Design Document
Version 1.0
May 26th 2011

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Arcanian Design Document

Jack Chang, Howard Lee, Jeb Pavleas, Long Dang, Vince Ly

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Version History

Version 0.1 – April 28th 2011

First version of the document – Template based on link noted in "Links" section

Version 0.2 –May 5th 2011

Updated:

- Name of the game
- UML Diagram
- Edit some text based on where Kelvin commented

Added:

- Gameplay Controller Schematics
- Skills and Projectiles Activity Diagram
- Camera View Prototype Picture
- Game Character Info
- User interface pictures

Version 0.3 – May 12th 2011

Updated:
- Game Genre Section
- Skill and Projectile Section
    - Just some rewording
- Game Characters

Added:
- Game Logo
- Art
    - Fire Arcanian Model
- Game World
    - World Map

Version 0.4 – May 19th 2011

Updated:

- Game Pad Control Schematics
- World Map

Added:

- Game Overview
- Main Focus
- How long the game lasts? Or how long game matches last?

Version 0.5 – May 26th, 2011

Updated:

- Passive Skills
- Removed Cool down System
- How long the game lasts? Or how long game matches last?

Added:

- Skills/Projectile and Movement
  - Technical Points System

Version 1.0 – June 7th, 2011

Updated:
- Removed Mini view Image and changed description, since the feature was removed
- Remove the UI paper prototype image since it was implemented differently
- TP system description
- Controller Schematics

Game Overview

Game Logline
A 2D side scrolling angle shooting game

Gameplay Synopsis
It is similar to Gunbound and Worms (angle shots), but the twist is that instead of a state/turn based game, our game will be done in real time instead and will have different concepts for the player's character, which we call Arcanians.

Game Genre?
MMORTSRPG (Massive Multi-player Online Real Time Shooter Role Playing Game)
Although for now we're developing it as a small local game, we will be expanding it to allow large amount of players to play together.

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Is this single-player or multiplayer game?

Mainly multi-player game

Is this 2D or 3D?

2D

Where does this game take place? (World)

The gameplay itself, the PVP (Player Versus Player) games will take place on one big large map. We will be possibly expanding past PVP to a story line game style which may go beyond a big map, but that will be considered much later on.

What do I control? How many characters? Can I use vehicles?

The player controls one character called an Arcanian. It is very similar to a vehicle, Arcanian if you will.

What is the main focus?

Main focus is to be very creative with shots/skills and defeat other players by reducing the amount of lives down.

How long the game lasts? Or how long game matches last?

Game matches should last roughly 10 minutes. Games should be quick, so that players can move on to the next match to experience new environments.

Comparison

Gunbound and worms present a very similar genre of the game and is a lot of what our game bases the concepts from.

What is unique?

The thing that will make this game unique in comparison to other games of this genre is the fact that the pace of the game will be real time rather than a state machine or turn based type game.

Why create this game?

It allows players to be creative and work together in a more strategic, yet real time game.

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UML Diagram
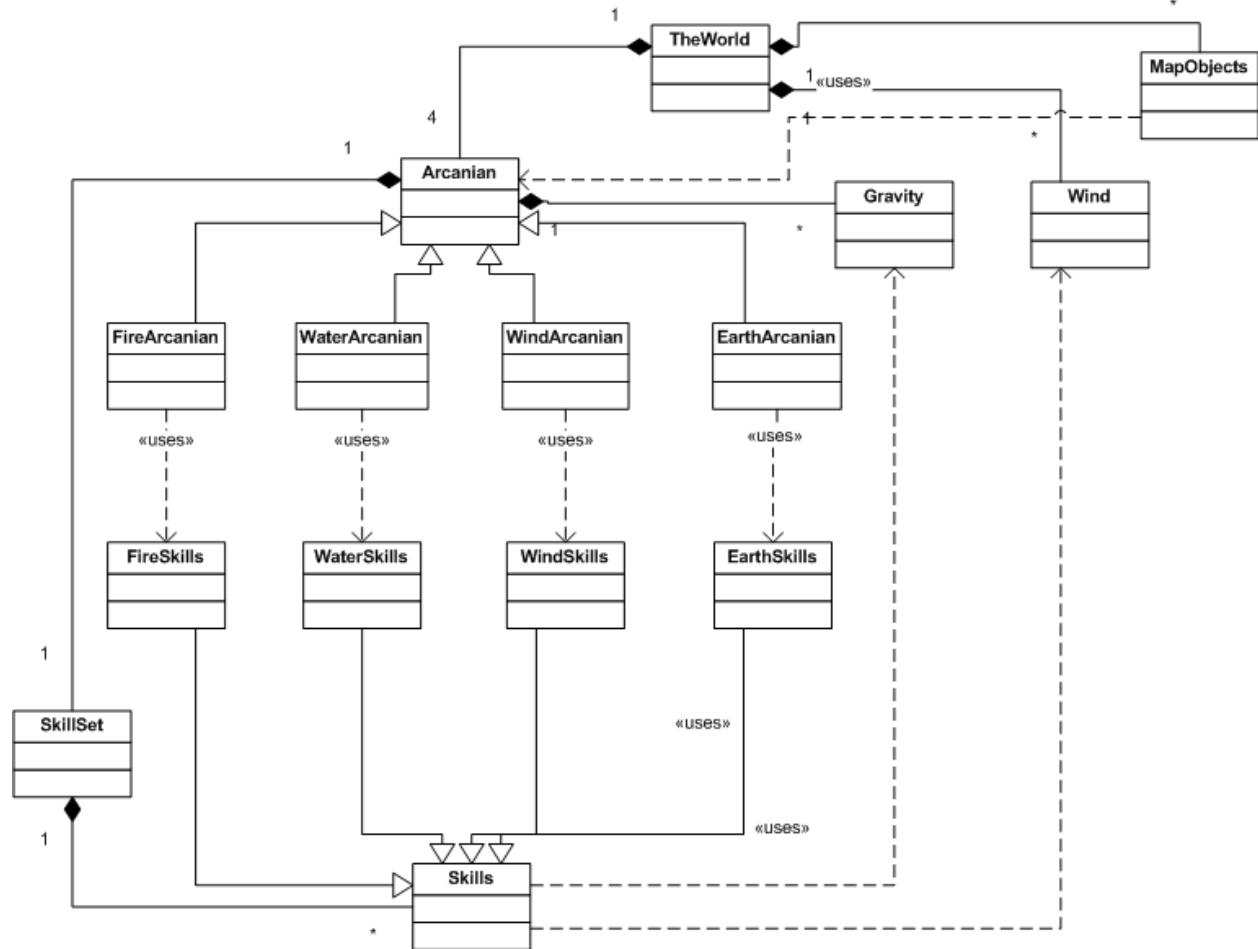
Audience, Platform and Marketing

Target Audience

Teens

Platform

For now we are mainly considering developing on the Xbox360 but other considerations are still up in the air

Language

We will be developing in C# and drawing the main engine based on the custom XNA Library that Kelvin Sung has created and provided for us

Top Performers

The top performers in this type of genre would probably be Gunbound and Worms. Both have been around for a long time however and that is why we feel we can create something new.

Feature Comparison

Finances

This game will be free to play. When the game is published (to play locally) Innovades will be opening a website with a donation button. All profit will not go to anyone individually but will be funds for Innovades to keep expanding. In the future, we want the game to be able to play online and add more features. Adding more Units/Players (Arcanians) and charging customers a small amount to unlock them to use in the game will be the main source of profit.

Feature Set

General Features

- Different Arcanians that allow different styles of gameplay
- Destructible terrain
- User Interface
- Multiple Camera Support
- Multiplayer Support

Multiplayer Features

- Local Multiplayer
- Local Multiplayer over Xbox Live
- Extend to be able to play over Xbox Live

Level Editor

Currently No plans with this regard

Gameplay

Since it is in real time, the player will control one Arcanian. To avoid spamming and balance into the game, a technical points system will limit the players. There will be 4 different types of Arcanians that represent the 4 basic elements: fire, water, wind, and earth. For this class, we are going to focus on team battles (instead of free for all), they will share extra lives.   There will be a total of 8 players/units per game, since we are making this a local game; it means we will be making 4 AI controlled players/units to play against the human controlled units 4v4. Two ways to win/lose (which I have not decided is the best way) is either when a team lose all their extra lives (this mean game ends all at once) or when a team lose all their units in the game (this

means if there are no extra lives then the player can't re-spawn and have to wait till the game is over).   Of course we will be allowing the option to play 2v2, which will be our initial aim for our prototype.
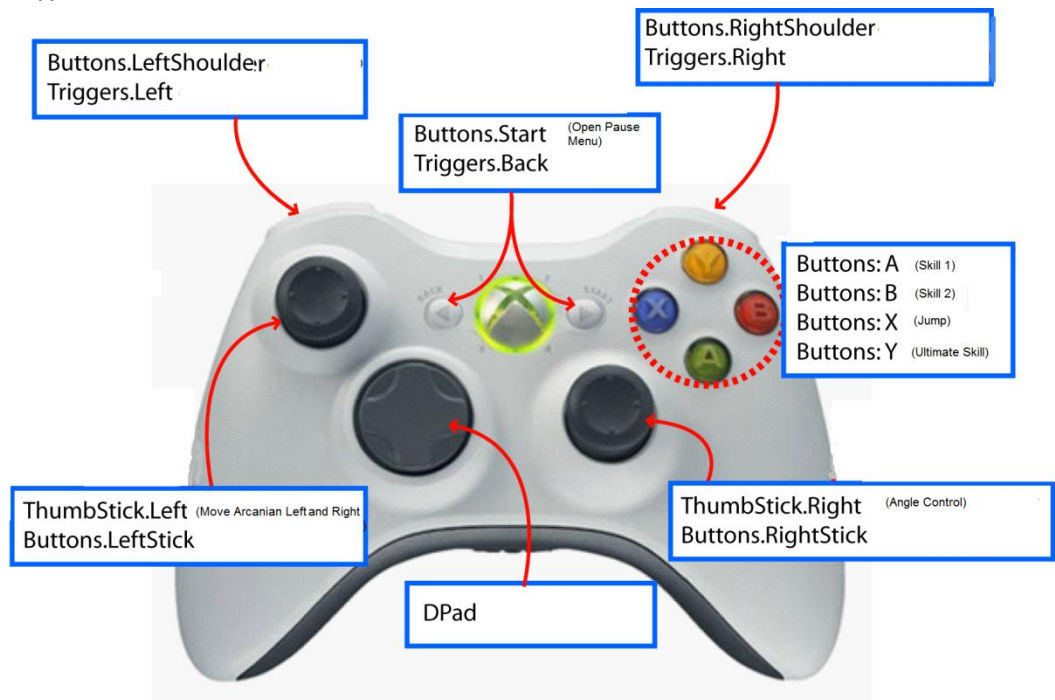
Skills/Projectiles and Movement

The technical points system (TP) limits the players to balance the game. Players start with a certain amount of TP which decreases when the player moves or uses a certain skill. If they do not have enough TP then they cannot move or use another skill. If players do not perform any action for a certain amount of time then TP fully restores (a TP cycle). TP will also regenerate slowly, so that players do not completely feel restricted.

These are projectiles attacks that will be shooting from our player/units. To use a skill/attack you need to 3 things: a position, an angle, and power. Each all player/units will have two basic skills, one ultimate skill, and one passive skill. The skills are picked out from their specific elemental skill tree, depends on which elemental Arcanians you use. This allows customizations for your Arcanian, so we will need a way for make change in the game lobby (pre-game waiting room). Skills/Attack properties will be unique depending on the element. The biggest difference between our game and state based games like Gunbound, is that we will have to deal with skill/attack collision! Since our Arcanians will be too slow to dodge, it means it can only block skill/attack by using a skill/attack themselves.

Each Arcanian will have a skill set (2 normal, 1 ultimate, 1 passive)
All skills will have their own angle ranges.
Normal skills will vary between strength and the higher the strength, the longer that cool down/reload time to use the skill again.

An ultimate attacks start 0% charged at the beginning of the game and slowly builds up.

A passive skill gives Arcanians additional boosts to itself and other Arcanians near it, which can stack.

- **Fire Skills** - Initially starts condensed and explodes on contact of Arcanians or map objects. Fire does the most destruction to map objects
  - *Normal*
    - Fire Ball - a single fire projectile that explodes on contact. The closer to the source of the explosion, the more damage.
    - Multiple Fire Ball - Shoots 3 Fire Balls at different angles.
  - *Passive*
    - Anti-Shield - double damage to shields.
  - *Ultimate*
    - Mega Fire Ball - similar to fire ball but gives a giant explosion.
- **Water Skills** - Initially starts expanded and can condense together after a certain amount of time or position of the projectile
  - *Normal*
    - Water Stream - a single stream of water that moves in a sin motion initially, but starts straightening out after reaching the peak height.
    - Multiple Water Stream - two streams of water that starts converging to one after reaching the peak height.
  - *Passive*
    - Regeneration - very slowly heals a small part of HP.
  - *Ultimate*
    - Ultimate Water Stream - similar to Multiple Water Stream but shoots four steams instead.
- **Wind Skills** - More affected by the winds of the map, allows projectiles to change directions easily and can gain additional velocity (increasing damage).
  - *Normal*
    - Wind Blade - a single projectile heavily influences by the wind on the map.
    - Multiple Wind Blades - 3 wind blades back to back at the same angle.
  - *Passive*
    - Increase Mobility - allows Arcanian to move faster
    - Glide – allows Arcanian to move during falling state
  - *Ultimate*
    - Change Wind - randomly changes wind direction and speed of the world/map
    - Mega Wind Blade - a single wind blade that either does massive damage or creates a tornado wall
- **Earth Skills** - Can shoot projectiles underground. Projectiles also nearly unaffected by wind.
  - *Normal*
    - Earth Cannon - a projectile that is unaffected by wind, but heavily affected by gravity. Small explosion when lands.

- - Earth Mole - a projectile that shoots from underground (angle is downward instead). Gravity is reversed for this skill, small explosion when projectile reaches surface.
    - *Passive*
      - Increase shield - double the shield strength
    - *Ultimate*
      - Ultimate Earth Canon - a projectile that ignores and passes through all map objects. Can damage and go through many Arcanians.

The Game World

Overview

World Map:

The setting takes place on an island that is divided by four different lands, which represents an element.

During gameplay the world will have gravity and wind that will affect the player and the skills/attack, but map objects will not be affected by those 2 forces. Map objects are terrains

that allow players to move around on. They can also serve as obstacles. If a player is not on a map object then they fall out down, out of the world and automatically die. The hardest part about implementing map objects is making them destructible by skills/attack.

Key Locations

There are 4 lands each have their own elemental village: The Village of Fire, The Village of Water, The Village of Wind, and The Village of Earth. A key location is the mountain at the center, which will be the key to the storyline of the game, when the game is expanded.

Travel

Scale

Objects

Destructible Terrain

Weather

- Wind Class – Force at any random direction that only affects particles
- Tornado Wall Class – A vertical object that affects projectiles

Day and Night

Time

Time is a factor here. Each of the Arcanians abilities will have some sort of cool down preventing them from using their skills or move until a certain time period has passed. We have to incorporate this notion due to the fact that the game is real time.

There is also a consideration in the pace of the game, since it is a real time game; pacing is going to be a very important aspect of the game in which we need to consider with great detail.

Water

Other Elements

Camera

Overview

There is one main camera view that fits all players in. It will zoom in and out depending on the location of the players.

Game Characters

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Overview

Our hero/units are called Arcanians. There are 4 different types of main Arcanians: Fire Arcanian, Water Arcanian, Wind Arcanian, and Earth Arcanian. There will be other special Arcanians to create in the future, but for now we will be focusing on the 4 main ones.

All Arcanians will have:

- o   Angle meters, which allows players to see what angle they are aiming at.
- o   Power meters which determines the initial velocity of a skill.
- o   200 points of heath (HP)
- o   50 points of shield, which recovers fully after a period of time
- o   Arcanian movement speed, they will be moving slowly, only left and right.

CSS 490b Final Project - Element System
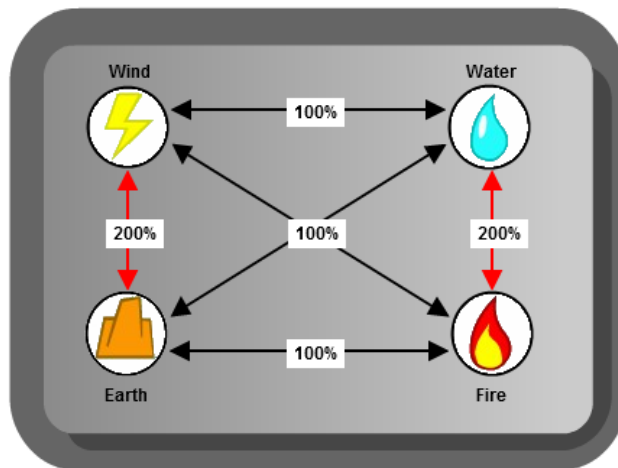
There will be a rival system, fire and water are strong against each other, and wind and earth are strong against each other too. If a Arcanian is hit by their opposite element, then it automatically pierces (ignores) a Arcanian's shield.
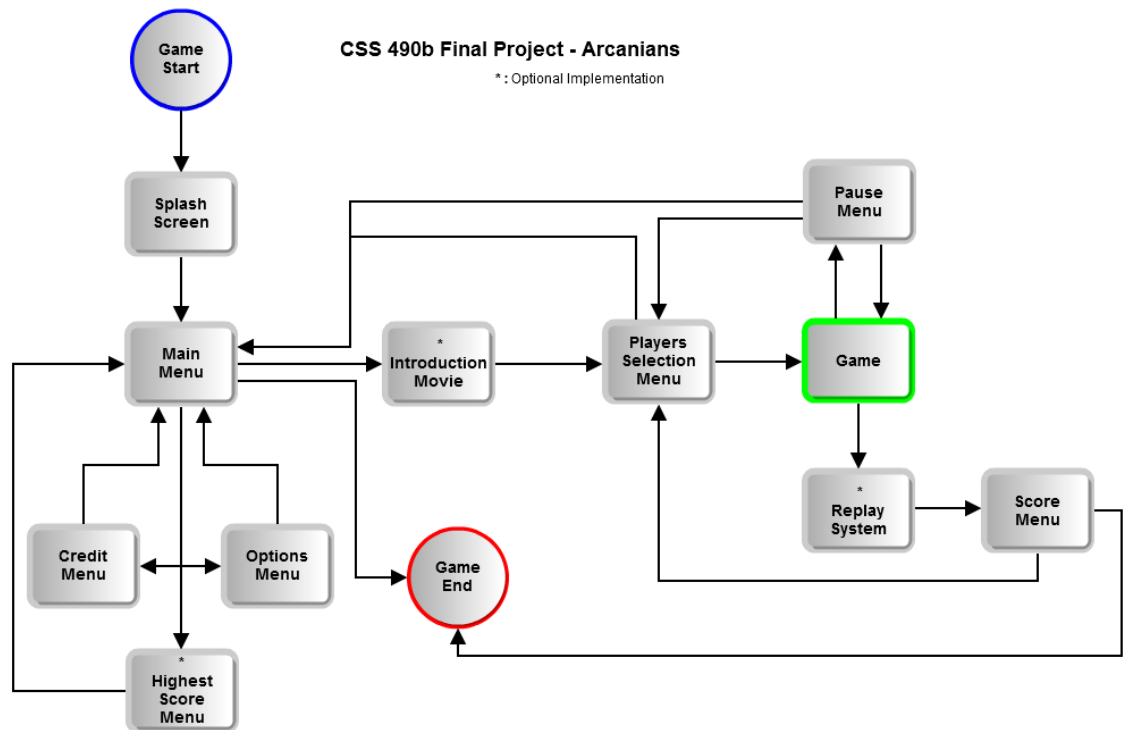
Character Creation

Enemies and Monsters

User Interface

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Overview

There are some elements of the user interface that we will need for our game design:

- Main menu, you'll be able to choose the type of game play, view the credits, view the introduction movie, set any option, view any high scores, and any other elements that we feel should be on the main menu.
- There should be some sort of player selection screen where the users can select the Arcanian they wish to use.
- There will be a replay system where they can view past games that they have played
- There should be a pause menu allowing the user to navigate back through various menus.
- The game itself will have a lot of UI elements but we have no decided on the specifics.

Details

Objects

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Overview

Weapons

Items

Equipment

Other

Music and sound effects

Overview

Details

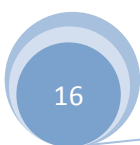**Music Tracks**

Sound Effects

3D Sound

Other

Art

What kind of style will be used in the game?
> The graphics will be anime style based. It will be soft and simple.
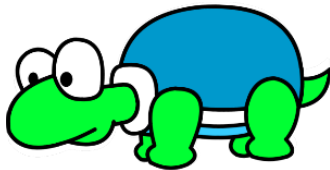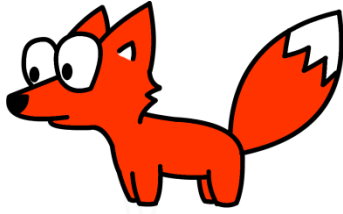

Needed Building Models

Scenery Models

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Character Models

Vehicle Models

Particle Effects

Other

Single-Player Game

Overview

With this regard we may offer some sort of tutorial or training area that allows one player to shoot at a target, this is probably going to be similar to the Angry Birds concept in which you progress by completing different levels.

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Details

Story

Victory Conditions

Just completing the single player missions and destroying the targets is about all that we can think of right now

Multiplayer Game

Overviews

Focused on Team Battles

Free for all is considered for later

Max Players

8 Players

Servers

Customization

Is the world persistent or not

Saving and Loading
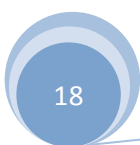
Scores

Chatting

Clans

Resources and Links

Links related to resources

Design document based on this template:
http://courses.washington.edu/css490/2011.Spring/DesignDocTemplate.doc

InnovadesLogo.png

Logo template obtained from: http://www.clantemplates.com/free_logos/

Modified by Jack Chang using Photoshop CS5

doh.wav, holy.wav, SelectionMenu.wav

Obtained from: http://opengameart.org/

Credits.png, Options.png, NewGame.png, KelvinMode.png, Exit.png, Eye.png

Made by Jack Chang using Paint.Net

ExplodeA.png, ExplodeR.png, ExplodeC.png

Base Picture Obtained from: http://polygonwrangler.deviantart.com/?offset=30#/d36xe9s

Modified by Jack Chang using Paint.Net

XNA Library from Kelvin Sung and modified by Nick H

Extra Miscellaneous Stuff

Overview

Crazy Ideas