



Lost Cause

Final Report

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Course: BSc (Hons) in Entertainment Systems

Year: 2014-15

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1.0 Project Overview

1.1 Overview

Lost Cause is a multiplayer survival game played via the Oculus Rift. Players become stranded on an island after their ship runs aground, and so their primary goal is to survive. To do this, players will have to explore the terrain, gather resources, encounter wild animals, and solve puzzles.

1.2 Description

After surviving a ship wreck, you find yourself stranded on an island. You don't know where you are, or if help will ever arrive. With darkness looming, and the ever present danger of the unknown, you have but one goal, TO SURVIVE. *Lost Cause* is a co-op survival experience that uses the latest in VR technology to fully immerse players in an ever changing game world that tests both their wits, courage, and desire to survive.

1.3 Conception of the Project

Both of us have an interest in game development, and so we were both interested in developing a game for the Final Year Project. After discussing our individual plans, we realised that the type of games we both expressed an interest in making was somewhat similar. Instead of individually developing projects of a similar theme, we decided that we would instead collaborate on a project that merged both our visions for the game, and focus our combined efforts into creating one survival game on a larger scale than we could have hoped had we undertaken the projects individually.

1.4 Development Process

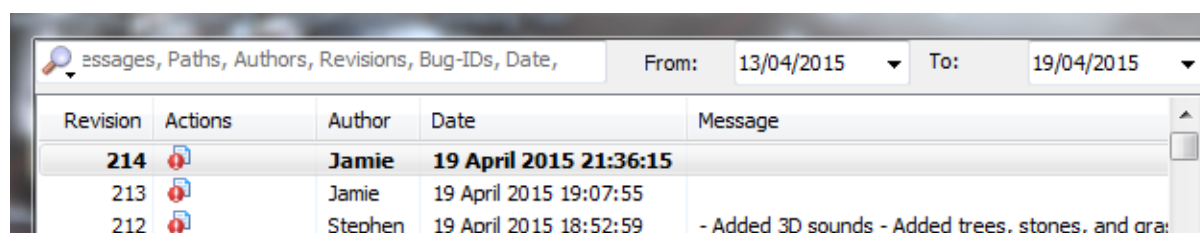
For the development of this project we followed an agile procedure, which means it was an iterative development process that provided us both with development and testing responsibilities. We decided upon this approach for a number of reasons. While on placement both of us were fortunate enough to gain experience working in environments that adopted an agile approach to development. An agile approach also allowed us to delegate tasks within a project of this magnitude. This approach was complementary to the development of a game in many ways. Initially each user story was broken down and an estimated time allocation was associated with it. This suited the project as it would allow us to simultaneously work on the project whilst each focusing on specific areas. When we were finished implementing a user story, we then committed the changes to the SVN repo where they could then be accessed by the other developer. Traditionally when using an Agile methodology a period of two weeks is allocated before a peer review takes place and updates are given with regard to progress that has been made. However, for our project, we abandoned the two week structure, and instead we performed testing after each feature to ensure that the desired functionality was achieved.

2.0 Project Review

2.1 Project Testing

The testing of our project was an iterative process that coincided with the development of the project. As features were implemented, the functionality was then tested both locally and across the network. In some cases where new functionality was added, a certain amount of regression testing needed to be performed to make sure previously implemented features were not affected.

As mentioned in our prior reports, SVN is the version control software we are using. Both of us have a local copy of the project at any given time. We would develop locally, and then where possible, we would test locally before then committing those changes to the global repository for the other person to access. After committing the changes to the repository, we would both then test across the network. Figure *Figure 2.0* below shows the SVN repository. It allowed us to keep logs of what changes were made by each player. The revision number on the left is the total number of commits made to the repository during the projects lifetime.



Revision	Actions	Author	Date	Message
214		Jamie	19 April 2015 21:36:15	
213		Jamie	19 April 2015 19:07:55	
212		Stephen	19 April 2015 18:52:59	- Added 3D sounds - Added trees, stones, and gra:

Figure (2.0) – Lost Cause SVN Repository

2.2 Project Evaluation

As a whole, we are very happy with what we have created. Given the time allocated and the scope of the project we are happy with the project in its current state. In our original proposal outlining the scope of this project, we declared that we would deliver a cooperative multiplayer experience for the Oculus Rift that allows players to explore uncharted territories whilst simultaneously trying to survive. Overall, we feel that with the exception of some minor adjustments, we delivered the project we originally outlined, in some cases even including functionality not outlined in the proposal.

The entire development process was certainly a learning experience. Not all of these were positive, and there were many problems encountered over the course of development. Although we are pleased with how closely representative our game is of our initial draft, this is not to say that there were not a number of obstacles to overcome. These ranged from minor problems arising due to lack of familiarity with both Photon and the Oculus SDK, to more advanced problems related to the trials and tribulations of networking. Collectively, any problems encountered were eventually overcome.

2.2.1 Problems Encountered

As with any project, there are certain inherent problems that will be encountered. These range from the trivial, such as a lack of familiarity with API's or SDK's, to more complex problems, such as the ones we will discuss in the section below.

2.2.2 Networking Difficulties

One of the most difficult aspects of managing the networking of the project was related to the testing of networking features. As we were mostly limited to testing our networking remotely, it was very difficult to account for the unpredictable connection speeds that were subject to fluctuation at any given time. When trying to test the effectiveness of optimization techniques we had implemented, having inconsistent internet connection speeds made it extremely difficult to assess whether optimization had been effective or not. This led to many hours of headache, which consequentially lessened the time allocated to the implementation of other features.

When we were initially outlining the specifications for the project, we were aware that it was very ambitious. Most games have a development cycle of a few years, and although we were not claiming to produce a AAA title, we were aware that we had proposed to deliver a very well rounded game in a short space of time. We were aware that there would be challenges, and that some features would

be more difficult to implement than others, however we both greatly underestimated how difficult the inclusion of multiplayer would be. As mentioned in the *Problems Encountered* section, the networking was extremely difficult. What may be perceived to be trivial tasks such as synchronizing character rotation across a network proved to be a lot more difficult than one might imagine. Consequentially, throughout the entire development cycle, a lot of time was lost trying to make sure different networking functionality was correctly implemented. These problems were eventually overcome due to rigorous testing and long hours.

2.2.3 Time Management and Allocation

Another problem encountered was related to the original time estimate given to each user story. Initially all of our user stories were defined and assigned a priority based on importance. We then estimated how long each particular user story may take, and created a work schedule based on this information. However, it quickly became evident that the estimate given to each user story, was essentially just that and nothing more. As we were simultaneously familiarizing ourselves with new technologies whilst developing a game, some of the user stories that were originally planned to complete in a shorter amount of time than some of the larger stories ended up being much more challenging than originally expected. As a result of this, staying on schedule became challenging, and time management had to be addressed a number of times.

Although it may not be classed as a problem, but more so naivety on our behalf, condensing a project of this scale to be done in such a short space of time was a problem in itself. As mentioned above, it is difficult to estimate how long certain functionality will take to implement. When the tasks that were considered to be the easier tasks within the project take a long time to complete, this affects the rest of the project too. External factors such as time allocated to other projects was also difficult to estimate at the time.

2.3 Interesting insights

2.3.1 Working with new technology

The Oculus Rift is still such a new piece of hardware, that its full potential with regard to gaming experiences still hasn't been realised. It was very interesting to be able to dedicate such a set amount of time to developing for a piece of technology that is still so new. There was a real sense of accomplishment when we got a feature to work. This is true of many features implemented.

Another interesting Oculus Rift fact we stumbled upon is just how few multiplayer games there are available for the Oculus Rift at present. The main developer website for sharing Oculus Rift based games, Oculus Share VR, does not even have a multiplayer category. The majority of the games and demos there are games that place a single player in a single environment. More often than not, the player is on rails, meaning they only have control over the orientation of the camera, and nothing more. This really helped put the work we had done into perspective. Not only did we create a game where the player was free to go wherever they chose, but they could also do that with a friend.

2.3.2 Peer Programming Effectiveness

On a number of occasions we found that the most productive way to approach a problem was to use peer programming. There were a number of times where instead of just individually approaching a problem, we would use peer programming and tackle it together. We found that this was always a very successful approach that often resulted in problems getting solved quicker than they would have been had they been done individually.

2.4 Future Developments

First and foremost, at the time of completion, there were other features that we wanted to include, however we had to be cautious of time constraints, and so instead we made note of these features and how we planned to implement them.

The first feature we would implement if development was to continue would be that of player skills. This refers to the player's abilities such as chopping and mining. As of now, trees are chopped at a certain rate, and stone is mined at a different rate. We would like to build on top of our current system, and have players ability to perform such actions to be dependant on how much of that activity they have already done. For example, a player that has chopped fifty trees would have their "chopping" ability increased, and would then chop trees at a faster rate than a player who may only have chopped ten trees. The implementation of such a feature would only require some minor adjustments to the code we already have.

Another feature we would like to include is the players ability to craft weapons of a progressively higher level. For example, at the beginning, players would all be able to craft primitive tools, however only after the player has gained experience would they be able to craft more effective items, such as a bow, that would allow ranged attacks.

2.5 Risks

2.5.1 General Risks

The undertaking of a team project in itself is a risk. We accept that seeing as there was two people working on our project, the project itself will inherently be held to a higher standard than that of a project undertaken by a single person. Also, with regard to team projects, there is always a risk that there may be disagreements leading to conflict. In the case that any conflict may not be resolved, it could have a detrimental effect on the project.

One of the main things we both wanted to do when we undertook this project, was to work with the Oculus Rift, It is an amazing piece of technology that has allowed us to add another dimension to our game, allowing players to experience our creation from a unique perspective. However, using this technology does not come without risks. The Oculus Rift is still a relatively new technology. It is a technology that is still in development, with a consumer version not yet available for purchase. As a result, new updates and patches are constantly being released for the Oculus Rift Unity SDK. However the overall structure and functionality of how some components within the SDK work often changes, meaning that there is always the risk that the updates will not be compatible with the code that we have written.

The Oculus Rift Share VR website is one of the most popular sites for developers to share with other developers, the games and demos that they have created. However there are very few multiplayer games available, let alone multiplayer games that offer more than a few minutes of on-rail entertainment. Attempting to create a multiplayer Oculus Rift game was in itself a challenge, and there is very limited information available regarding how to do it. Implementing multiplayer and the Oculus Rift separately is a challenge, let alone incorporating them together into the one project.

2.5.2 Scope of the game

Creating a game world the size of the one in our game was always a risk too. The world is fully populated with AI, vegetation, and structures. Our main game scene contains almost two thousand trees, along with hundreds of rocks, grass, AI, and structures. This is not to mention the water, terrain, and dungeons. All of these can be interacted with, and so in order to be able to create a world of this size, we had to greatly optimize how the game runs.

One of the things that became evident early on, was just how expandable the game is. The Oculus Rift is still a new technology, and there is still so much room for improvement with relation to both functionality and graphical capabilities. As of now, the game is a two player cooperative experience, however there is nothing stopping us from increasing that number with the exception of a few minor adjustments. It would also be possible to make the game a Player vs Player game where multiple players are added to the game world and left to fight against each other whilst simultaneously trying to survive. The game is programmed robustly to allow us to make these changes at ease.

As well as having the option to adjust the multiplayer aspect of the game, there is also room to experiment with Oculus Rift functionality and be creative with how the rift is actively used as opposed to passively.

We took advantage of the Oculus Rift motion tracker technology, to allow users to specify where they place a structure based on where they are looking. Innovative features like this is what we hope will draw people to our game, and its creative features like this that we would look to implement if we were to develop the game further. Our game currently allows players to step into a world they may otherwise never see, and experience things they may otherwise never experience. Given time to expand and improve the game, there is a lot that we could do.

In relation to the game itself, the game in its current state is already a functioning product that has a number of innovative and exciting features that make good use of the technologies we outlined in our first two reports. Our intention is to make *Lost Cause* available to the gaming community via Oculus VR Share which is a site for developers to share their Oculus Rift related products with both the gaming community. We feel that this would be a beneficial experience seeing as the development over the past few months has been quite substantial. Any feedback we could get from those willing to try our game would prove invaluable for future development.

With regard to the future development of gameplay, there are a number of gameplay elements that could be altered. We discussed the possibility of introducing an end state, where player actively pursue an end goal. In this scenario, the end goal would be the players escaping from the island. We thought that this may be an interesting concept and one that we would possibly consider in the future.

3.0 Project Features

3.1 Proposed Feature List vs Actual Feature List

Table 1 below is a comparison of our proposed feature list compared to the actual feature list implemented in the game. When compared to the desired feature set from the initial Final Year Project proposal, it is evident that the current version is a close representation, with a few minor exceptions. As development progressed, some design decisions were made, and some alternations from the initial desired feature set were made.

Feature	Included in original report	Included in final version
Oculus Rift Compatibility	Yes	Yes
Cooperative multiplayer	Yes	Yes
Selection of puzzles	Yes	Yes
Xbox 360 controller support	Yes	Yes
Collectable Resources	Yes	Yes
Inventory System	Yes	Yes

Craftable tools and weapons	Yes	Yes
3D player model & animations	Yes	Yes
Skills and experience system	Yes	No
Dynamic Player UI to manage hunger, thirst, stamina, etc	Yes	Yes
Audio Effects	Yes	Yes
Dynamic Day/Night cycle	Yes	Yes
Fully inhabitable game world	Yes	Yes
Different types of AI	Yes	Yes
Discoverable storyline	Yes	Yes
Combat System	Yes	Yes
Procedurally generated maps	Yes	No
Save/ Load	Yes	No
Construction System	No	Yes
Ability to travel via raft	No	Yes
Traps	No	Yes
Durability for weapons	No	Yes
Main Menu	No	Yes

(Table 1)

There are a number of features in *Lost Cause* that were not originally intended to be included. As we were developing the game, there were a number of features that we agreed would be nice to have included in the game. However we had no intention of including features for the sake of it. If a feature was to be included, there had to be a practical reason for it. Some of the ideas discussed included being able to travel to other islands, being able to sleep to regenerate health/ stamina, making the night time much more daunting than the day, and more. As a result of these discussions, we agreed that it would be interesting if players did not only craft tools and weapons with the resources they gathered, but if they also had the option to build structures. This led us to develop a construction system whereby players could use the gathered resources to build a firepit, a hut, or a raft. Each of these structures has a practical use within the game world. The fire pit allowed players to craft torches to help them navigate at night. If players built a hut, they would then respawn there if they died. If both players entered the same hut at night time, this would speed up the night cycle allowing players to bypass the night stage. This is useful as it doesn't force players to just stand idle whilst waiting for day to come if they have no intention of exploring at night. The raft, as mentioned above, allows players to travel to areas that are only accessible by traversing water.

Originally we had planned to have a map of the area, so players could navigate the game world based on landmarks represented on the map. However after some discussion we agreed that this didn't actually coincide with the main theme of the game. We agreed that if two people were to find themselves lost in an uncharted area, it wouldn't make sense for them to have a map of that area, and so we discarded the idea.

Players can find journal entries in the game that give both insight to the lives of those who wrote them, and also the background of the island. Initially we planned for the player to collect these and have access to them via a journal. However in the final version we made these journals render the text in 3D space in front of the player instead of making the journal a collectable object. This meant that instead of one player collecting a journal, the journal entry would instead be opened once a player got in range of it in the game world. This would also allow both players to read the entry at once.

3.2 Intuitive Design & Implementation

3.2.1 User Interface

Lost Cause is designed to be played with an Oculus Rift, and so that as a major factor when designing the User Interface. Games that require the Oculus Rift to play do not have standard “flat” UI that you would see on most games. Instead, the UI must be displayed in a different way so that it can be mapped into 3D space by the rift. We decided that any UI in our game would be intuitive to use, even whilst wearing a rift. The Start Menu of our game is a prime example of this. Instead of getting players to navigate through a menu and select an option, instead we designed a menu where players could view the controls, and then simply look at the “Start Button” to load the main scene.

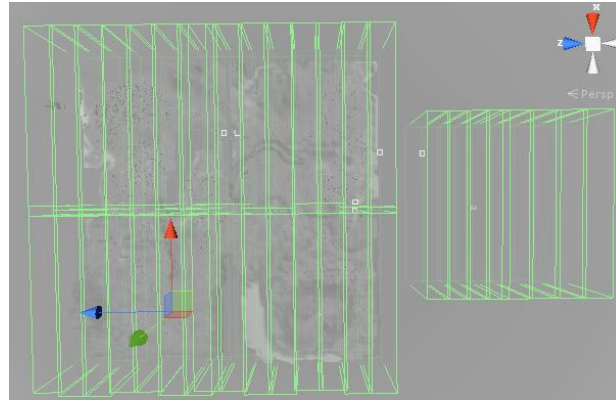
In the game itself, we present the UI to the player by rendering it in a 3D space in front of their camera. Players can access their construction menu, their inventory, and their vital bars. These were designed with both functionality and accessibility in mind. They can be accessed by the click of a button. *Figure 3.0* below shows both the Inventory System and the Construction System.



Figure (3.0)– Inventory System and Construction System implemented in Lost Cause

3.2.2 Optimization

Creating a game this world was a risk because if we had a huge game world that was sparsely populated, it wouldn't look or feel right to the player, however unless we could successfully optimize the game and manipulate the rendering of the world, the game would run at too low of a frame rate to be playable. We also took the size of the game world into consideration when loading the game from the main menu. Instead of just loading the game normally, we instead load the game asynchronously, meaning that we can actually start loading our game world while still at the menu screen. This creates a more seamless transition for the player, as they don't have to wait for an extended period of time whilst waiting on the game world to be populated. *Figure 3.0* below shows the sections we divided our game world up into. Based on the player's position within these zones, we then manipulated the amount of rendering and processing done. This allowed us to have much better performance than if we didn't optimize.



(Figure 3.1) – Optimization technique used to limit processing costs in Lost Cause

3.3 User Manual

3.3.1 Overview:

Lost Cause is a Co-Op (meaning 2 player) survival game, where your goal is to stay alive for as long as possible. In order to achieve this goal both players need to work together in order to collect resources, hunt prey and fend off vicious animals.

3.3.2 Control Scheme:

Lost Cause is played using an Xbox 360 controller.

Player movement is controlled using the *left thumb-stick* to walk or strafe, while using your head rotation to look around and control your direction, additionally you can use the *right thumb-stick* to assist in with rotation to prevent the player from having to turn 180 or 360 degrees in their chair.

The main action button is linked to the *right-trigger* button. This is used for the majority of player to world interactions, such as chopping down trees, mining rocks and attacking animals etc... An icon will appear on screen to prompt the player when and where they can press the button and interact. When interacting with the world a progress bar will fill up inside the player's reticle indicating the progress for the current task, if your task becomes interrupted you must start again.

As this is a survival game, each player must manage the condition of their character. These can be monitored by displaying the player vitals screen using the *left-bumper* button. Here you can monitor hunger, thirst, energy and health. The hunger and thirst meters will gradually deplete over time and it is up to the player to keep them replenished. Hunger can be fought off by eating meat collected from animals, while you can prevent your character from becoming dehydrated by drinking from your canteen, which you will need to keep filled via fresh water sources (more on eating and drinking in the inventory section). As mentioned above there is also an energy bar, a player uses energy by doing actions, such as chopping, mining or attacking and so on. When your energy reaches zero you can no longer perform these actions until it has replenished. Then after energy is the player's health bar. This is arguably the most important of all as when it reaches zero your character will die. Health will gradually deteriorate over time if your player is starving and or dehydrated, and additionally through combat. A player can regain health and energy overtime simply by keeping their character's hunger and thirst at bay.

Players also have access to an inventory system, this is used to manage resources, tools and weaponry. The inventory can be accessed by pressing the 'X' button and navigated using the 'directional arrows'. When a player chops down a tree, mines a rock or picks at long grass they will be rewarded with the corresponding resource either wood, stone or a grass tuft. This resource can then be viewed in the inventory screen. Additionally the inventory screen can be used to eat or drink, by pressing the 'A' button on either meat or the player's canteen. From here players will also equip and de-equip tools and weapons using the same button. When an item is equipped it will be marked by an orange circle. You will also notice under tools and weapons a health bar for each one, this is because tools and weapons will deteriorate over time so it is important to keep an eye out. A player is also able to drop any item from their inventory aside from the canteen by using the 'B' button. This allows players to share tools and resources to aid working together.



(Figure 3.2) – Tutorial Prompt

As well as the aforementioned inventory system, the game also has a crafting mechanic. This is what allows the players to craft tools and weapons. To access this you must first open your inventory and then press the 'Y' button. The highlight index will now switch to the crafting tab at the bottom. Once you have the required resources to craft an item, it will light up below and you simply select it and press 'A', the items will be removed from your inventory and the tool/weapon will be added instead. The crafting mode can be closed by pressing 'Y' again or closing the inventory using 'X'. It is important to note that each tool and weapon has a purpose. Weapons are better for hunting animals than standard tools, and you cannot chop trees or mine stone without the required tool.

Requirements to craft each tool and weapon listed below:

- Axe: 3 wood, 2 stone, 2 grass tufts.
- Hammer: 2 wood, 3 stone, 2 grass tufts.
- Spear: 4 wood, 1 stone, 4 grass tufts.
- Dagger: 1 wood, 1 stone, 1 grass tufts.
- Torch: 2 wood, 0 stone, 4 grass tufts (must be beside a fire pit).

In addition to the crafting system, the game also includes a construction interface. This can be accessed by pressing the 'B' button. The construction menu gives the players a choice of three structures to build each with their own purpose. These are a hut, a fire pit and a raft. To use the interface you must select the item you want to player, a semi-transparent version will appear and

the player must position it using their regular movement and head rotation (by look at where on the ground it should be placed). It will change colour according to if you can place it or not. Once you decide to place it, it will become visible to the other player, and you both can contribute resources to the building process by walking up it and pressing the 'A' button with the correct resources in your inventory. When the target is met, the item will be constructed and then functional.

4.0 Project Reflection

4.1 General Response

Now that the project is complete, it is nice to be able to look back at the project and assess it as both a player, and a developer. There is a lot that I'm proud of, and a lot that I would change if I were to do it again. I've certainly learned a lot over the past couple of months, and I'd certainly say that my programming skills are stronger as a result. After working in Unity for so long, I feel a lot more familiar with it now than I was nine months ago. It was also great to get experience programming for the Oculus Rift, and although the networking was stressful at times, it was certainly an achievement to be able to successfully create a project that has so much working network functionality.

Firstly, I'm extremely pleased with the game we managed to create in the time allocated to us. We unexpectedly lost a lot of time over Xmas that we thought we would have to allocate to project development, and so during Semester two, a lot of hard work was put into delivering not only a playable game, but an enjoyable one.

4.2 Development Approach

Overall, I am pleased with our approach to the development process. I felt that work was evenly distributed, and that the agile development approach fitted our project well. With the exception of a few design disagreements, we were majoritively unanimous with our decisions, and as a result development was not impacted.

4.3 Gameplay & Mechanics changes

In hindsight, I think the inclusion of this feature may be our biggest regret. Implementing proper, reliable multiplayer functionality was very difficult, and extremely time consuming. Although I am personally very happy to be able to say that our project includes functioning multiplayer functionality, I don't think that it will be looked upon as being as big of an achievement as it actually was. It was by far the most time consuming feature to implement, and it was also something that had to be done multiple times within the game. Testing the functionality was also exceptionally difficult as it was difficult to tell if lag was inherent due to the network, or due to our programming. I feel that had we chosen to develop a single player game, the time taken to figure out the networking for this game, could have been used to incorporate a multitude of features. Also, by doing a multiplayer game, we brought an entirely new workload upon ourselves with regard to modelling and animations. Take for example the following scenario. The player picks up a spear, attacks an enemy, the enemy dies, and the player collects meat from the enemy. Had we just developed a single player game played from the first person perspective, we would not have had to worry about how the player looked picking up the spear, about the player's animations when attacking the animal, or about how seemingly tedious things like how a weapon is equipped looks. We would have had to simply check that the weapon is equipped, and when the enemy health reaches zero, spawn the meat, and then collect it. However by doing a multiplayer game, that scenario becomes infinitely more complicated. With multiplayer, we would have to make sure both players are fully rendered in 3D as they can be viewed by the other player. Animation, position, and rotation information has to be sent across the network so it is consistent amongst players, when the spear is picked up we must

check to make sure that only one player can pick up the spear. When the animal is present we must ensure that its health is consistent across the network, and if it dies for one player, it dies for the other player too. We must then check that if a player picks up the meat the meat does not remain on the ground for the other player. If the meat is then dropped, we must make sure there are no networked ownership conflicts preventing a player other than the one that dropped it from picking it up. Now imagine having to implement such a system with regard to an entire game world. Hopefully this has helped to clarify why I feel that multiplayer was too time consuming. However I have taken a learning experience away from this. I learned that I should have researched multiplayer incorporation a lot more thoroughly. I should have stopped to realise, that although it may be possible to include a feature, it may not actually be practical to do so.

4.4 Peer Programming

As mentioned earlier in the report, we undertook a lot of peer programming throughout the course of development. I found this to be extremely beneficial, and is actually something I would highly recommend to others. I would also recommend that future students consider the idea of undertaking a group project as part of their FYP. Not only can they reap the benefits of peer programming, but I also found that when working as part of a team, there is somewhat more of an urgency and responsibility to get things done, as not only does your own grade depend on your progress, but so too does another person's. It can also be constructive to see how somebody else approaches the same problem you have.

5.0 Project Breakdown

5.1 Meeting Minutes

2/10/2014.

In today's meeting we covered:

- We brought in a short prototype document that outlines so key features and mechanics of the game. We discussed player movement, narrative and the basic game mechanics.
- We spoke about the fact our game was going to be a multiplayer experience and the feasibility of it.
- We covered the topic of end states for our game as it was an area we hadn't talked about previously.
- We spent time explaining our vision for the game and trying to get across what we wanted as an end product, additionally we spoke about compromising on realistic gameplay versus enjoyable gameplay, for example we mentioned at night time ways to keep the player involved as opposed to sitting by a fire.

For next week we have committed to doing the following:

- Getting our project up and running with a form of version control.
- Investigate the story arc with relation to our game
- Looking into Microsoft Project to keep track of progress and major deadlines
- Creating a live game design document for our project

9/10/2014.

In today's meeting we covered our progress since last week.

- We agreed to establish version control for our project, which we did. We talked about our decision to use SVN as opposed to GitHub, as well as mentioning that we were investigating a code review tool to allow for peer reviews throughout the project.
- We also discussed the story arc. This was first mentioned last week and we investigated but needed to clarify a few issues with how it applied to our game. Since then we have agreed to investigate the "departure" and "return" of our game with reference to Campbell's Monomyth. We also spoke about a branching narrative and the possibility of using this to determine the end state of the game (similar to Zork).
- We also spoke about the Oculus Rift DK2's which have been ordered. As well as touching on our technology feasibility report where we have committed to having a demo to show both Oculus Rift and multiplayer compatibility.
- We spoke about the software and tools that we would be using during our project, notably: Unity (Pro), Photoshop, Photon Server and C#.

For next week we have committed to delivering:

- The project outlined in Microsoft Project with the main deadline dates
- To have completed the Game Overview section of our GDD to the point of "Look and Feel"
- To have a rough story arc developed with regard departure and return

23/10/2014.

In today's meeting we covered:

- We discussed what we had covered in our Report 1 so far
- We also talked about and arranged a meeting for next week.
- Decided we would talk about iteration 1 next week as well
- Talked about putting screen shot into a 9th section of the doc called appendices and to refer to them in our report

For next week we have committed to:

- Adding the management section to our technical document
- We also talked about and arranged a meeting for next week.
- To iron out multiplayer bugs and to put time into learning how to do GUI for the Rift.

30/10/2014.

In today's meeting we covered:

- We discussed what was required in the iteration 1 section of our report.
- We spoke about finishing the document and what was involved to complete it.

For next week we have committed to:

- Having the report finished for next week.
- Resource list and item list defined.
- To print and bind our report.

20/11/2014.

In today's meeting:

- We demoed our progress with the project so far; multiplayer, oculus rift, basic HUD and basic resource collection
- Looked at what was needed for the report 2
- We spoke about demoing out work at the college open day, and perhaps the need to write questions for a play test session

For next week we have committed to:

- Completing sections 5 & 6 of report 2 and perhaps some of sections 7, time depending.

13/02/2015.

In today's meeting:

- Continued work on the inventory system for the game and it's at a stage now where you can pick up/collect items and they will be stored and displayed in the inventory.
- Currently there is no interaction so I'll be hoping to implement this over the weekend, initially starting with dropping items and then eating food or drinking water for example.

For next week we have committed to:

- Next week I'm aiming to start work on the crafting system as this couldn't be implemented until an inventory system was in place, so hopefully with all going well there will be functionality there to show you in our next meeting.

13/02/2015.

In today's meeting:

- Continued work on the inventory system for the game and it's at a stage now where you can pick up/collect items and they will be stored and displayed in the inventory.
- Currently there is no interaction so I'll be hoping to implement this over the weekend, initially starting with dropping items and then eating food or drinking water for example.

For next week we have committed to:

- Next week I'm aiming to start work on the crafting system as this couldn't be implemented until an inventory system was in place, so hopefully with all going well there will be functionality there to show you in our next meeting.

12/03/2015.

In today's meeting:

- To start I did some work on the games inventory to handle the removal of items, as well as to re-order the remaining items once something is removed or used.
- After this I worked on the core functionality of the crafting system. I made good progress on it as it's now currently at a point where you can craft two items either an axe or a hammer both requiring a different collection of resources, the resources will be removed from the inventory and the crafted object will be placed there instead. I created the two inventory icons for the tools as well.
- Currently to craft an item, I have it linked with keyboard input, i.e. pressing 1 will attempt to create the axe and pressing 2 will attempt to create the hammer. So the next step will be to give the player access to this functionality through the GUI, so I also took some time to plan out and sketch up how this will be implemented.

18/03/2015.

In today's meeting:

- After the trees are cut, they can be cut further to form chunks of wood that can then be collected.
- Also had an enemy character in the game that reacts to the player but no animations were yet being sent across the network.
- I also did some research on Nav meshes and baking nav meshes (which allows characters to navigate the terrain).
- Also, when you mine a rock, loads of little rocks form in its place. These can then be collected.

31/03/2015.

In today's meeting:

- Discussed the current state of the project and addressed the fact that we needed to get more gameplay elements in
- We discussed the video, and agreed to look into how we would render the output from the rift so people watching the video won't get a split screen view.
- We discussed the final report and what would be involved in it. You confirmed that it would be much shorter than other reports, and you also mentioned that you would send on some documents relating to it.
- You said you would send on the panel that is grading us too actually

What we had done for that week related to the project was as follows:

- Upgraded the entire project to Unity 5.
- -Designed the new inventory & craft system and implemented it at a low level
- Recreated the player controller
- -Added occlusion culling for all players connected, dynamic batching, and static batching
- -Added basic AI (I did this to test the networking of AI characters. Will implement properly in the next few days)

07/04/2015.

In today's meeting:

- Created icons for every type of resource and item in the game
- Added functionality to the reticle so that it fills as a player progresses with an action
- Implemented craft system into the inventory screen allowing the creation of 5 tools/weapons
- Re-designed and implemented the player vital screen
- Added functionality to the player vitals so they deplete at different rates over time
- Also added player health and stamina to the vitals, and the ability to drink water.
- Added a 3d player model to the player controller and rigged it with movement animations, and set it up to work with the rotation of the player's head
- Removed all the legacy GUI functions that were in place from earlier builds and versions of unity
- Added in the first batch of sound effects, this includes inventory and vital bars opening & closing, moving the cursor, eating, drinking, crafting, picking up and dropping items
- Refactored old code for collecting resources to make it more extendable

- Added the ability to equip and unequip weapons and tools
- Refactored the actions script to play chopping or mining animations, and to only allow players to do so with the correct tools equipped
- Re-positioned the player raycasting point to increase accuracy and performance
- Added functionality to determine resource depletion rates
- Added functionality to be able to refill water canteen at fresh water locations
- Added start menu with functionality to look a button to select it
- Added 5 types of AI to the game, all of which functions differently and has randomized behavior
- Made AI responsive to situations where both players are present
- Implemented combat system between player and enemies
- Added basic puzzle mechanics that can be synchronized across the network
- Synchronized rotation across the network
- Synchronized player position and rotation across network
- Updated networking functionality
- Added different strengths for each weapon
- Added more models, including rocks, trees, animals etc
- Added player attack animations
- Added zones to reduce networking overhead
- Added networking of animations

The point we are at now is all of the above added and working, and thoroughly tested across the network. We are at a point now where we nearly have a finished project with plenty of time left to add additional functionality.

17/04/2015.

In today's meeting:

- Added switches and levers with animations for multiplayer puzzles
- Added construction system to create structures between two players, this includes adding the models, designing the menu and the functionality
- Added sound effects to animals and actions
- Added 3 types of constructible objects (Hut, Fire Pit and Raft)
- Added day and night cycle
- Updated inventory to show equipped item
- Added torch to the game allowing the player to equip it in their off hand, this can only be crafted next to a fire.
- Updated inventory to allow de-equipment of tools
- Added health to tools, weapons and torch so they deteriorate over time
- Added raft to the game, this allows players to craft a raft on the water and transport them between islands
- Created journal object that pops up to display a message in a book format for players to read
- Wrote 10 journal entries
- Added health to the player that deteriorates when starving and dehydrated. This regenerates when the player is in good condition.
- Updated enemies to not walk on water and to avoid objects
- Added death mechanics to the player to handle death and respawn
- Updated player script to smooth movement and rotation
- Prefab created for tutorial points

5.2 Breakdown of user stories

Listed below is the exact transcripts from our SVN repo over the past couple of months. This clearly highlights each change made by each person over the course of the projects duration. Admittedly, there were a handful of cases where peer programming was done, and so both parties are responsible for the code, this information will appear as being committed by a single person. However, aside from those few cases, a clear breakdown of each person's work can be seen.

Revision: 214

Author: Jamie

Date: Sunday, April 19, 2015 9:36:15 PM

Message: Pushed scene changes for network demo

Revision: 212

Author: Stephen

Date: Sunday, April 19, 2015 6:52:59 PM

Message:

- Added 3D sounds
- Added trees, stones, and grass, water
- Populated scene
- Disable sun when enter caves

Revision: 211

Author: Jamie

Date: Sunday, April 19, 2015 4:23:35 PM

Message:

- Added audio to main menu scene
- Reconfigured the menu scene to load asynchronously into the game scene

Revision: 210

Author: Jamie

Date: Sunday, April 19, 2015 3:04:34 PM

Message:

- Finished tutorial points
- Finished water barriers

- Added death sound

- Added background music

Revision: 209

Author: Jamie

Date: Sunday, April 19, 2015 8:28:12 AM

Message:

- Created dungeon enter and exit scripts
- Added sprites to create the tutorial points
- Added zone management to the project to handle enabling and disabling resources

Revision: 208

Author: Jamie

Date: Sunday, April 19, 2015 7:28:13 AM

Message:

- Added water colliders to surround the map

Revision: 203

Author: Stephen

Date: Saturday, April 18, 2015 11:42:08 PM

Message:

- Removed conflicting prefabs
- Repositioned water

Revision: 202

Author: Stephen

Date: Saturday, April 18, 2015 6:29:19 PM

Message:

Added scripts to caves to reduce rendering costs

Revision: 201

Author: Stephen

Date: Saturday, April 18, 2015 11:16:59 AM

Message:

- Placed journals
- Added skeletons
- Constructed underground caves + dungeons
- Added traps and levers to the dungeons
- Re-edited terrains to allow placement of caves + dungeons
- Added Sinking ship

Revision: 200

Author: Stephen

Date: Saturday, April 18, 2015 12:21:37 AM

Message:

- Further edited terrain to increase land mass and add coast access
- Added prefabs for ship
- Added ship sinking

Revision: 199

Author: Jamie

Date: Friday, April 17, 2015 5:03:29 AM

Message:

- Added heart beat sound effect for when player health gets low
- Added walking sound effects to the player
- Created the tutorial script for tutorial prefabs

Revision: 198

Author: Stephen

Date: Friday, April 17, 2015 12:27:31 AM

Message:

- Edited terrain
- Re-enabled scripts that disabled tree colliders when player not near

Revision: 197

Author: Stephen

Date: Thursday, April 16, 2015 10:51:07 PM

Message:

- Localized animals
- Added boar + rabbits
- Added Shroud package
- Created new scene

Revision: 196

Author: Jamie

Date: Thursday, April 16, 2015 6:19:54 AM

Message:

- Testing fox across the network

Revision: 190

Author: Jamie

Date: Thursday, April 16, 2015 5:29:57 AM

Message:

- Added interpolation to fox networking script

Revision: 183

Author: Stephen

Date: Thursday, April 16, 2015 3:21:49 AM

Message:

photon for fox

Revision: 182

Author: Stephen

Date: Thursday, April 16, 2015 3:13:59 AM

Message:

FOX

Revision: 181

Author: Stephen

Date: Thursday, April 16, 2015 3:07:16 AM

Message:

fox

Revision: 179

Author: Stephen

Date: Thursday, April 16, 2015 2:25:29 AM

Message:

fox state

Revision: 176

Author: Stephen

Date: Thursday, April 16, 2015 1:56:49 AM

Message:

Updated pig

Revision: 161

Author: Stephen

Date: Wednesday, April 15, 2015 10:39:09 PM

Message:

bear script update

Revision: 158

Author: Jamie

Date: Wednesday, April 15, 2015 9:45:18 PM

Message:

- Matchmaker script update

Revision: 149

Author: Stephen

Date: Wednesday, April 15, 2015 8:42:07 PM

Message:

- Updated player tags

Revision: 148

Author: Stephen

Date: Wednesday, April 15, 2015 8:31:29 PM

Message:

Bear test

Revision: 147

Author: Jamie

Date: Wednesday, April 15, 2015 7:47:01 PM

Message:

- OVRCameraControllerNetwork update
- Worked on player head rotation

Revision: 129

Author: Jamie

Date: Wednesday, April 15, 2015 4:36:08 AM

Message:

- Updated player death script
- Added death room prefab

Revision: 125

Author: Stephen

Date: Wednesday, April 15, 2015 1:56:12 AM

Message:

- Refactored day/night cycle

Revision: 123

Author: Jamie

Date: Wednesday, April 15, 2015 1:16:58 AM

Message:

- Added death mechanics to the player
- The player can now die and respawn
- The respawn point updates based on the last hut the players build

Revision: 122

Author: Stephen

Date: Tuesday, April 14, 2015 10:13:27 PM

Message:

- Added null checks around VitalBar lines in animal scripts
- Re-enabled jump functionality and reduced extra jump height from 4.1 to 0.5

Revision: 121

Author: Stephen

Date: Tuesday, April 14, 2015 8:03:01 PM

Message:

- Enemies can no longer walk on water

- Enemies can no longer move objects like trees, rocks or huts
- Enemies navigate around obstacles in the world
- Enemies can not attack players through other objects

Revision: 120

Author: Stephen

Date: Tuesday, April 14, 2015 5:38:08 AM

Message:

- Added obstacle avoidance for enemies

Revision: 119

Author: Stephen

Date: Tuesday, April 14, 2015 3:17:19 AM

Message:

- Added entries for 10 + journals
- Added fonts
- Added speed up night cycle when players are in the same hut at night

Revision: 118

Author: Jamie

Date: Tuesday, April 14, 2015 2:56:53 AM

Message:

- Added player health regeneration to the VitalBarDriver.cs script

Revision: 117

Author: Jamie

Date: Tuesday, April 14, 2015 12:19:53 AM

Message:

- Set up the raft construction so that it can only be placed in specified areas

Note: This is done by placing the RaftArea.prefab where you want to build the raft

Revision: 113

Author: Stephen

Date: Monday, April 13, 2015 4:51:29 AM

Message:

- Added OVRControllerNetwork script

Revision: 112

Author: Stephen

Date: Monday, April 13, 2015 4:28:20 AM

Message:

- Attack animation working

- Raft working

Revision: 111

Author: Jamie

Date: Monday, April 13, 2015 4:08:39 AM

Message:

- Added Photon view to OVRController in an attempt to fix misaligned collider

Revision: 110

Author: Jamie

Date: Monday, April 13, 2015 2:47:07 AM

Message:

- Created journal prefab for the game with the ability to pop up when the player approaches

- Also added new sound to the audio driver to play when the book is opened/closed

Revision: 108

Author: Stephen

Date: Sunday, April 12, 2015 10:31:08 PM

Message:

raft update

Revision: 107

Author: Jamie

Date: Sunday, April 12, 2015 10:25:52 PM

Message:

- Attempted fix for construction bug spawning more than one instance

Revision: 105

Author: Jamie

Date: Sunday, April 12, 2015 9:40:36 PM

Message:

- Updated raft movement script

Revision: 104

Author: Stephen

Date: Sunday, April 12, 2015 8:58:42 PM

Message:

fixing raft

Revision: 103

Author: Jamie

Date: Sunday, April 12, 2015 8:31:30 PM

Message:

- Updating prefabs for merging
- Added book object for journal

Revision: 102

Author: Stephen

Date: Sunday, April 12, 2015 7:55:00 PM

Message:

fix raft

Revision: 101

Author: Stephen

Date: Sunday, April 12, 2015 7:25:15 PM

Message:

- Added raft functionality
- Increased box collider on grass

Right trigger no longer shows for enemy when no weapon equipped

Revision: 100

Author: Jamie

Date: Sunday, April 12, 2015 6:46:30 AM

Message:

- Fixed bug in the inventory where if you craft and drop you are unable to craft again

Revision: 99

Author: Jamie

Date: Sunday, April 12, 2015 5:54:20 AM

Message:

- Added sliders to indicate tool and weapon health
- Added functionality so that tools and weapons deteriorate with use

- Added functionality for the torch to go out over time
 - Added rpc functionality to the toolHealth script so that the health is persistent across all users
-

Revision: 98

Author: Stephen

Date: Saturday, April 11, 2015 7:47:08 AM

Message:

- Fixed AI Bugs
- Added raft travel functionality

Revision: 97

Author: Jamie

Date: Saturday, April 11, 2015 3:17:42 AM

Message:

- Added torch to the game and assigned it to the player controller
- Added the ability to equip and de-equip torch
- Added ability to de-equip regular tools
- Added ability to craft torch when in the proximity of a fire
- Added a 2nd highlight sprite to indicate that the torch is equipped

Revision: 96

Author: Stephen

Date: Friday, April 10, 2015 11:40:24 PM

Message:

- Fixed players being thrown into air by AI

- Fixed Stag animation and coroutine

- Changed Pig AI to avoid Players

Revision: 95

Author: Jamie

Date: Friday, April 10, 2015 7:41:28 PM

Message:

- Added feature to the inventory to place an icon beside the selected tool or weapon

Revision: 94

Author: Stephen

Date: Friday, April 10, 2015 5:49:33 PM

Message:

- Added day night cycle
- Added custom skybox

Revision: 92

Author: Jamie

Date: Friday, April 10, 2015 5:01:32 AM

Message:

- Created Hut and Raft models for 3 stages of construction
 - Added construction functionality for raft and hut
-

Revision: 89

Author: Jamie

Date: Friday, April 10, 2015 2:15:18 AM

Message:

- Updating player controller to add script

Revision: 87

Author: Jamie

Date: Friday, April 10, 2015 1:26:59 AM

Message:

- Finished adding functionality to the construction system to work with the firepit, allowing you to now place the outline and contribute resources to it, until it is completely constructed, in which case it will spawn the finished object

Revision: 86

Author: Stephen

Date: Thursday, April 09, 2015 10:09:03 PM

Message:

- Added sounds to traps
- Added sounds to animals for attack and death
- Added sound arrays for chopping, mining, and attacking
- Added randomness to how close you can get to animals before they attack

Revision: 85

Author: Stephen

Date: Thursday, April 09, 2015 5:19:44 PM

Message:

Added sounds for the animals, chopping, mining, and pulling grass

Imported over 30 sounds for various actions

Revision: 84

Author: Jamie

Date: Thursday, April 09, 2015 6:04:53 AM

Message:

- Updated player actions to talk to the construction script

Revision: 83

Author: Jamie

Date: Thursday, April 09, 2015 6:00:40 AM

Message:

- Added firepit prefabs to the construction system
- Created FaceCamera script to rotate a canvas to face the player camera
- Created and added A and B button icons

Revision: 82

Author: Jamie

Date: Thursday, April 09, 2015 4:51:57 AM

Message:

- Added functionality to the construction system to allow you to place the outline for items (only rigged with firepit atm)

TODO: Add the functionality to actually construct the item

Revision: 81

Author: Jamie

Date: Wednesday, April 08, 2015 11:37:37 PM

Message:

- Created PlaceItem script
- Added first prototype of placing object on the ground

Revision: 80

Author: Stephen

Date: Wednesday, April 08, 2015 8:43:19 PM

Message:

- Fixed puzzles to stop photon errors when only one player has spawned

Revision: 78

Author: Jamie

Date: Wednesday, April 08, 2015 6:19:26 PM

Message:

- Added construction menu to the player to display using B button
- Added ability to scroll through the menu and sound also
- Created ConstructionScript

Revision: 77

Author: Stephen

Date: Wednesday, April 08, 2015 6:01:35 PM

Message:

- Added switch and lever functionality
- Networked switches and levers
- Added animations to the above
- Added models and prefabs for traps, switches, etc

Revision: 74

Author: Jamie

Date: Tuesday, April 07, 2015 5:24:04 AM

Message:

- Added start menu scene with look at button functionality
- Added Asynchronous level loading to the main scene

Revision: 73

Author: Stephen

Date: Tuesday, April 07, 2015 5:01:39 AM

Message:

- Added player animations for individual attacks
- Refined AI scripts to prevent characters being stuck in any one position
- Added AI ability to attack player
- Added functionality for players to be able to kill enemies
- Added instantiation of meat when animals die
- Added RPCs to spawn meat over network
- Added basic puzzles (includes networking)

Revision: 72

Author: Jamie

Date: Sunday, April 05, 2015 9:32:24 PM

Message:

- Added functionality to fill the canteen at freshwater locations
- Added freshWater tag

Revision: 71

Author: Jamie

Date: Sunday, April 05, 2015 7:19:29 PM

Message:

- Updated player collider and ovrcontroller to be at the same height when instantiate

Revision: 70

Author: Jamie

Date: Sunday, April 05, 2015 6:27:55 PM

Message:

- Added the ability to change the rate at which resources are acquired (see PlayerActions.cs for more details)

Revision: 69

Author: Jamie

Date: Sunday, April 05, 2015 4:54:05 AM

Message:

- Frozen player movement when inventory open

Revision: 68

Author: Stephen

Date: Sunday, April 05, 2015 4:49:35 AM

Message:

FIXED BUG

Revision: 67

Author: Stephen

Date: Sunday, April 05, 2015 4:37:03 AM

Message:

buttons update

Revision: 66

Author: Stephen

Date: Sunday, April 05, 2015 4:26:57 AM

Message:

new button scripts

Revision: 65

Author: Jamie

Date: Sunday, April 05, 2015 4:19:52 AM

Message:

- Moved and reconfigured PlayerActions.cs onto the right camera to increase raycasting performance

Revision: 64

Author: Stephen

Date: Sunday, April 05, 2015 3:35:12 AM

Message:

- Added button functionality

Revision: 61

Author: Jamie

Date: Sunday, April 05, 2015 2:07:33 AM

Message:

- Added health to the vital bar screen
- Added functionality to the vitalbardriver class to modify player health
- When player hunger and/or thirst depleted decrease health

Revision: 57

Author: Stephen

Date: Sunday, April 05, 2015 1:13:16 AM

Message:

- Added headrotation script to allow rotation to be synced across network

Revision: 54

Author: Stephen

Date: Sunday, April 05, 2015 12:22:46 AM

Message:

changed bear script and bear photon observe

Revision: 53

Author: Jamie

Date: Sunday, April 05, 2015 12:15:02 AM

Message:

-Tools finished so that you can now only cut a tree with an axe and mine rock with a hammer

- Also added functionality to drop and pickup tools

Revision: 51

Author: Jamie

Date: Saturday, April 04, 2015 10:53:51 PM

Message:

Changed equip functionality to move items position as opposed to changing the renderer

Revision: 49

Author: Stephen

Date: Saturday, April 04, 2015 10:07:56 PM

Message:

Changed the tag for Player_Controller_Test.prefab

Revision: 48

Author: Jamie

Date: Saturday, April 04, 2015 10:06:36 PM

Message:

Updated the equip functionality to try incorporate RPC calls to disable the current tools / weapons

Revision: 47

Author: Stephen

Date: Saturday, April 04, 2015 9:53:16 PM

Message:

- Changed mass of trees
- Edited spawnWood function to spawn wood after shorter time
- Changed MatchMaker script to now assign different tags to both players

Revision: 46

Author: Jamie

Date: Saturday, April 04, 2015 9:50:54 PM

Message:

Added functionality to the inventory script to equip tools and items

Revision: 41

Author: Stephen

Date: Saturday, April 04, 2015 7:38:24 PM

Message:

animation test

Revision: 39

Author: Stephen

Date: Saturday, April 04, 2015 6:06:37 PM

Message:

- Fixed spawnWood function to spawn wood after tree is removed
- Added code to network script to allow animations to be send across the network

Revision: 29

Author: Jamie

Date: Saturday, April 04, 2015 1:26:31 AM

Message:

- Added animations to the player for movement and chopping, mining & general action
- Added weapons to the players hands to later be equipped
- Created prefabs in the networking folder for each tool and weapon

Revision: 28

Author: Stephen

Date: Saturday, April 04, 2015 12:32:34 AM

Message:

- Added animal pack
- Added scripts for the following animals : wolf, fox, bear, pig, stag
- Added zones that have trees assigned to them
- Added RenderTest.cs that disables capsule colliders on trees if a player isnt in that area

Revision: 27

Author: Jamie

Date: Wednesday, April 01, 2015 3:43:38 PM

Message:

- Added mocap library for player animations
- Added rigged character model to the player controller

Revision: 26

Author: Stephen

Date: Wednesday, April 01, 2015 3:16:24 PM

Message:

- Changed large rock tags to "rock"
- Changed tallgrass tag to "tallgrass"

Revision: 25

Author: Stephen

Date: Wednesday, April 01, 2015 7:47:15 AM

Message:

- Added more resource scripts
- Can now pick up stone and grass
- Added grass , stone, and tree prefabs
- Added multiple more tree prefabs and rigged them up to enable them to be cut

Revision: 24

Author: Jamie

Date: Tuesday, March 31, 2015 11:31:53 PM

Message:

Refactored the resource mining in the player action script to make it more dynamic and legible

Revision: 22

Author: Jamie

Date: Tuesday, March 31, 2015 10:10:38 PM

Message:

- Added resource utility script to allow us to delete items across the network without hitting ownership conflicts.

- Modified player actions, inventory script and tree health script to accommodate this

Revision: 17

Author: Stephen

Date: Tuesday, March 31, 2015 6:54:33 PM

Message:

- Testing networking of cutting trees and item collection

Revision: 16

Author: Jamie

Date: Tuesday, March 31, 2015 6:24:33 PM

Message:

- Added sound effect to vital bar window

Revision: 15

Author: Jamie

Date: Tuesday, March 31, 2015 6:23:01 PM

Message:

- Created audio driver to make it easier for a variety of game object to play sounds
- Added sound effects to the inventory for opening, closing, moving the cursor, eating and drinking

Revision: 14

Author: Stephen

Date: Tuesday, March 31, 2015 4:56:46 PM

Message:

- Changed TreeScript to make chopTree an RPC function
- Removed unnecessary Prefabs
- Renamed prefabs
- Added functionality to inventoryScript to synchronize instantiation of objects over the network

Revision: 12

Author: Stephen

Date: Tuesday, March 31, 2015 12:14:49 AM

Message:

- Refactored player controller so all scripts are succesfully enabled

Revision: 11

Author: Stephen

Date: Monday, March 30, 2015 11:46:19 PM

Message:

- fixed player controller (player_new_gui_network)

Revision: 10

Author: Jamie

Date: Monday, March 30, 2015 7:19:07 PM

Message:

- Added the ability to collect grass to the inventory and add the icons for every collectible resource

Revision: 9

Author: Stephen

Date: Monday, March 30, 2015 6:20:42 PM

Message:

- Added NEW_GUI_NETWORK_CONTROLLER
- Added NetworkManger and NetworkPlayer scripts

Revision: 8

Author: Jamie

Date: Monday, March 30, 2015 4:51:51 PM

Message:

Removed legacy GUI

Revision: 7

Author: Jamie

Date: Monday, March 30, 2015 4:17:20 PM

Message:

- Added vital bargui elements
- Added functionality to the vital bars so that they deplete over time
- Added canteen item icons
- Added functionality to the canteen so you can drink and it will deplete its water
- Created vital bar screen icons and background

Revision: 6

Author: Jamie

Date: Sunday, March 29, 2015 6:10:51 PM

Message:

Update player action script to sync up chopping down trees with the reticle

Revision: 5

Author: Jamie

Date: Sunday, March 29, 2015 5:45:34 PM

Message:

- Added new inventory layout and controls
- Added craft system with 5 craftable tools
- All icons for resources and items have been added
- Reticle implemented to display progress with slider functionality

Revision: 4

Author: Stephen

Date: Wednesday, March 25, 2015 12:54:55 AM

Message:

- Added survival tools pack

Revision: 3

Author: Jamie

Date: Tuesday, March 24, 2015 3:55:49 PM

Message:

Initial Project Commit to locally hosted repository

6.0 Appendix

6.1 Model References

Asset	Reference
Wood	https://www.assetstore.unity3d.com/en/#!/content/11256
Stone	https://www.assetstore.unity3d.com/en/#!/content/13568
Grass Tuft	https://www.assetstore.unity3d.com/en/#!/content/8746
Axe, Hammer, Spear, Dagger	https://www.assetstore.unity3d.com/en/#!/content/23082
Torch	https://www.assetstore.unity3d.com/en/#!/content/11256
Player Model	https://www.mixamo.com/editor/new/729?character_id=611850
Animals	https://www.assetstore.unity3d.com/en/#!/content/4990
Skeleton	https://www.assetstore.unity3d.com/en/#!/content/3543
Ship, House	https://www.assetstore.unity3d.com/en/#!/content/14706
Trees	https://www.assetstore.unity3d.com/en/#!/content/30701
Rocks	https://www.assetstore.unity3d.com/en/#!/content/13568
Journal	http://tf3dm.com/3d-model/puo-32297.html
Shroud Package	https://www.assetstore.unity3d.com/en/#!/content/10370
Meat Pack	https://www.assetstore.unity3d.com/en/#!/content/19234
Underworld (Caves, Pier)	https://www.assetstore.unity3d.com/en/#!/content/10875
Fire	https://www.assetstore.unity3d.com/en/#!/content/11256

Table 2 – Models and corresponding references

6.1.1 Resource models used

- Wood
- Stone

- Meat
- Grass Tuft

6.1.2 Weapon and Tool models

- Axe
- Hammer
- Dagger
- Spear
- Torch

6.1.3 Character Models

- Player Character
- Pig
- Boar
- Fox
- Stag
- Wolf
- Bear
- Rabbit
- Skeleton

6.1.4 Environmental Models

- Ship
- Caves
- Pier
- Trees
- Rocks
- Journals

6.2 Animations

Asset	References
Chopping	https://www.assetstore.unity3d.com/en/#!/content/5330
Mining	https://www.assetstore.unity3d.com/en/#!/content/5330
Attacking	https://www.assetstore.unity3d.com/en/#!/content/5330
Walking	https://www.assetstore.unity3d.com/en/#!/content/5330
Idle	https://www.assetstore.unity3d.com/en/#!/content/5330
Enemy animations	https://www.assetstore.unity3d.com/en/#!/content/4990

Table 3 – Animations and corresponding references

6.2.1 All Animations

- Animal animations (walk, run, attack, die, etc)
- Chopping
- Mining
- Walk
- Attack (different for each weapon)

6.3 Sounds

6.3.1 Music

Asset	Reference
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Background Music - Nascence (from Journey)	https://www.youtube.com/watch?v=M3hFN8UrBPw
Menu Music	https://soundcloud.com/broadway-project/the-way-we-were-hugo-boss-bottled

Table 4 – Music used in game and corresponding reference

6.3.2 Sound Effects

All sounds were gotten from free sound effect websites including SoundBible.com, FreeSFX.com, SoundJax.com, and SoundDogs.com. We did not record any of the audio used in this project ourselves.

- Ocean sound effects
- Ambient forest sounds
- Beach sound effects
- Switches being activated
- Switches being deactivated
- Traps being activated
- Animal sounds
- Chopping sound (when woodcutting)
- Mining (when mining stone)
- Rustling (When pulling grass)
- Attack Sounds (When swinging and hitting an enemy)