# Working Title: Cybersky

**A modern reimagining of classic Shoot 'em Up gameplay, designed for handheld play,**

**featuring roguelite mechanics.**

**Genre: Roguelite, Shoot 'Em Up**

**Version 2.0.0**

Charlotte Ward

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## Contents

# 1 High Level Design

## 1.1 Working Title

The working title for this project is *Cybersky*, derived from the general Cyberpunk subgenre of Science Fiction. This name aims to convey a pessimistic, futuristic setting, mirrored in the proposed visual and audio style.

## 1.2 Concept Statement

> *A modern reimagining of classic Shoot 'em Up gameplay, designed for handheld play, featuring roguelite mechanics.*

This statement quickly and easily sums up the core mechanical alignment of the game, demonstrating the historical basis that the Shoot 'em Up genre has. Additionally, the roguelite features and handheld nature are conveyed. This may be expanded as more features are added.

## 1.3 Genre

The genre of this game is described as a:

> *Roguelite Shoot 'em Up (Shmup)*

This description can be broken into two parts:

### 1.3.1 Shoot 'em Up:

The following subsection primarily follows an article by Brian W (2020a).

Recent Shoot 'em Up games are an influence for *Cybersky*, including *'Ikaruga'*, a 2001 title that's often regarded as the epitome of Shmup design. *Ikaruga* was very popular within the community of Shmups and Bullet Hells, quickly becoming the gold standard of the genre. In more recent years, *'Enter the Gungeon'* has revitalised the Shmup genre, breathing some life back into the fandom.

Additionally, Shoot ém Up games share ground with Twin-Stick Shooters, a specific subgenre that relates to a movement and combat system where one control stick controls movement, and another control stick affects firing direction. A notable example is *'Geometry Wars: Retro Evolved 2'*. This style of control system works well with Shmups, as it allows for a lot of precision in terms of movement and control, effectively utilising analogue sticks when compared with directional pads (D-Pad) and buttons.

The gameplay of a Shoot ém Up is designed around a large quantity of projectiles, involving player movement in the style to a Twin-Stick Shooter, or similar to a fixed shooter like *Galaxian*. This is a large inspiration for *Cybersky*, a game designed around adapting this genre for Roguelite progression (see next subsection) and adapting it for mobile gaming.

To summarise:

- High quantity of projectiles & enemies.

- Twin-Stick Shooter or Fixed Shooter movement.

### 1.3.2 Roguelite:

The following subsection primarily follows an article by Brian W (2020b).

The genre of Roguelikes derive from the overall structure of the game *'Rogue'*, a 1980 release, being the first implementation of a ruleset which came to define the genre. These rules can be outlined as:

- Permadeath

- Procedural generation

- Difficult enemies

- Loot based progression

Roguelike games implement these rules across many different genres, illustrating their versatility as a set of rules. A *Roguelite* in particular is a subset of this genre, implementing some or all of these rules in a less strict or hardcoreway. This is particularly useful in describing *Cybersky*, as the game should appeal to a more casual audience due to the target platform; Accessibility is the key to the mobile market, regardless of the genre staples that *Cybersky* is influenced by.

A few examples of Roguelike games include *'Darkest Dungeon'* and *'The Binding of Isaac'*. A more loose example of a Roguelite would be *'FTL: Faster Than Light'*. These examples are good inspirations as they feature procedural generation and progression, and implement permadeath and loot-based progression.

## 1.4 Target Audience

With *Ikaruga* being described as a "shooter-fan's shooter" by Tyrone Rodriguez (2018), and the resulting success in the industry (Brian W, 2020a), it's clear that *Ikaruga* has become a bit of a cult classic, with few games reaching the same heights since. *Cybersky* aims to appeal to the same fans that *Ikaruga* has, and more generally Shmup fans as a whole.

As well as this, *Cybersky* is aimed at the general mobile market, meaning that it should follow the archetypical conventions of a mobile game: accessibility in terms of gameplay and design, simplicity, cognitive flow, short session length, all of which relate to the psychology and design trends in mobile gaming at the moment (Northington, 2018).

### 1.4.1 Casual Persona

This section is dedicated to the persona of a casual mobile gamer:

- Name: Cynthia Enriquez

- Age: 27

- Gender: Female

- Job: Digital Marketing

Cynthia works full time as a digital marketing employee for a small company. She spends a lot of her time commuting by train to the small office and has little time to play games on a console or computer. She's looking for something easy to pick up and put down as her train journey has lots of stops. *Cybersky* aims to fill this gap by being easily accessible for casual players, having short gameplay loops to help fill time in this kind of fractured manner.

### 1.4.2 Fan Persona

This section is dedicated to the persona of a fan of shmups:

- Name: Jaylen Farrow

- Age: 22

- Gender: Male

- Job: Student

Jaylen is a student in university, spending a fair amount of time doing coursework and attending lectures. He uses a pomodoro timer to get work done effectively during the day, but needs a way to quickly unwind. He also is an enthusiast in the Bullet Hell genre and has been for many years, seeking out new games in the genre to deep-dive into and enjoy. *Cybersky* aims to appeal to Jaylen by subscribing to the genre conventions, and has long-term progression alongside the short gameplay loop to allow for him to enjoy the game in this multifaceted way.

## 1.5 Unique Selling Points

This game aims to reintroduce classic Shoot 'em Up gameplay onto the mobile gaming market. With the industry tending towards monetisation and advertisement, there's a sore need for games that are simple and replayable. *Cybersky* can achieve this by cutting past the annoying and often offputting monetisation that exists in mobile gaming, skipping advertisements and instead relying on a short entry cost or pay-what-you-want scheme.

To summarise:

- Noninvasive Monetisation

- Pay what you want scheme

- Open source

Additionally, *Cybersky* includes roguelite features, featuring short levels that make up part of a larger 'run' narrative. Each of these levels are chosen procedurally and have their own features, gimmicks and enemy/loot types. Players choose between two or three paths forward, being told the general archetype that each path fits into.

While *Cybersky* is permadeath for each 'run', there are permanent unlocks that can manipulate the way the game is played and add complexity depending on the amount the player has played the game.

To summarise:

- 'Roguelite' features

- Revolves around 'runs'

- Choose your own adventure style progression

- Item synergy

- Progressive upgrades

- Pseudo-Permadeath

- Permanent unlocks

# 2 Product Design

## 2.1 Player Experience

The player controls a small starship well equipped to switch loadout and add field upgrades very easily. This means that the player can easily pick up gameplay-altering items mid run, allowing for self-determined playstyle and loot gathering, subscribing to the Roguelike/Roguelite definition of the game. The game takes place in a Sci-Fi universe, affording large variety in in-game settings without requiring much justification. Some high-level examples of this would include:

- Space levels

- In-Atmosphere levels

- Levels inside superstructures

These settings follow archetypes of Sci-Fi, taking inspiration from genre-influences that have been around for decades. To add clarity, Superstructures may be underground tunnels, space stations, any large structures, owing inspiration to things like the Borg from *Star Trek* or the Death Star from *Star Wars*.

*Cybersky* grants the player the fantasy of being alone against a formidable army, building up an arsenal slowly and eventually being able to push back against a planet overrun by malicious robots. This revolves around the narrative, but includes ludonarrative

features such as difficulty progression in-run, permanent (i.e. non-permadeath) progression, player development through short term and long term unlocks and customisation. These ludonarrative features link with the narrative itself, building a world around the gameplay.

What keeps the player engaged for the duration of their play?

The game relies on two main driving forces to keep the player engaged, relating to the short term gameplay revolving around visual spectacle and testing player skill, and the long term gameplay involving long term progression and challenging the player in a cumulative fashion. To expand upon this:
Short Term:

- Visual spectacle

- Skill-testing revolving around gameplay balance

- 'Permadeath' ruleset influencing gameplay stakes

- Short gameplay loops

Long Term:

- Permanent unlocks

- Harder levels

- Stats

- Narrative progression

## 2.2 Visual and Audio Style

*Cybersky* is resolutely based in Sci-Fi, a genre of fiction whereby technology and science are at the forefront of the genre conventions. Additionally, having a dystopia is a genre convention, which works well for this game. *Cybersky* is itself a technological dystopia, where the player controls a sleek starship or drone, shooting futuristic weaponry. The enemies are similarly technological, likely drones, with sleek designs and metallic appearances.

What is the "look and feel" of the game?

In terms of look, the game appears 2.5D, whereby the gameplay takes place in 2 dimensions but the scene itself is 3D, allowing for depth. This means that the models used in the game must be 3D, with simplistic meshes. Since the game is top-down, surface detail is less important than the overall silhouette and shape of an object. For this reason, even low-poly meshes would work perfectly for this game, as visual identification
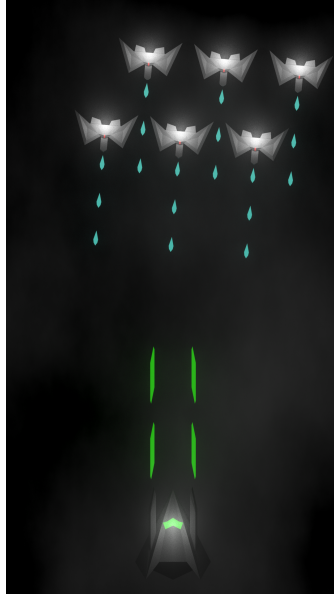
Figure 1: *Cybersky* Mockup Render

is instead based on shape than minor differences like colour or mesh variation. A 3D rendered mockup of *Cybersky* is included in Figure 1.

In terms of feel, the game is responsive in how the controls work, with a simple and versatile input system utilising the touch-screen. This is expanded upon further in section 3.3.1. With the movement relying on being responsive, the feel of the game should be fast and utilise reflexes, and this is compounded by the utilisation of particles and post-effects that enhance the visual depth to the scene.

With regards to the visual style, simplistic and yet visually detailed 3D design affords a lot of artistic freedom without much of a hardware limitation; this makes the game more accessible, and lets the environment and object design heavily impact the narrative.

## 2.3  Narrative

Summarising everything included in this document already, *Cybersky* is a futuristic dystopia whereby the player controls a rogue drone (or ship) that faces off against a large automated army of drones. This world primarily revolves around a space-faring power that has taken control of 'the core worlds', a general setting for the game.

The story of the game revolves around the rogue element getting in contact with a resistance cell, discovering that the antagonist group commits atrocities and deserves to be fought against. The story doesn't conform to a standard three act structure, instead being an over-arching narrative allowing for simplistic story elements of fighting against the antagonist, or potentially an anthology of short stories that fit into the larger narrative.

# 3 Game Mechanics

## 3.1 Game Rules

Summarising what's touched upon in this document already, *Cybersky* is a fixed-shooter with one dimensional or two dimensional movement, where the player shoots forward at all times. The player must acquire items to improve their abilities, and face against various enemy types, which appear at the top or sides of the screen. Bosses are high level enemies at the end of levels, which have specific abilities, phases and movesets, in which the player should learn to overcome a specific boss style to overcome it.

## 3.2 Core Loops

The core loop for *Cybersky* revolves around 'stages', where difficulty steadily increases upon completion of each stage. Each stage has a gameplay or narrative focussed goal, such as "defeat the boss at the end of the level" or "find the key to

$$narrativeelement$$

'. On top of this, each time the player dies, their 'run' is reset, putting them back to the beginning of the stage progression. Stages follow an anthology style of storytelling, allowing for a random order of stories to keep each 'run' engaging.

To add to this, each run also progresses in difficulty, in such a way that the player doesn't get overwhelmed or find it too easy. This requires some form of balance system, whereby the player gains or loses points or unlocks to get more powerful or less powerful over time.

The permadeath nature of each run is engaging as it means that the player is disincentivised for failing a stage; they lose out on story progress, and it may be a while before they can see the story through to it's completion. Some features may be needed to keep a failed story relevant, such as a failed story queue, so that the player can catch up again without losing track. Additionally, this long-term progression should be engaging as it helps to raise the bar for skill requirement over time, keeping the game challenging.

## 3.3 Control Schemes

### 3.3.1 Touch

The game is designed for use on a mobile phone screen primarily, utilising the bottom of the screen for positioning. See Figure 2 for a wireframe.

The proposed control method involves having an area at the bottom of the screen where the player can swipe or tap to have the ship move horizontally. Vertical movement is not planned as this may be overly complicated for the style of game. This being said, more testing is needed. The scene wireframe in Figure 2 illustrates this control method.

Not included in this wireframe is the philosophies that could control player movement; whether the ship snaps to the point without any speed limit, whether it moves to the
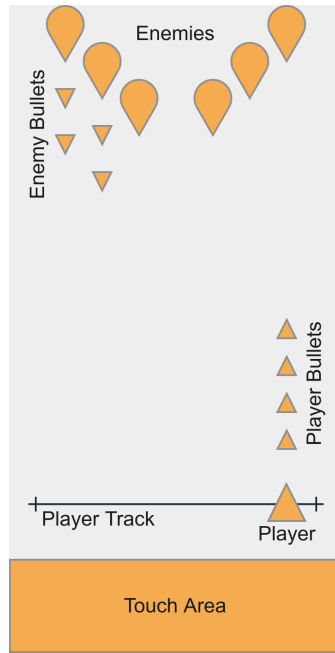
Figure 2: *Cybersky* Scene Wireframe

point with a maximum speed, or whether there's two dimensional movement will depend entirely on playtesting and further conceptualisation.

This method of control affects the experience in multiple ways:

- The control system is accessible and simplistic, making it easy for entry level gamers to pick up and play.

- Additionally, the control system allows for high level players to accurately move around obstacles.

This allows for a high skill ceiling and a low skill floor, which fits with the target audiences of the game.

### 3.3.2 Controller, Keyboard and Mouse

This fixed-shooter style gameplay translates well to controller layout and Keyboard & Mouse. With a controller, it's possible to control both the one-dimensional fixed-shooter style movement with the left stick, and, should it be implemented, the two dimensional movement outlined above. Keyboard & Mouse are a little more complicated, as one of the things that keyboards are less useful for is precise positioning. Because of this, it might be useful to implement some kind of mouse control, mirroring that of the touch input. Regardless, this information is only useful for a minority of players, as the intended platform is mobile.

# References

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