# Population Unknown Game Design Document

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   1. Levels. Each level should include a synopsis, the required introductory material (and how it is provided), the objectives, and the details of what happens in the level. Depending on the game, this may include the physical description of the map, the critical path that the player needs to take, and what encounters are important or incidental.
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10. *Title*
    * 1. Game Name: Population Unknown
11. *Game Overview*
    1. *Game Concept*

An Open World Adventure. Humans, having made Earth uninhabitable, voyage to a new world and encounter a new sentient species, new eco-systems, and attempt to collaborate and thrive. The Player will exist in a politically changing world, facing volatile conflict and resolution. A realistic, visceral experience putting the Player in a dirty, adult, changeable world that gives them the freedom to explore and make decision that effect not only their Species but the entire stability of the region.

* 1. *Genre*

Science Fiction Adventure. Open World. Adventure. First/Third Person.

* 1. *Target Audience*

18-30 Year olds, non-gender specific. Adult themes and content. Foul Language, Nudity, Sex, Torture, Violence.

* 1. *Game Flow Summary – How does the player move through the game. Both through* *framing interface and the game itself.*

The framing interface is a minimalistic as possible first/third person (Player controllable) HUD with accessible menu system through a PDA Tablet that allows access to Inventory and Game Settings etc. As for physical movement, most of the Players travelling will be on foot. As the game progresses other modes of transport may be made available including Horse/Kha-Rax equivalent mount, Motorcycle, and Helicopter. Quick-Travel may be considered once locations have been found for the first time.

* 1. *Look and Feel – What is the basic look and feel of the game? What is the visual style?*

Human locations and equipment will be near-future modern, with the colony living out of the wreckage of the ship that crash lands on the planet and slowly spreading outwards as they settle. Kha-Rax technology is the Human equivalent of Medieval, they are not an advanced civilization, and everything is used, dirty, improvised.

1. *Gameplay and Mechanics*
   1. *Gameplay*
      1. *Game Progression*

The progression of the game will be through the Main Storyline; a linear plotline that leads from the Tutorial to the Crash and then from the Crash to the Conclusion of the Game (Being the stability of the region and integration of the Humans into Kha-Rax society), all side-quests should be wherever possible non-dependent on the Main Storyline, with completion available at any time throughout and after the Main Storyline is completed. After completion of the Main Storyline, there is no end. There should be suitable options and side-quests to facilitate as close to indefinite play as possible.

* + 1. *Mission/challenge Structure*

**Main Story:** A scripted succession of missions that link an over-arching storyline through the game. That gradually introduces the Player into the socio-political world of two very different species interacting whilst simultaneously going through Leadership changes and cultural exchanges. The ultimate aim of which is to create a harmonious integrated co-existence

**Faction Missions:** Shorter Storylines for specific Groups e.g. Hunting Animal Pelts for the Hunters Association, Foraging for berries, plants, and animal parts for the Medicinal Herbalist Group, or Working for the City Guard.

**Side-Quests:** Single stand-alone missions for NPCs e.g. “Deliver this for me.”, “Can you find X”, “Speak to A to learn X”.

**Personal Goals:** The Player will be able to set up a home both in the Human Camp and in the Kha-Rax city, have a home-life, marriage, children etc.

* + 1. *Puzzle Structure*

**Lock picking:** Lock picking is achieved through activating the locked object using the “Use” Key (door/chest etc). There will be two types of locks to pick; modern computerized locks used by the Humans, which are manipulated through the PDA being plugged into a socket on the lock and attempting to run a “Connection” through a maze on a circuit board before the Lock realizes it’s being hacked (Time Limit). The other type is an older five pin style lock used by the Kha-Rax, which is manipulated by using two metal tools to depress the pins and turn the barrel.

* + 1. *Objectives – What are the objectives of the game?*

With the exception of the Main Story quest line, the player can make their own objectives. They can have a quiet life, go cave diving, hunting, fishing, procuring plants etc, or they can simply follow the story and bring harmony to the two tribes.

* + 1. *Play Flow – How does the game flow for the game player*

Commencing with ‘Character Creation’ in the style of an application form for ‘The Corp’, the player selects their Gender, appearance, and basic statistics, upon creation of the character, there will be a basic movement tutorial level on Earth, in the guise of a basic fitness exam through an assault course, that allows the player to see how environmentally devastated and uninhabitable Earth has become. There will then be a multiple choice style “exam” sat at a desk in a classroom with other applicants that will select some ‘mental attributes’ for the player. There will then be a cutscene that shows the player being accepted and given a uniform, then flown on a shuttle ride up to the Spaceship (allowing the player some beautiful space shots) This should also be used to mask the loading of the next Tutorial section. The player is positioned in the Security Crew and undergoes ‘Weapons handling training’ in the Security Firing Range. Teaching the player how to aim, shoot, reload etc. As well as firing down range with live ammunition, the player will get to shoot another security team member in full riot gear with a Tazer and a Beanbag shotgun. Once complete it will load onto the first major cutscene and level that follows the book. More to be shared at a later point. After the crash on the new world of Gliese 581g, with the exception of a couple of scripted events, the world will become completely free-roam allowing the player to set the pace and flow of the game.

* 1. *Mechanics – What are the rules to the game, both implicit and explicit? This is the model of the universe that the game works under. How do all the pieces interact?*
     1. *Physics – How does the physical universe work?*

Gravity is 1.4G, it is a habitable world like Earth, and all the standard realistic laws of physics apply.

* + 1. *Movement in the game*

‘WSAD’ will provide Front, Back, Strafe Left, and Strafe Right functionality, whilst the mouse will control Orientation. ‘SPACE’ for jump, ‘Ctrl’ for Crouch.

* + 1. *Objects – how to pick them up and move them*

A press and release of the ‘E’ key will be the interact button, this will allow players to pick up objects and add them to their inventory. Pressing and holding the ‘E’ key will make the object hover and allow the player to move using the WSAD keys and Mouse whilst holding the object. Releasing the ‘E’ key will drop the object.

* + 1. *Actions, including whatever switches and buttons are used, interacting with objects, and what means of communication are used*

The ‘E’ key will be the ‘Interact’ button, this will open doors / windows / chests etc. As well as activating objects e.g. open a dead animal, activate a forge etc.

Communication will be initiated either by the Player interacting with an NPC using the ‘E’ key, or by an NPC initiating an interaction through script. Conversation will be handled through a scripted dialogue selection giving various options to the player at the side of screen in the bottom right hand corner through a GUI. Selection can be handled by the Cursor Pointer or through ‘W’ and ‘S’ to scroll up and down the selections and by pressing ‘E’ to select the highlighted option.

* + 1. *Combat – If there is combat or even conflict, how is this specifically modeled?*

First/Third Person Combat using a variety of weapons. There will be unarmed hand to hand combat. Melee combat using Swords (Long, Short, and Great), Spears (Throwable Javelins and Pikes), Shields (Riot and Wooden), and Batons. Ranged combat using Firearms, Less lethal Weapons (e.g. Tazer, Beanbag shotgun), bow and arrows, and crossbows.

‘Left Mouse’ clicked will give a fast low powered swing, or a quick throw. ‘Left Mouse’ clicked and held will produce a slow but powerful strike when using hands or melee, it will also throw objects further and increase drawstring tension. ‘Left Mouse’ will fire firearms and crossbows whilst ‘Right Mouse’ will bring the weapon up from the hip, up to the eyes to aim down sight. ‘Right Mouse’ will also bring up the shield into a raised position.

* + 1. *Economy – What is the economy of the game? How does it work?*

The Kha-Rax use coinage made of metal, the Humans have no currency at the start of the game, the player is equipped from the ‘Stores’ of the wreckage. Later the Humans adopt the same coinage as the Kha-Rax.

* + 1. *Screen Flow -- A graphical description of how each screen is related to every other and a description of the purpose of each screen.*

TBC

* 1. *Game Options – What are the options and how do they affect game play and mechanics?*

Standard audio, video, and control options with the ability to redefine keyboard and mouse controls. Game controller support optional but a bonus if doable. Standard easy, medium, hard difficulty settings which should impact on multiplier coding, in so far as how much damage the player deals and takes with each attack given or taken. As well as altering AI response times and aggressiveness of their behavior (likelihood to retreat or be tactical).

* 1. *Replaying and Saving*

The player should be able to Save their game at any point of their choosing, and able to reload at any time. Autosaving would be preferable when entering buildings or towns, with an option for time-based intervals e.g. every 15 minutes.

* 1. *Cheats and Easter Eggs*

TBC

1. *Story, Setting and Character* 
   1. *Story and Narrative – Includes back story, plot elements, game progression, and cut scenes. Cut scenes descriptions include the actors, the setting, and the storyboard or script.*

TBC once the book is released in Q1 2016.

* 1. *Game World*
     1. *General look and feel of world*

High realism temperate biome with a scorching un-survivable desert to the west, and a freezing un-survivable ice cap to the east. The Planet is tidally locked to it’s sun, so one side permanently faces towards it (the desert) and the other side permanently in shadow (the Ice Cap). The VERY edges of each biome should be accessible for a few specialist biome specific items e.g. plants, animals, or minerals. Gliese is a Red Dwarf, so the world should be in an orange perpetual sunset during the day, and black during the night. Planetary Libration causes the day/night cycle. 2 seconds of real time, for 1 minute of game time. So 24 hours game time is 48 minutes in real-time. 24 minutes of daytime, 24 minutes of nighttime.

* + 1. *Areas, including the general description and physical characteristics as well as how it relates to the rest of the world.*

Earth ‘The Corp’ Facility

Earth Orbit – The Shuttle / The Ship

Space – The Ship

Gliese – Crash Site

Gliese – First Human Settlement

Gliese – Second Human Settlement

Gliese – The Great Forest

Gliese – Kha-Rax Capital

Gliese – Kha-Rax Capital under extension

Gliese – Kha-Rax Capital Extended.

Gliese – Minor Kha-Rax towns 4-6

Gliese – Desert’s Edge (Western Edge)

Gliese – Ice Cap’s Edge (Eastern Edge)

Gliese – The Golden Lake

Gliese – Various Rivers and Lakes

Gliese – The Continetal Ocean (Northern Edge)

Gliese – The Impassable Mountains (Southern Edge)

* 1. *Characters. Each character should include the back story, personality, appearance, animations, abilities, relevance to the story and relationship to other characters*

Full List TBC once the book is released in Q1 2016.

Sam Salisbury – Captain of Security

Henry McCleod - Admiral

Khalista - \*Spoiler\* TBC

Kali-Kat - \*Spoiler\* TBC

1. *Levels*
   1. *Levels. Each level should include a synopsis, the required introductory material (and how it is provided), the objectives, and the details of what happens in the level. Depending on the game, this may include the physical description of the map, the critical path that the player needs to take, and what encounters are important or incidental.*

See 3.1.5. For more Information. More will be provided here at a later date.

* 1. *Training Level*

See 3.1.5. For more Information.

1. *Interface*
   1. *Visual System. If you have a HUD, what is on it? What menus are you displaying? What is the camera model?*

All HUD info should appear only when required, e.g. If injured and health drops, the health bar shall appear and show the condequence of the hit as well as the edges of the screen going red.

**Crosshair** – Four white dots with a black outline marking an invisible + in the Centre of Screen

**Health Bar** – Red – Bottom Centre of screen.

**Stamina Bar** – Yellow – Bottom Left corner of the screen

**Ammo Count** – White Text with Black Outline - Bottom Right Corner of the screen.

**Interaction Context Menu** – Appears with the crosshair when the player is able to interact with an item e.g. Door, chest etc. With a notation informing the Player of the action possible (Open, Pick up etc.)

* 1. *Control System – How does the game player control the game? What are the specific commands?*

See 3.2.2. – 3.2.5. For more Information. But the short version is WSAD, E, Ctrl, Mouse movement and Mouse Buttons for 99% of all actions and menu interaction. There will be other commands like ‘M’ for Map and ‘K’ for Compass etc.

* 1. *Audio, music, sound effects*

All sound effects and voice acting are to be kept as realistic as possible. Music will be instrumental and should complement the mood of the game (e.g. Combat, exploring, in a city or town, action sequence etc.)

* 1. *Help System*

Ideally a Game-specific Wiki should be created as well as an FAQ and support forum on the Official Website.

1. *Artificial Intelligence*
   1. *Opponent and Enemy AI – The active opponent that plays against the game player and therefore requires strategic decision making*

TBC – This requires input from Coding Team

* 1. *Non-combat and Friendly Characters*

TBC – This requires input from Coding Team

* 1. *Support AI -- Player and Collision Detection, Pathfinding*

TBC – This requires input from Coding Team

1. *Technical* 
   1. *Target Hardware*

Low end Hardware will try to be accommodated for, but they may have to have it on Low Settings. Mid end Hardware should be able to run it on average Graphics settings, and High-end machines should be able to run it on Ultra.

* 1. *Development hardware and software, including Game Engine*

Unreal 4 or Unity 5, whichever the majority of the Coding / Engine Team are comfortable with.

* 1. *Network requirements*

N/A. The Game is Single Player only. However all members of the Team should have Skype, with a Microphone, Web Cam, and be willing to Screen Share.

1. Game Art – Key assets, how they are being developed. Intended style.

See 2.5. For more Information. As well as supporting documents, images etc attached in relevant folders etc.