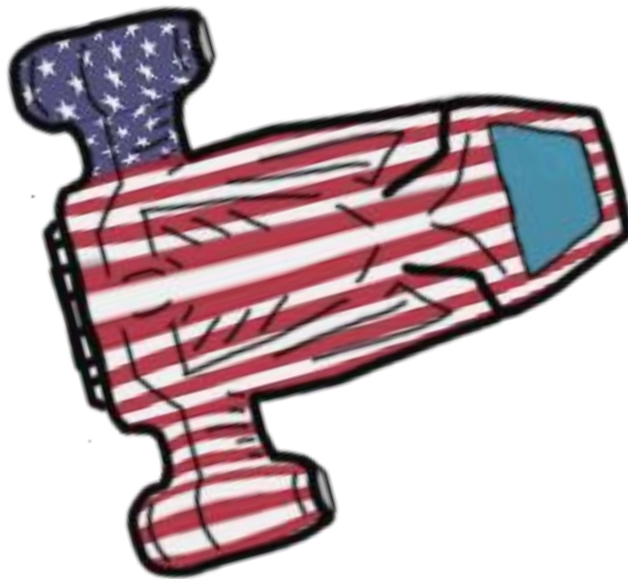UNB Fredericton, MAAC 3601 with Professor Jeff Mundee

Space Force

Introduction to Video Games – Game Design Document 1

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CONTENTS

Overview and Story

Space force is a top-down, bullet hell game based on the absurd declaration by the United States president, Donald Trump, to create a military force called the "Space Force" to obtain dominance in space.

The game is a training simulation of space combat by the US military in preparation for a potential space war. The player must progress through training levels of increasing difficulty. To do this, the simple AI enemies of each level are to be destroyed. While this is happening, firing weaponry and destroying the training enemy ships causes millions of dollars to be used by the military. The game will end with the player deploying for defense mission to protect "US space space" (as opposed to "US air space"). The game ends with the player given nothing to do but float around and reflect on the gargantuan cost of launching and training.

The game is meant to reflect on the absurd idea of necessity of creating a space force and the huge cost it would entail. Of course, it isn't an accurate representation of how the budget would be spent, but this method was a much better way of telling the story and giving gameplay in the way which I wanted to make.

The game is supposed to be fun and responsive. The controls are to be seamless, the feedback of weapons will give the player a sense of feeling and power behind every shot, and the art style will be simplistic, as a bullet hell game will fill the screen with a lot of bullets.

Screen and UI overview
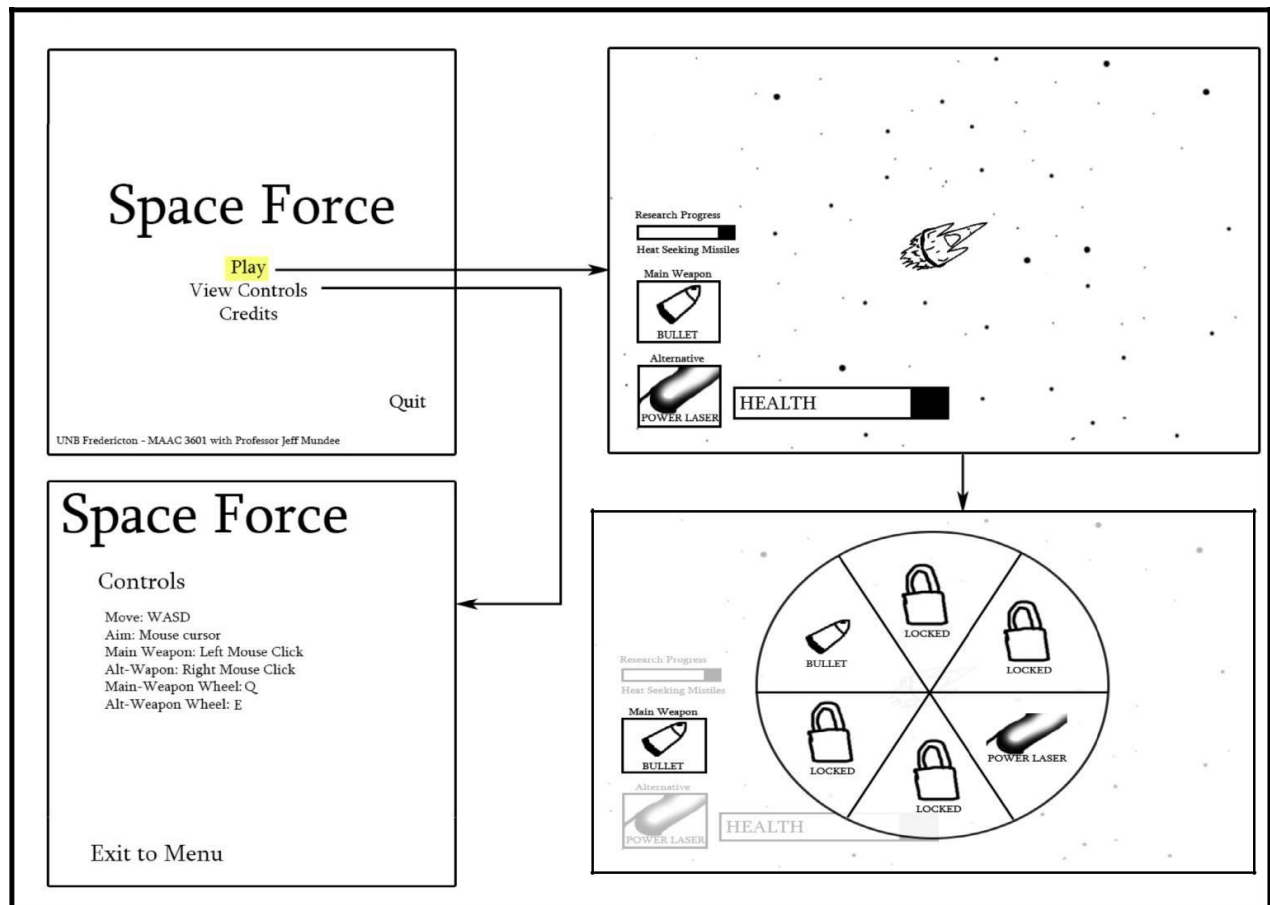
Controls

Move: WASD

- Applies movement in the given direction

Aim: Mouse Cursor

- Moving the cursor to the desired location will aim the weapon on the player's ship towards the cursor

Main Weapon: Left Mouse Click

- Will fire the main weapon attached to the main weapon slot
- Default: Bullet Gun

Alt-Weapon: Right Mouse Click

- Will fire the Alt-weapon attached to the alternative weapon slot
- Default: None

Main-Weapon Wheel: Q

- Hover over desired weapon and release Q to chose df

Alt-Weapon Wheel: E

- Hover over desired weapon and release E to choose

General Weapons

The general weapons are weapons which the enemies use against the player. They are unlocked through research tasks for player use as well. All guns will have to be tested during development to determine the correct amount of feedback needed. Feedback refers to the sounds, recoil, damage, knockback, speed of fired projectile, accuracy, and rate of fire of a weapon.

Bullet Gun

- The only weapon which the player starts with.
- Simple gun that fires slow projectiles that have 0 feedback other than a timid sound effect.
- Meant to be simple and underpowered to emphasize the increase in raw power the unlocked weapons are.
- Fires 100 rounds in an amount of times, then is reloaded for an amount of time.
- The player will be stuck in an area until they unlock the laser gun.


Laser Gun

- Fires continuously for an amount of time, then must recharge
- Fires similarly to the bullet gun, but in much stronger and shorter bursts.
- Introduces heavy weapon feedback.
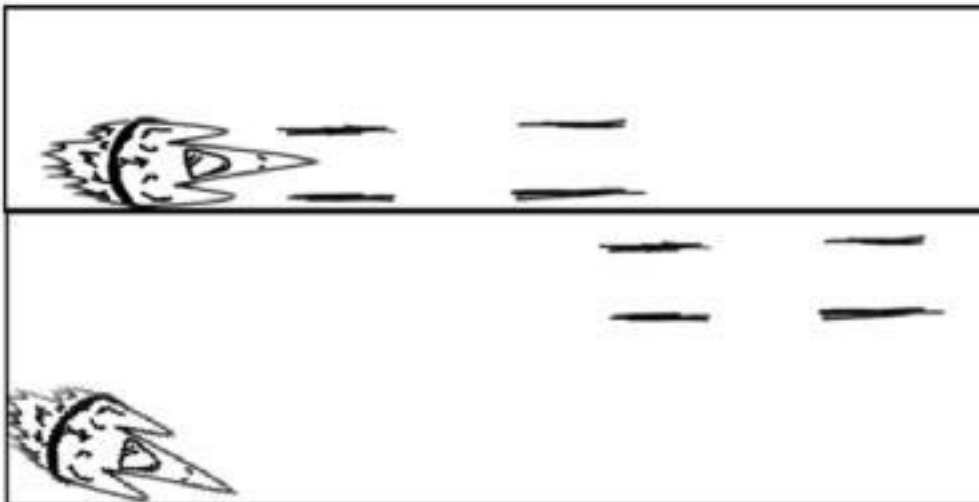
Heat Seeking Missile

- Fires straight for an amount of time, then activates and finds the player.
    - Shooting the missile as the player can result in it coming back to the player if they are the closest ship to the missile after it activates.
- Can be shot down.
    - Resulting explosion can damage enemies, but the player takes reduced damage.
- Deals splash damage.
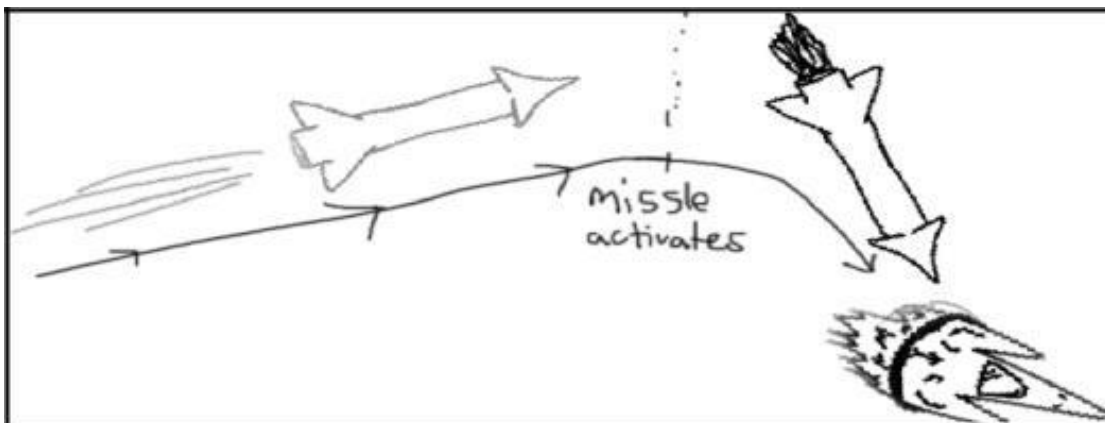
Power Laser

- Fires slow charge shots that are 10 times wider than normal shots
    - The player's shot will be only a fraction of this size
- Fires a continuous beam for an amount of time
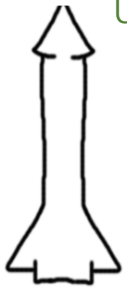- High Damage, low recharge rate
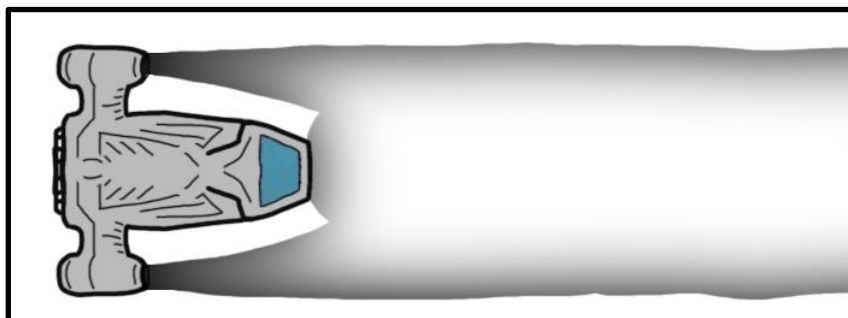
Enemies

There are no definite health or damage decisions made for the enemies. These must come purely from QA to properly balance the game into a proper difficulty curve.
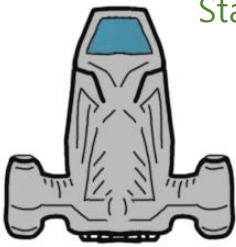
Standard Fighters

- Fly to the player, then circles them
- Has a delayed reaction to the player accelerating
- Uses a random general weapon

Unmanned Rocket

- Flies to the player using normal movement mechanics
- Explodes after a timer or a direct hit to the player
- Deals splash damage, the close the rocket is to the player, the more damage that will be dealt

Super Ship

- Standard Fighter that's about 3 times larger than regular ships
- Uses a Power Laser, but doesn't move, just spins in place

Resources

Resource Meteor

- Resources can be obtained from slow moving meteors by shooting them until they are destroyed.
- Will have stages of damage dealt to it visibly determined by sprites.

Ammunition

- Limited only for Heat Seeking Missiles and bullets
    - Must be made by collecting enough resources from enemies
    - Enemies can drop ammo which can be picked up and used immediately.
    - Ammo for locked weapons will drop but cannot be picked up.
- Laser weapons are on a recharge meter which will be displayed on the gameplay UI.

LAZER CHARGE

AMMO
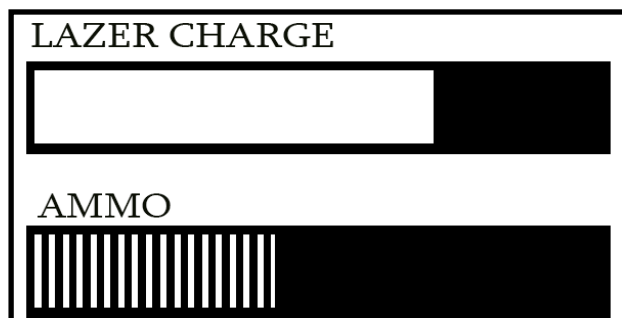
Health

- Health can be dropped from destroyed enemies at random.
    - Will need to be a small restore and low frequency.
- Health can be dropped from resource meteors.

Level Design

To simplify this project significantly, the level design will consist of a single room in which the player must fight within. This room will be large and may grow as the player progresses through the levels. Enemies come in waves with the difficulty determined by the current level. There will only ever be one wave of enemies per level. The player will have the reward of increasing their otherwise hidden stats such as speed, rate of fire, rate of recharge, and handling for completing a level.

Enemies will appear far away from the player's view at random. There are several things which will increase with every level passed:

- The variety of general weapons used
- The number of enemies that appear
- The types of enemies that appear
- The enemy's speed, damage, and accuracy

Cut Content

Not everything from the previous document made it to this one. This is because the scope of the documented was way more than what is cared to be implemented by the development team. The cut content includes:

- Bombs (Weapon)
- Proximity Arc (Weapon)
- Tractor Pilots (Enemy)
- Drain Wavers (Enemy)

Control Diagram