Unnamed 2D PVP Game
Game Design Document

Version 1.0
August 28, 2025

Revision List

Version	Date	Comments
1.00	August 28, 2025	Initial Version

Table of Contents

1. Introduction

This document outlines the design of gameplay for a yet to be named game. Everything is designed and specified solely by Christopher Kokanour.

1.1 Scope

This document is intended to be read by anyone involved in the design and testing of the game or who is interested in the design and testing process of the game.

1.2 Type Conventions

Terminology included in this document:
- ATK: Attackers
- DEF: Defenders
- Down/Downed: Players who have had their health reach 0 but did not recieve enough damage to outright kill them so they have entered a "last stand" state. They cannot shoot or interact, they can crawl, and can be revived by teammates.
- LoS: Line of sight

Version control is Major.Beta.Alpha.Minor or 0.1.2.3.

2. References

- Operator Design Document

3. Target System

This game will only be produced for PC through Steam. Supported input is mouse and keyboard.

4. Development System

4.1 Software

This game will use the Unity 6 game engine.

4.2 Networking

This game uses the PurrNet networking plugin to handle all networking behind the scenes. Testing using PurrNet's development connection starter while release will use Steam and peer to

peer connections. These are in use when starting from the main menu and connecting through the lobby.

5. Specification

5.1 Concept

The aim of this game is to make a fun, competitive, and strategic team-based multiplayer shooting game using a 2D vision-based system.

5.2 Premise & Factions

There are a set of attackers and defenders where the defenders are protecting an objective. Each character is from one of five factions. These factions will be sci-fi space themed factions such as space police, workers, outlaws, or cultists as generic examples.Their gadgets, look, and backgrounds will match their faction. The maps will be locations where each of the factions would reside.

5.3 Game Structure

The default match will consist of a best of 5, 5v5 round structure where sides swap after two rounds. Each round consists of a character selection phase where each character can only be selected once. Then comes the setup phase where attackers can scout the defender's characters, objective room, and their setups using small spider bots. During this phase, defenders can destroy the spider bots and deploy their utility to protect the objective. After the setup phase, attackers have a set amount of time to either eliminate all defenders or to destroy the objective. Defenders have to either eliminate all attackers before they start destroying the objective or disable the device destroying the objective once it has been placed. Default values are 20 second character selection, 45 second setup phase, 3 minute round, 45 second objective timer, and 5 rounds. In the lobby, the host can change these values before the match starts.

5.4 Players

Each player will be playing as individual characters with unique loadouts consisting of a primary weapon, secondary weapon, primary gadget, secondary gadget, 2 spider bots if an attacker, and wall barriers and cameras if a defender. Players will be able to customize their inputs. Playable characters, their gadgets, their lore, and faction can be found in the attached Character Gadget List document.

5.5 Action

Shooting is hitscan and bullets can destroy barricades placed in doorways by defenders along with many gadgets on both sides. Some gadgets are explosive which can destroy walls without barriers and any bulletproof gadget. Any gadget, secondary gadget, or defensive setup will only

be visible if inside the player's vision cone. Only static map objects and teammates will be visible at all times.

5.6 Objective

5.6.1 Attackers

The objective is to scout the defensive setup and either eliminate all defenders or place the attack objective device inside the objective room before the round timer runs out. Once it has been placed, the attackers will win once the objective timer reaches 0.

5.6.2 Defenders

The objective is to defend the objective room and either eliminate all attackers before they place their device, disable their device before the objective timer reaches 0, or delay the attackers until the round timer reaches 0.

5.7 Graphics

The graphics are top-down 2D sprites. Each character has a vision cone to simulate visibility.

5.8 Data Storage

The only data stored will be player controls which will be saved locally.

6. Gameplay

6.2 First Map

6.2.1 Layout

6.2.2 Surface Types

6.2.3 Object Types

6.3 Rules & Enforcement

There are no current plans for an anti-cheat or any enforcement. There is no matchmaking so players will join lobbies through invites or codes. In-game, team-killing and going afk is completely allowed.

6.4 Control

Players will have a default set of keybinds which they can modify in the main menu.

7. Front End

7.1 Intro

When the game launches, there will be a Unity splashscreen, Und3d Games splashscreen, and mini-intro. In the background, players will connect using their steam profile.

7.2 Menus

Players will start on a main menu where they can select to either join a lobby using a code, host a lobby, open the settings, or quit the game. There will also be corner buttons to view credits and a help/tutorial menu.

8. Development Tools

8.1 Editor

The game has been developed using Unity 6, JetBrains Rider, PurrNet, and Unity Steamworks.

9. Team

Christopher Kokanour has been the sole developer. Quality Assurance and testing will involve other people who will be listed here in a future document version.

10. To-Do List

Trello to-do list link.

11. Time

Official Start Date   :   June 25, 2025

Milestone 1 - 1st Playtest   :
Milestone 2 - Beta   :

End of Project   :