04.06.2023

[REDACTED]

Home Fudge

A game inspired by Homeworld and Space Engineers

Goal of the Prototype

The basic idea of the Game Prototype is to have a Destroyer equipped with:

- One Gatling Turret for PD
- Two missile launchers
- Two beam weapons

The ideal case for the Game Prototype would be to have two Destroyers in a battle with each other using Fudge's Network ability for two players and an AI variant of the battle. The worst-case scenario is to have the Gatling Turret player-controlled to destroy incoming asteroids. This Prototype will look into Fudges Performance and capabilities. There will be many Vector3 Calculations for Bullets, Aiming and Movement. This will decide how many moving Objects are rendered on the scene.

Basic Gameplay

Key binds

Movement:

- W Pitch Down
- S Pitch Up
- A Yaw Left
- D Yaw Right
- Shift Forwards Thrust
- Ctrl Backwards Thrust

- Alt Switch Movement Mode

- W Forwards Thrust
- S Backwards Thrust
- A Left Strafe Thrust
- D Right Strafe Thrust

Weapons:

- 1 Gatling Turret
- 2 Beam Laser
- 3 Rocket Pod
- Left Mouse Fire
- Right Mouse Aim lock (Gatling)

Debug:

Gameplay flow

Bronze Prototype for the worst-case scenario. Asteroids will be randomly spawn around the Player ship. With a random Wight to how many small-, more medium- and some large- asteroids spawned. The Spawn rate of asteroids will increase exponential over time. Large Asteroids brake up to one or tree small Asteroids.

Gold Prototype for the best-case scenario.

Stats

Weapons:

1. Gatling Turret
    a. Turn Speed = [REDACTED]
    b. Reload Time = 1.5 Seconds
    c. Fire Rate = 8 rpm
    d. Magazine Capacity = 30 Rounds
    e. Bullet Velocity = 800 m/s
    f. Damage = [REDACTED] per Bullet
    g. Range = 4.8 Kilometres

2. Laser Beams
    a. Reload Time = 3 Seconds
    b. Beam Time = 2 Seconds
    c. Beam Range = 1 Kilometres
    d. Damage = [REDACTED] per seconds

3. Rocket Pods
    a. [REDACTED]
    b. [REDACTED]
    c. [REDACTED]

Ships:

1. Destroyer
    a. Health = 1000 HP
    b. Thruster Strength = 400 m/s
    c. Maximum Speed = 500 m/s
    d. Turn Acceleration = 10 rad/2
    e. Turn Speed = 1 rad/s
    f. Mass = [REDACTED] Tons
2. [REDACTED]
    a. [REDACTED]
    b. [REDACTED]
    c. [REDACTED]

Asteroids:

1. Large Asteroid
    a. Health = [REDACTED]
    b. Maximum Speed = [REDACTED]
2. Medium Asteroid
    a. Health = [REDACTED]
    b. Maximum Speed = [REDACTED]
3. Small Asteroid
    a. Health = [REDACTED]
    b. Maximum Speed = [REDACTED]