Game Design and Development Plan

# Section A: Game Design

We have been tasked with designing and creating a resource management game with the aim of monitoring and investigating how ownership affects human behaviour.

My proposition is to make the game in space, with players starting off on a “home world” with a number of colonist ships. The players will use the ships to travel and colonise planets or in the generated universe, each planet will produce a different amounts of different resources.

Players will start in a corner of the map and gradually move out from their home planet colonising planets as their ships fan out occupying planets as they go. Only when a ship is on a planet will it collect the resources there eventually moving on to the next when the resources are used up.

I propose using two different ship types, one a colony/resource ships which collect and extra amount of resources from a planet or collect it quicker but is relatively weak and a soldier ship that can deal extra damage in an attack or has more health but it collects resources slower.

I propose using 3 different resources like minerals, fuel and anti-matter. The rarity and amount of said resource would be up to the experiment runner to set within the customizable maps, however each map would have a standard set up with anti-matter being rarer than the others.

If 2 player’s ships meet on a planet then a dialog between them will be produced eg. Talk, attack or run. Depending on both players actions a number of different scenarios can occur for example:

If both players talk then they would exchange a message or even open a chat between them.

If both players attack then they will each take damage.

If both players flee then they will each leave the planet.

If one player talks and the other attacks the player who talked will take damage.

If one player attacks and the other flees then the attack will miss and the fleeing player will leave the planet with the other player occupying it.

If one player talks and the other flees then the talking player will remain to occupy the planet.

A trading option could also be implemented so that players can trade with each other, trading unneeded resources for ones they do need.

For a player to win they must either destroy all other players ships or reach a threshold value of resources to be able to build an “ftl (faster than light) drive” first.

As put across in the brief and meeting there are 2 different versions of multiplayer intended on one hand is a one on one type gameplay where it is player vs player or player vs ai, and on the other hand is a version with multiple players and ai against each other each with a separate home world and ships or possibly a version where only players have a home world and the ai are roaming ships who move around the universe randomly and interact with other ships randomly.

The customer also expressed a need for customisation in not only each players avatar but in aspects of the game that effect the players behaviour eg. Changing the amount of resources a planet produces or the starting variables of the players like number of ships they start with. As such this would be made easier by having a set map for each scenario meaning you could change everything in the maps rather easy as this would be done either in game when setting up a match or could be done using a text file outside of the program that is associated with the given map. The same process could be used for editing a lot of other things as well such as the ships health or resource collection speed using a text file to be loaded when the game is started.

The customer also wanted as much data as possible referring to the player’s actions and such. To do this every relevant action will be recorded to a log based text file.

The customer express a number of needs and functions that the program has to do and I feel that my design fills these needs. The need for territory and resource management is fulfilled by the planets and ships as players will only be able to harvest from a set number of places meaning they will have to manage where they put their ships depending on what resources they need. The interaction between players, consequences and territorial invasion is fulfilled as that players can still interact with each other if they both have a ship on the same planet with different ships providing different benefits. The customisation options will be met by allowing players to customise their avatar before they start eg. Look, gender or clothes but also allowing the person running and monitoring the experiment will be able to change the environments variables using a text file.

# Section B: Business Plan

Games artists/designers cost around £15 - £30 per hour

Sound designers/producers cost around £15 - £50 per hour depending on experience and such.

Game developers/programmers cost around £6 - £30 per hour

Peopleperhour.com

Looking at the market for territorial and resource management there are quite a lot of games that would fit this genre however they do it a lot of different ways, as such the territorial and resource management genre is an extremely wide with many different niches across numerous games.

One of the biggest examples that is relatively similar to our brief is the Civilisation series. I will be concentrating on comparing with not the most recent version but CIV 5, arguably the most well received iteration. Players start with a settler and found a city wherever on the map they like, from there the players work to build up their cities by claiming resources within their expanding territory which gradually grows as their city does. There is a number of ways to win a game but it usually comes down to who has the most resources to build better defences, a better army etc. CIV 5 also has extensive player to player/ai interactions as you can trade, make treaties and spy on each other. As such I would say that if you stripped down CIV 5 to its bare bones it would be very similar to our plan however as it is a AAA game it can be expected to be more expansive and refined than ours will be but at the lowest level they could be seen as similar, CIV 5 has just been expanded profusely. However at a lower level of game there are very few games that are similar to ours when not looking at the research objectives, this means there is a gap in the market for a lower level version of this kind of game as such if the game was put to the market it could either do relatively well as an accepted lower level version or could be harshly compared to the higher level versions like CIV 5, because of this the game would need to be extremely refined and bug free.

To maximise the games revenue we could do a few things, one could be adding a purely single player mode where the players plays against just ai, using a level system the players would progress as they defeat each scenario, to aid this and the moniterization you could have in-app purchases of different boosts, these could take a number of paths for example one could make it so that you start with extra resources at the start of the match, another could boost the resource collection rate of all the players ships or their health/damage. However this would not be viable for the multiplayer aspect as the players who had paid for boosts would have an unfair advantage against players who hasn’t, games that add a pay-to-win option in this way are often hit with a lot of backlash from players who will often leave a bad review because of it and can lead to a game flopping because unless they have a lot of money a player will usually steer clear of a game that is reported as being pay-to-win, severely affecting the games revenue.

Our team is comprised of 6 people encompassing all roles and we have 400 hours to complete the project, I would split the group to accommodate all jobs required to complete the project as such I would recommend having 3 game programmers, 1 game artists and 1 sound developer and 1 game designer. I have gone with this composition as the most important thing for the project to succeed is for there to be a working game at the end of the 400hrs thus I have placed the most importance upon the programming side therefor having more people assigned to this as there is also be more of a time constraint than the others as the programming should go from start to finish. The others I have placed with less importance as these don’t have as much of an effect on active programming as placeholders can be used until each person is finished with their tasks and in my opinion doesn’t have to be as good of a standard as the programming.