Flex Friday Exploratory Project Proposal

And/Ore Backend Team

1 Vision

1.1 Purpose

The team's vision for AndOre is a browser centric top down two dimensional MMO. Built to explore machine learning, AndOre requires a robust and dependable server architecture allowing synergistic application of And/Ores team at large. Bringing the team's efforts to fruition requires internal efficient implementation and asynchronous communication between the project and the world at large.
The team is responsible for developing the tools to analyze aggregated data so frontend can further evolve the user experience. The backend ultimately provides a brick-and-mortar foundation to further the game's development.

1.2 Goal

- Implement a communication tool to improve user experience
- Optimise server performance
- Improve gameplay through new game mechanics

2 Approach

2.1 Objectives

- Optimize Server Performance
  - Research server architecture
  - Gain understanding of server tick rate
  - Change server tick rate
- Implement a communication tool to improve the experience of the user

  - Research python communication protocols
  - Add social features such as chat within corporations and general chat
  - Implement a form of identifying players, such as usernames.

- Improve gameplay through new game mechanics
  - Implement sprint feature
  - Implement stamina feature
  - Implement further suggestions from the rest of the And/Ore team

2.2 Team

John Z

John has experience in working on all parts of a software project, and has a million different projects he could be working on, but chose to be a founder of And/Ore due to his interests in Machine Learning, as he eventually wants to experiment in combining it with internet of things, specially due to the connotations. John also has a tendency to write runoff sentences, and thinks Illeism is silly, but that's just what you do in bios.

Caleb Wentworth

Having previously worked on John on an internet of things project, working on backend systems is Caleb's passion. With his C++ & Java skills Caleb will work with John on eventually porting some of the existing codebase later in the year.

Finnigan McDonough

Finn is a ninth grade student who has experience in web fundamentals. He hopes to gain experience with server architecture, and coding in general.

Noah Flewelling

Noah is a ninth grader who has experience in horseback riding and 3D printing. He hopes to learn more about coding and server nodes.

Antonio Custodio

~~Antonio is a ninth grader high school student . He has been programming C++ C# for 2 years. He hasper He plays hockey and skateboards for a living. He plays piano, guitar, flute, dizi, ocarina and violin. He has coded many Xbox 360 stealth servers for a year.~~

Antonio is a ninth grader who's been programming in the C family for more than 2 years. He plays hockey and skateboards for a living. He plays many instruments, including but not limited to: the piano, the guitar, the flute,

the dizi, the ocarina, and the violin. Hes set up many xbox 360 stealth servers for years.

Xander Lemieux

Xander is a ninth grader who has experience in C# due to developing 5 games in unity. He has experience modeling in Maya and Blender, making him a useful resource if there was ever a 3d spinoff of andore. He plays the saxophone, guitar, and launchpad. He also has experience in 3D printing, vive game development, and filmmaking.

2.3 Milestones

- 10/08/16
  - Version 1.4 Release
    - Introduced feeding treats to your neural network.
    - Split up game server for better performance and to introduce the start of multiple playable worlds.
- 10/22/16
  - Version 1.5 Release
    - Bug Fixes
    - The release of sphere, an admin panel for game moderators
    - New feature to heal others/buildings.
- 11/05/16
  - Version 1.6 Release
    - Chat Introduced
    - Bug Fixes
- 11/11/16
  - Prototype of Isometric Art Viewer meant to replace the text representation of objects present in the game.
- 11/19/16
  - Version 1.7 Release
    - Bug Fixes

3 Logistics

3.1 Resources

- Collaboration
  - Slack, Team Messenging App
  - Github, Social Coding & Issue Tracker
- Theory
  - Hal
  - Rob
  - Rubber Ducks
- Learn to Code Resources
  - PyCharm Edu
  - CodeHS
  - codecademy
- Development Tools
  - Linux
    - Ubuntu
  - atom
  - PyCharm
  - SmartGit

3.2 Budget

This is the only budget the entire And/Ore Project has, as these are the only expenses.

Vendor	Item	Cost	Quantity	Total Cost
Digital Ocean	Sleipnir Node	$10/month	1	$10/month
Digital Ocean	Panagoul Node	$10/month	1	$10/month
Digital Ocean	Ulysses Node	$10/month	1	$10/month
Digital Ocean	Reinforced Node	$20/month	1	$20/month
Digital Ocean	Absolution Node	$5/month	1	$5/month
Digital Ocean	Cynosural Node	$5/month	1	$5/month
Digital Ocean	Erebus Node	$5/month	1	$5/month
Amazon	26pc Alphabet Rubber Ducks	$12.36	1	$12.36
				$12.36 + $65/month