**Design Document for:**

Difficult circumstances.

## Philosophy

First serious attempt to properly plan and create a game. Previous attempts were largely for learning purposes, this game is an attempt to design and build something from the ground up.

This will be designed primarily for PC but with Android as a possibility.

## Concept

Turn based 4x strategy, with procedurally created maps and enemies. Focus around survival and construction with dynamically increasing difficulty.

Base building should be the primary focus to grow and expand, challenge should be in the balance between the growth of the settlement and finding a way to defend it. The environment would be the primary antagonist here. The aliens on the world are adapted to the environment and the player is not putting you at a constant disadvantage.

## Inspirations

Dwarf Fortress, procedural environment and enemy generation. AI and motivation for actors.

Stronghold/Dungeon Keeper, fortress building with a combination of static/dynamic defenders.

Rebuild, interesting balance between growth, sustainability and danger.

Civilization V, best implementation of the 4x formula simple enough to be constantly fun, complex enough to require work to master.

Battle for Wesnoth, unit persistence over levels and leveling power increase.

## Why create this game?

I really like 4x games and base building games. I think this could be a fun mix of genres and I think it is something that I can do solo.

## Setting

Alien planet. Allows us to get creative with environments and enemies and makes the survival concept innately ‘work’. Stranded on planet X, our hero needs to find a way to find survivors, enlist the natives and carve out a niche to survive bla bla bla. Also has a wide arc for tech development. Start with sticks and stones and end with plasma blasters for example.

## Player

Player creates an avatar and decides attribute spread (Dexterity, Strength, and Intelligence), avatar would start as sole playable character at start that would need to get more. Game does not give player direct control, the game plays more like an RTS where orders are given and the AI units do the orders based on their ‘jobs’. Initial avatar will try to do all jobs until more characters are recruited.

## Focus

Explore, exploit, expand and exterminate. With a lesser focus on exterminate and more on the expand and explore X’s.

## Difference

Game differs from most 4x games in the more random nature and the keener focus on base building and survival against ‘insurmountable’ odds. The player is never on even par and is playing more against the environment than specific players.

## Feature Set

## General Features

Large grid based map  
Randomized creatures  
Sprite graphics

## Gameplay

Turn based with certain attributes determining how much ‘work’ can be done per turn. For example a character with a very high strength may be able to chop more wood per turn than a character with low strength.

Gameplay takes form of indirect orders. For example: place a beacon to say go ‘here’ and any character with nothing to do at that moment will go there.

Combat is very simplistic animation wise, units just bump against each other but the results of combat are calculated from various metrics, attributes, physical properties, armor, weapons and environment all play a role.

With the focus on base building the player can build traps and tower defense like mazes to deal with dumber enemies.

Simplistic sprite based graphics that allow for Dwarf Fortress like creatures. Physical properties are just modifiers on entities so a mud monster can also be incorporeal to be able to walk through most surfaces but still keep the same sprite but with a changed alpha channel. More emphasis should be on adding systems than on adding pretty graphics.

Robust AI, all characters should behave ‘appropriately’. A flame demon should try to avoid water, a blob should avoid spiky objects etc.

Each character should have some importance, like in Dwarf Fortress if you lose you grand master mason this should be a big deal.

# The Game World

## Overview

Alien world. Should be procedurally generated but with an emphasis on ‘strange’, purple trees, gaping holes in the ground red oceans etc.

The environment should feel hostile to the player so viscous (but fairly non-lethal) critters should be commonplace.

Extreme weather conditions should also pose a risk to the player like snow in one location and a scorching desert a few screens further.

Day/night cycles could bring in some large temperature swings or allow certain creatures to become active.

Time passing should in some way impact the world, like trees growing, monsters becoming more/less restless.

# Game Engine

## Rendering

A custom 2D grid based sprite rendering engine will be used based on the earlier work done with contingency.

## Camera

Camera is fixed to a certain ‘screen’. Can be moved with arrow keys and moving the mouse to the edge of the screen. Fixed rotation.

## Game Engine

Built from the ground up with using MVC pattern. The goal is to keep the UI and the data behind completely decoupled to allow for faster work without having to work on a lot of art assets at first. The UI and sprites can be easily updated later.

Game engine to be designed as a generic model for potential future games. Abstraction and ease of use should be primary factors in the design.

## User Interface

## Overview