# DESIGN DOCUMENT

COM4050-N Rapid Application Development

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## Concept

EvoSky is a top-down twin stick shooter [1], where the aim of the game is to destroy the enemy's Mothership [6.1]. Shooting down smaller ships [6.2], with your bullets [3.1] and special missiles [3.2] which seek out enemy ships, grants scrap [3.3] which can then be used to level up, upgrade [5] your ship through the upgrade tree [5.1] and give access to better weapons and armour. However, this all comes at the cost of an increased ship size making the player an easier target. You can dodge enemy missiles in two different ways; on the spot by doing a backflip [4.4] or by rolling to a chosen side [4.3] Gathering pickups [5.2], which last a short amount of time, can aid you to defeat the enemy army. Once a certain number of ships of each level are killed the mothership [6.1] will appear.

## Core Mechanics

Any of these mechanics that can be controlled by the user will have a button associated with them. The AI player will have a set of algorithms that determine when each action is performed.

1. Move about the environment using the left analogue stick
2. Boost with the X button
   2.1. Provides invulnerability for the duration of the boost
   2.2. Smashing through enemies doing massive damage
3. Shooting
   3.1. Fire primary(Bullets) using the Right analogue stick
      3.1.1. Fires in a straight line
      3.1.2. Fires a burst of a set number
   3.2. Fire secondary(Missiles) using the B button
      3.2.1. Selects a target and fires towards it
      3.2.2. Heat-seaking style
         3.2.2.1. Selects a target from a range in front of the player
   3.3. Gain scrap on kill
      3.3.1. Used for upgrades
4. Dodge
   4.1. Has a cool-down
   4.2. Use to avoid missiles when they are within a certain range
   4.3. Barrel roll using the trigger buttons (LT or RT)
      4.3.1. Moves to a chosen side
         4.3.1.1. LT for left
         4.3.1.2. RT for right

4.4. Flip using either of the bumper buttons (LB or RB)
   4.4.1. On the spot
5. Upgrades
   5.1. Makes the player bigger & move faster
   5.2. Open the passive upgrade tree using the BACK button
      5.2.1. Pauses the game while the player chooses and applies their upgrade points
         5.2.1.1. Resumes when the player has no upgrade points left to spend
      5.2.2. Bullet upgrades
         5.2.2.1. Beam weapon
         5.2.2.2. Fire more bullets
         5.2.2.3. Longer fire time
      5.2.3. Missile upgrades
         5.2.3.1. Cant dodge
         5.2.3.2. More
            5.2.3.2.1. Multitarget
         5.2.3.3. Scatter
            5.2.3.3.1. Fires one that breaks into 3
      5.2.4. Ship Upgrades
         5.2.4.1. Speed
         5.2.4.2. Armour
   5.3. Pickups
      5.3.1. Active for a duration
      5.3.2. Cannot have more than one at a time

## Visual Style

The main visual inspiration for EvoSky comes from the popular table top game from Games Workshop: Battlefleet Gothic. Which revolves around an army of space-battleships designed in a gothic style. Battlefleet Gothic is set in space in the year 40,000.
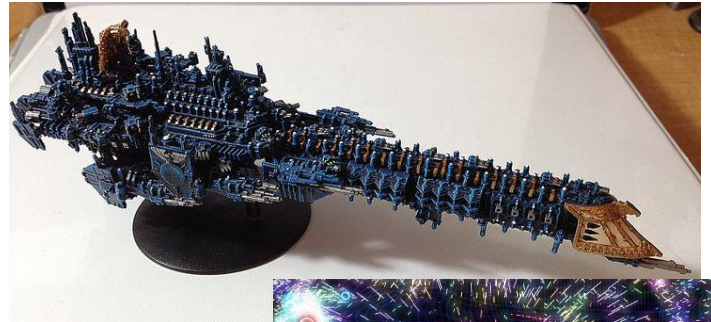
## Comparative products

The two main stimuli for the gameplay come in the form of; Lucid Games' Geometry Wars, a 'bullet-hell' top down twin stick shooter with heavy focuses on bright colours and dark backgrounds, and the StarFox series of games from Platinum games and Nintendo which focuses on large environments traversed in a 2nd person camera style.

## User Stories

These 'stories' are based on the assumption that the player has installed the game correctly and that the game is running and the player has moved through the menus and is in the actual gameplay.

- The player can move using the Analogue stick
- The player can fire projectiles, using the right analogue stick and A button, if they are not on cool-down
- If the player has boost, the player can boost using the X button
- The player can roll dodge, using the trigger buttons, if it is not on cool-down
- The player can flip dodge using the bumper/shoulder buttons, if it is not on cool-down
- The player can open the upgrade screen using the back button, if the player has upgrade points to spend
- The player can apply upgrades from the upgrade screen, if the player has upgrade points
- The player can activate a single pickup by moving over it

## AI stories

- The AI can Change its playstyle
- The AI can chase the player
- The AI can move away from the player
- The Ai can move in a random direction
- The AI can shoot at the player if it is close enough and not on cool-down
- The AI can dodge the player's missiles if it is high enough level
- The AI can boost into the player if it has boost available
- The AI can randomise its upgrades for a given level