

Project Request Specification

Written by Peter Mitchell (mitc0271) and reviewed by prospective team members prior to request submission.

1 Foreword

Please consider this document a work in progress. The scope may still be subject to change if there are necessary changes desired by you or by ourselves based on what we believe is achievable. Please at minimum read to the end of the section titled important information. The additional information included is a continued outline showing more expansively what we wish to set out to accomplish as a set of high level requirements and an initial overview of races and the ships that could be expected based on their appearance in the show. We look forward to hearing your thoughts on our project and hope it will be acceptable.

If you have additional queries or would like to organise a meeting to discuss this further please contact the project leader: Peter Mitchell at mitc0271@flinders.edu.au.

2 Project Name

Stargate: Galaxy

3 Project Members

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Phil Lavender (Bachelor of Computer Science)

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4 Project Abstract

Stargate: Galaxy is a game set within the Stargate universe. The game puts the player in control of a marine from the forces of Earth. The setting is based on that of the TV series Stargate. The player may encounter races in particular from the forces of the Goa'uld (a many factioned race of rival warlords), the Asgard, Replicators, in addition to others. The objective of the game is to explore the unknown galaxies meeting the many unknown races, exploring their worlds while under the pressure of the aggressive Goa'uld and vicious Replicator armies. Players will find information or parts during their travels that will increase their capacity to repel the enemy.

The player may set foot through the stargate and travel to many thousands of other worlds that populate the galaxy or by using ships that have been constructed by Earth or scavenged from other races. While travelling to other worlds or particularly while in space, enemy races may attack or you find alliances could be formed. These allies may assist you with trade, technology, assistance in the war with the goa'uld or replicators and potentially much more. The player must assist Earth in its quest to fight the hostile forces that seek to destroy them or risk the falling to the Goa'uld or other unknown enemy forces.

5 Project Scope

Due to the inherent large scope as dictated by the abstract detailed above, we have decided to focus on particular aspects of the game. More specific dot points may be found under the project requirements section; but, the core aspects at a very high level that will be developed in this project are:

- Space combat
 - Including more detailed ship management with hull breaches, air management, power management and other ship related activities/issues.
- Transportation to and from pre-created worlds. Facilitated by Ship or Stargate transport.
 - Including the acquiring of technology and learning of more Stargates that may be found out in the unknown galaxy beyond. Only a few pre-created partial worlds may be included to give the feel of the potential of the full scale game.
- Artificial intelligence that is capable of making strategic and diplomatic decisions.

Important exclusions and boundaries for the project are to include:

- Ground combat will not be implemented nor the artificial intelligence for simulating such.
- Graphical elements like the ships will be more detailed, but ground based elements will be less detailed dependent on time as we have one person working on modelling and graphics.
- Races included will be few: at minimum forces of Earth and various factions of the Goa'uld. Time permitting forces of the Asgard, Replicators, and some of the other races seen in the Stargate TV show.
- Only ships and building structures of some the races shall be included except for perhaps 1-2 humanoid models for the player to control when traversing ground.
- Support for multiplayer could later be implemented but will not be included within this project.
- Any worlds created will be pre-designed and not randomly generated as they might be in the larger scope of the overall game.

6 Important Information

Expected development platform will be Windows. Due to the nature of the project we have decided a game engine may be required or more extensive libraries. The primary option that is being explored currently is the Unity game engine that uses C#, or a game engine library such as JMoneyEngine that is a Java library.

We are aware that the use of Stargate and the related asset names and ideas for the underlying basis of the game may be considered incorrect. We have located the following exert:

Copyright Disclaimer Under Section 107 of the Copyright Act 1976, allowance is made for "fair use" for purposes such as criticism, comment, news reporting, teaching, scholarship, and research. Fair use is a use permitted by copyright statute that might otherwise be infringing. Non-profit, educational or personal use tips the balance in favor of fair use.

We are wondering if this can be applied to our project as the content is:

- in use for teaching and research of material as an assisting element
- is non-profit
- is for educational purposes
- will not be continued outside of university after the project completion

That is unless it is decided that we contact the copyright owner (MGM is the copyright holder) to continue the project. We would be willing to attempt contacting the copyright holder to use the idea with permission for the purposes of this project. If at all that would be non-preferable, as it can't be expected what time frame they will reply within.

The alternative to all of this is that we alter the name, and other related copyright elements and use the same relative idea structure. The names of elements and some portions of the Stargate show are what shall be appearing and the races. These if necessary may be changed and we can develop our own basic races that will likely have similar sorts of styles.

7 High Level Requirements

These requirements define what is in our scope including some boundaries on what we would like to do. This is the primary list of what would be desired for this project. In the ongoing documentation created during the project this list shall be expanded to make it more specific and defined.

- A space environment that includes:
 - A feeling of enormity (planets, ships, and other objects should have a relative size)
 - Thousands of planets that are each uniquely reference able with a gate address for those that may be travelled to with a stargate. The reference address for planets may be used as their name by default in your own view (English translation from gate symbols – or may be renamed so you can find planets in your list that you wish to visit again more easily)
 - Random encounters involving potentially many factions of enemies.
 - Enemy bases that are more heavily defended. (May include defence satellites)
 - Planets may require an initial random texture system.
 - Random generation of planet locations based off of sections that are dedicated to factions. Planets may have a random texture map that includes highlighting to allow for random colour schemes. This would affect the planet surface.
 - Elements such as asteroids may be included for artistic effect.
 - Crashing into planets should be possible.
- Ships should include the following general properties:
 - Ability to manually handle advanced ship functionality including:
 - Shield Management (multiple shield points)
 - Weapon Management (multiple weapons and different types)
 - Life support
 - Prevention of venting atmosphere when a hull breach occurs.
 - Power Management
 - Power given to a set of tools will increase the amount that may be done with that set of tools. (For example more power for weapons may boost damage) Too much in one area for an extended period of time may cause damage though to that component. Then requiring repair.
 - Communications/Sensors Management (includes weapon targeting)
 - Engine Management (including sublight and hyperdrive)
 - Repairs Management
 - Weapons/Shields/Hulls should have varying advantages and disadvantages against different types of shields.
 - Weapons should auto target the enemy while targeting a ship, but may miss, and will hit a particular shield region.
 - Standard ships will use a form of sublight to propel themselves through space (the normal form of movement). Most of the larger ships may also open a hyperspace window and jump between points in space by using the hyperspace window.
 - Ships may include drones – essentially smaller fighters. (This is something that will be implemented only if there is time).
 - Ships may contain means of transporting to planet surfaces and back again or may land on planet surfaces. (Landing for the purposes of this project will not involve the

- ship actually being on the ground – both landing and the transporting will be possible from a reasonable distance from a planet)
 - Only one ship may be controlled at a time, but you may have multiple ships in your collection and fly different ones out at a time.
 - Ship status modifiers for sections – eg, hull breach, replicators attacking. Deploying of soldiers to section. Affects the number of troops on ship. Bias for the crew of a ship to win. (deploying soldiers would be symbolic only and not animated or demonstrated other than through any diagrams showing ship control and breaches etc)
- Planet surface properties
 - Important Note: Planet surface is not an area that we will be focusing on due to time that will be available to us. Therefore expectations of this first person environment should be very limited.
 - Control a character from first person view.
 - Able to walk around the environment.
 - NPC characters on ground not included for the purpose of this project.
 - Collectible information (technology or other – eg, lists of nearby planets), or parts, potentially steal able ships.
 - Typically a stargate and dialing device of some sort will exist on planet surface.
 - Stargate should be useable to transport to other gates
 - A means of transporting to a ship that is nearby or docked to the planet.
 - Some buildings and other objects will be very rough in design – extremely low poly and low detail texture. Buildings are just to show that there would be buildings around and to fill space.
- Diplomacy (this is a largely time reliant section – **it may be decided that most of this will be out of scope**):
 - Some sort of diplomacy should be available.
 - Able to request:
 - Alliance
 - Cease Fire
 - Assistance against a target
 - Follow you to a battle
 - Able to force:
 - Breaking of an alliance
 - Disobey a cease fire condition
 - Declaration of war
 - Influence of battles and use of the above requests and forcing will alter the potential for good actions like an alliance request to be successful. Destroying enemies of an enemy while in a battle will potentially increase the likelihood that an “enemy” or neutral faction will listen to you.
- Trade (this is a largely time reliant section – **it may be decided that most of this will be out of scope**):
 - Elements of trade demonstrating trade for information, parts, or ships. For example allying with the Asgard and trading with them may allow you to have access to some of the Asgard weapons for the human vessels as seen in the TV series.
 - Trade is unlikely to be given a large number of elements if it is included.
 - Trading would influence diplomacy.

- Artificial Intelligence
 - As a prelude to this section:
 - A faction is defined to be a group that is a sub section of a race. The Goa'uld and Wraith for example are races, but there are many factions that are within them.
 - AI should include 3 layers:
 - Faction layer – for controlling diplomacy and the views of a faction as a whole.
 - Area combat layer – for ships to communicate that are in the same area and the same faction.
 - Individual Ship layer – for controlling the individual ships actions in a battle.
 - The AI should be capable of automatically managing the ships operations and ship management as the player would also need to.
 - The AI should be capable of determining when to enter or exit a battle.
 - The AI should be capable of determining when to accept, reject, or request for themselves an alliance or other diplomacy change between themselves as a faction or just within a battle.
 - The AI should be capable of calling in reinforcements if there are other ships within a certain range.
 - The AI should choose targets and use weapons appropriately depending on the enemy being engaged.

8 Outline of potential races and ships

The races and factions that are listed will be added based on whether there is time to create the relevant assets for the game. As each race requires planning for its base relationship with each race and the development of graphical assets they will be added as is possible. It may not be possible to include all of those that are listed.

Races: Asgard, Ori, Goa'uld (including factions and free jafa, Lucian alliance), Wraith, Humans, Replicators, Ancients.

Ships:

Asgard: Mothership, O'Neill-class vessel

Ori: Ori Mothership

Goa'uld: Ha'tak (a Goa'uld mothership), Anubis's flagship (a potential boss ship), Death gliders (only if we implement drones)

Wraith: Cruiser, Hive Ship, Super Hive ship, Dart (only if we implement drones)

Humans: Prometheus class (X-303), Daedalus-class battlecruiser (BC-304), fighter ships (X-301 and/or F-302 –but only if we implement drones)

Replicators: Replicator ship

Ancients: Destiny, Ancient Aurora-class battleship, City ship

Other: Defence satellite

Races with factions:

Other than the following two all the races are a single faction.

Goa'uld: Lucian Alliance, primary Goa'uld groups (eg, Baal), Free Jafa

Wraith: Many random multiple factions following larger ships with queens.