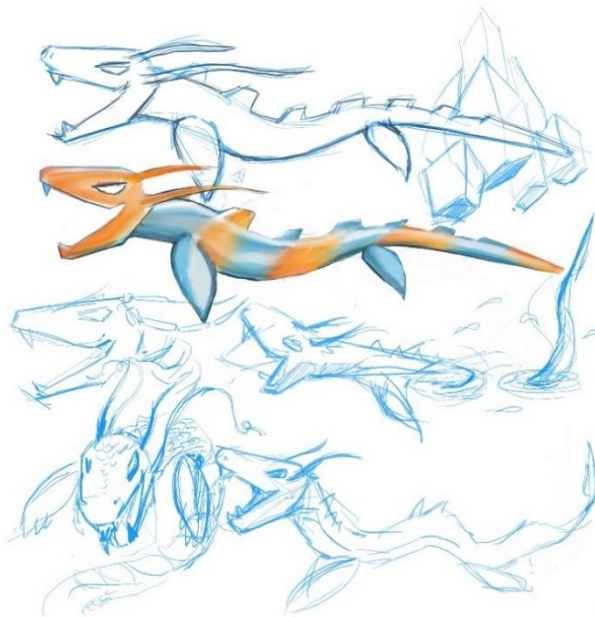
This arena utilises wraparound screen, meaning that if a player will reach the leftmost side they will be teleported to the rightmost side, while remaining the speed and direction. I wanted to introduce moving obstacles in this arena, and in my opinion sea with moving icebergs is an appropriate scenic choice. Some icebergs constantly float towards the right side, once they reach it, they teleport to the other (this is used as a hint to show the players that this stage has a wraparound screen). This stage



also has dynamic mesh material that acts like water, it has wave patterns that correspond to the players moment - it is used purely for a visual merit.

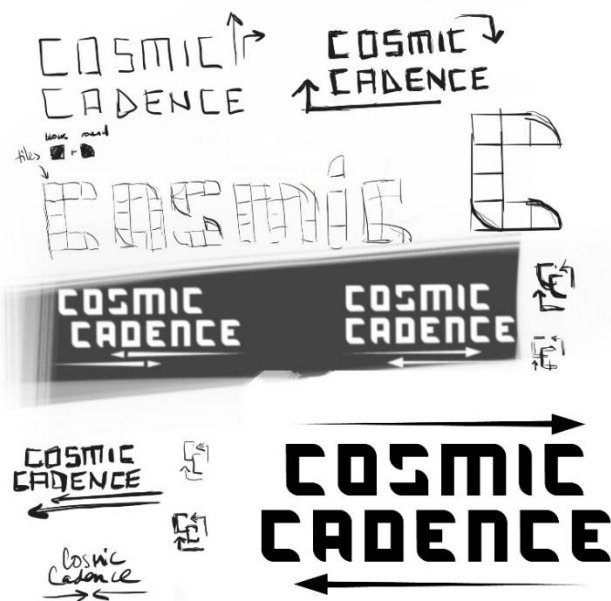
Water Dragon – used in sudden death from the Icy Waters arena

The Water Dragon appears in the Icy Waters arena, when players run out of time. It moves across the screen in linear fashion. Players will get a quick warning from what direction it is coming before it will rush through the arena. When the Dragon hits a player, round victory goes to the other player. The dragon itself is based on a snake/koi-fish appearance. The idea was to give it an interesting animation and vibrant texture - so that - it stands out and players can easily identify it as a threat.



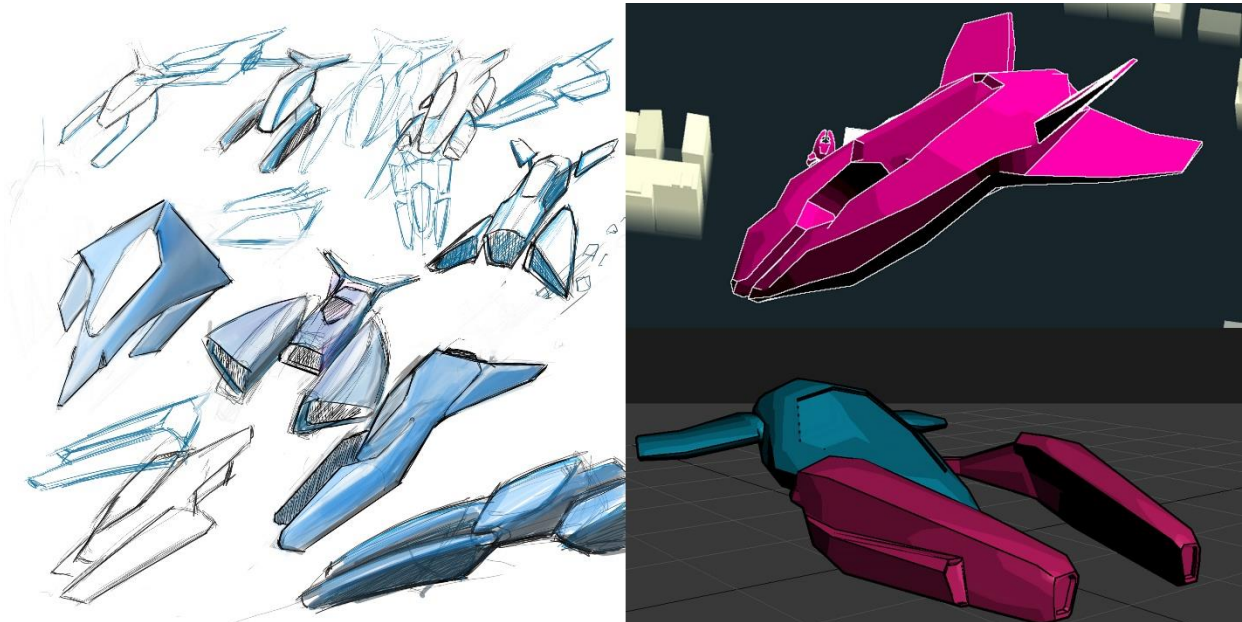
Logo & Font Design

This is a logo design, developed specifically for this game. I've attempted to create a custom font that encapsulates futuristic and gamy look. I came up with a font that is made out of 2 basic tiles. Also, I wanted to add little symbols of spaceships – that look like arrows to signify the gameplay.



Spaceships

The game allows some choice and customisation for the spaceships. Even though they all control in the same way and have the same collision box, they can have different appearances. I wanted to provide the player, with some choice of spaceships. They can also change the colour which will change the colours of the in-game UI (for example orange spaceship will have orange trail, orange boost and orange hexagon rounds). Later on, I'd like to add different boost trails for example: flames, snowflakes, lasers and so on.



Inventory system

After every match, there is a chance of getting an item drop. All items will be stored in the in Inventory. Items include: ships models, ship boosts and songs. In-game item will vary in rarity (common, rare and epic). Drops should serve as an extra motivation to play, as some players may decide to get interesting items. Players can also trade their items. This approach also opens a possibility for adding items as the game develops. Song drops will depend on popularity. Later, there should be some agreement where artists could promote their music.

Here are 3 examples of item drops: ship(common), boost(epic) and a song.



References

*. – all images without reference are original content made for the game.

1. - <https://readonlymemory.vg/generation-tony-hawk/>
2. - <https://www.vinyloftheday.com/video-game-soundtracks-vinyl/>
3. - <http://blog.counter-strike.net/index.php/2014/10/10432/>
4. - [https://en.wikipedia.org/wiki/Snake_\(video_game\)](https://en.wikipedia.org/wiki/Snake_(video_game))
5. - <http://cdn2-www.playstationlifestyle.net/assets/uploads/2016/05/Wipeout-555x328.jpg>
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14. - <http://www.theaveragegamer.com/wp-content/uploads/2014/04/Gang-Beasts-Ferris-Wheel.jpg>
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