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Design Documentation

The Network

Contents

Introduction

This design document shall detail all design and planning aspects, relating to the game *The Network.* The structure and continents of this document have been based heavily on the work of Tracy Fullerton (2008, p394 – 399). She goes into great detail about what should be included in a design document. However the main points she gives in her section on design documents are these, that a design documents whole point is "communicating the overall vision of the game itself to each and every team member" (2008, p395) and "a good design document needs to contain all the details required to create a game" (2008, p395). This document attempts to honour these statements, it may not go into the deepest detail about everything, but it at least provides an inkling of the direction these areas should be taken in.

High Concept

A social networking dungeon crawler, set within a fictional computer network. It puts an emphasis on networking between players.

Overview

The game is part social networking, part dungeon crawler. It is set within 'The Network' a fictitious online space the players are connected too via their Android phone. The main aims of the game are to gather more friends, complete dungeons, collect abilities, and collect items to decorate the player's avatar & home. All which are interlinked with each other at some level.

Gameplay Overview

Players begin the game and are welcomed to 'The Network'. They are asked to sign in using their Facebook account and then are asked to name and create their avatar. Late in the game players will have access to thousands of customisation options, but at first there are relatively few. Players will start in their Home Network. A fully customisable space belonging to the player, again this starts with very few options, more becoming available over time. The items for customising the player's avatar and Home Network can be obtained through

the exploring and liberating Infected Networks, being bought in the NetStore, and as gifts from other players.

Next players will have their Facebook friend lists searched, automatically networking with players whom are also playing the game. The player's avatar will then be installed with. The networks that a player are connected too shall be shown in the 'Networks' menu. The more networks a player is connected to, the more PP (Processing Power) the player shall have. PP is a stat that does a wide number of things. The more PP a player has, the bigger their home network becomes. This allows a player to put up more decorations. It also has heavily effects the gameplay. The higher the players PP, the higher tier cores they can equip, and the higher level Infected Networks can be accessed. Infected Networks are the dungeons of the game, players have to use their Offensive Cores to delete viruses and liberate the network. Liberating a network connects it to the player's home network, providing them with more PP. In some Infected Networks players will encounter bosses that cannot be defeated by them alone. When this happens players will put out a call to arms. Players that answer this call shall travel to the dungeon and deal as much damage to a boss as they can. When enough damage has been dealt, the boss shall be defeated and all players will be able to advance to the next floor.

There are three categories of core: Offensive, Defensive, and Hacking. Each core raises its corresponding stat: Attacking, Defending and Hacking, as well as providing the player with abilities. Another social aspect of the game is the forging system, as it requires two people. Each player chooses a core of the same category to merge together, and two more powerful cores are created.

Game Structure

Home Network

Players start the game here, and return here after dungeons. It is essentially a physical menu screen, yet also the player's personal space which they can customize. Players navigate the space using a virtual joystick on the bottom left corner of the screen, and interact using the interact button on the bottom right of the screen. There are a number of things that can be done/ accessed from here, players can:

- Use the network terminal to send a friend a gift, a message, or visit their home network.
- Use the data forge to start a forging session with a friend.
- Use the home terminal to customize their avatar and home network aesthetically, as well as change the cores the player has equipped.
- Use the data highways to travel to an Infected Network.

Infected Networks

The controls here are slightly different. The player still has a virtual joystick situated on the bottom left of the screen, but instead of an interact button, the player has three buttons that contain images of the three cores they have equipped. Touching these allows the player to use the ability associated with the core. The Offensive Core will deal damage in various ways. The Defensive Core will cast defensive buffs on the player, or act as a block or counterattack. The Hacking Core will provide the player with buffs, debuffs and damage over time effects. Combat shall happen in real time, with the Offensive Core being used the most, basically as the characters weapon. The other two cores shall be used mainly in support roles. In the stead of health or hp, as found in most games the player shall have a stat called DI (Data Integrity), as the player is attacked, or hit their data becomes more and more corrupted by the viruses. This stat is represented by a percentage in the top left corner. When it reaches one hundred percent the player's avatar is deleted, the link to the dungeon is severed and the player is returned to the home network were they awaken a backup of their avatar. The player loses all items collected during the dungeon if this happens.

The player shall also have two smaller buttons on screen. One next to the joypad witch shall pause the game and open the menu, and one next to the abilities which allows the player to data refresh, i.e. uncorrupt their data. There is a limit of 10 times this can be used per Infected Network, although players may find data to refresh this throughout the networks. When a player deals enough damage to a virus they are deleted, leaving behind data which the player absorbs to uncorrupt part of their data, Junk Data which can be used to buy goods from the NetStore, Cores, Appearance Data for customising the avatar, and Home Data for customising the home network.. The chests or treasure containers of this

game are called Data Discs and are represented by a floating, rotating disk, with a circle of binary floating around it. Players access these by touching them. They can contain Junk Data, Cores, a data refresh usage, Appearance Data, Home Data or any combination of them all.

Forging

The forging system uses a core each from two players, to create a better core for each of them. This is done through a player accessing their Data Forge, choosing a core to forge with, and then inviting a friend to forge with them. The friend receives the invite and can see what core Player 1 is wanting to forge with, if they accept they choose what core they want to forge with, and the process is complete. Both players then receive a core depending on which two cores they combined. An example is shown below with the tables for the Offensive Cores.

Player 1's cores

Player 2s cores	Slash v1.0 *Edged Melee*	Punch v1.0 *Bludgeon Melee*	Shot v1.0 *Pierce Ranged*	Throw v1.0 *Fling Reach*
Slash v1.0 *Edged Melee*	Slash v2.0 *Edged Melee*	Stab v1.0 *Edged Reach*	Scattershot v1.0 *Edged Reach*	Spear v1.0 *Edged Reach*
Punch v1.0 *Bludgeon Melee*	Stab v1.0 *Edged Reach*	Punch v2.0 *Bludgeon Melee*	Cannon v1.0 *Bludgeon Ranged*	Catapult v1.0 *Bludgeon Ranged*
Shot v1.0 *Pierce Ranged*	Scattershot v1.0 *Edged Reach*	Cannon v1.0 *Bludgeon Ranged*	Shot v2.0 *Pierce Ranged*	Throwing Knife v1.0 *Pierce Ranged*
Throw v1.0 *Fling Reach*	Spear v1.0 *Edged Reach*	Catapult v1.0 *Bludgeon Ranged*	Throwing Knife v1.0 *Pierce Ranged*	Throw V2.0 *Fling Ranged*

Table 1 - Table showing how tier 1 cores combine into tier 2 cores

	Slash v2.0 *Edged Melee*	Punch v2.0 *Bludgeon Melee*	Shot v2.0 *Pierce Ranged*	Throw v2.0 *Fling Ranged*	Stab Scattershot Spear v1.0 *Edged Reach*	Cannon Catapult v1.0 *Bludgeon Ranged*	Throwing Knife v1.0 *Pierce Ranged*
Slash v2.0 *Edged Melee*	Slash v3.0 *Edged Melee*	Stab v2.0 *Edged Reach*	Scattershot v2.0 *Edged Reach*	Spear v2.0 *Edged Reach*	Javelin v1.0 *Edged Ranged*	Arrow v1.0 *Edged Ranged*	Shuriken v1.0 *Edged Ranged*
Punch v2.0 *Bludgeon Melee*	Javelin Stab v2.0 *Edged Reach*	Punch v3.0 *Bludgeon Melee*	Cannon v2.0 *Bludgeon Ranged*	Catapult v2.0 *Bludgeon Ranged*	Tonfa v1.0 *Bludgeon Reach*	Shot-put v1.0 *Bludgeon Reach*	Mace v1.0 *Bludgeon Reach*
Shot v2.0 *Pierce Ranged*	Scattershot v2.0 *Edged Reach*	Cannon v2.0 *Bludgeon Ranged*	Shot v3.0 *Pierce Ranged*	Throwing Knife v2.0 *Pierce Ranged*	Rapier v1.0 *Pierce Melee*	Claw v1.0 *Pierce Melee*	Dagger v1.0 *Pierce Melee*
Throw v2.0 *Fling Ranged*	Spear v2.0 *Edged Reach*	Catapult v2.0 *Bludgeon Ranged*	Throwing Knife v2.0 *Pierce Ranged*	Throw v3.0 *Fling Ranged*	Takedown v1.0 *Fling Melee*	Cannonball v1.0 *Fling Melee*	Hidden Blade v1.0 *Fling Melee*
Stab Scattershot Spear v1.0 *Edged Reach*	Javelin v1.0 *Edged Ranged*	Tonfa v1.0 *Bludgeon Reach*	Rapier v1.0 *Pierce Melee*	Takedown v1.0 *Fling Melee*	Stab Scattershot Spear v2.0 *Edged Reach*	Lazar v1.0 *Tech Ranged*	Sonic Shot v1.0 *Tech Ranged*
Cannon Catapult v1.0 *Bludgeon Ranged*	Arrow v1.0 *Edged Ranged*	Shot-put v1.0 *Bludgeon Reach*	Claw v1.0 *Pierce Melee*	Cannonball v1.0 *Fling Melee*	Lazar v1.0 *Tech Ranged*	Cannon Catapult v2.0 *Bludgeon Ranged*	Force Palm v1.0 *Magic Melee*
Throwing Knife v1.0 *Pierce Ranged*	Shuriken v1.0 *Edged Ranged*	Mace v1.0 *Bludgeon Reach*	Dagger v1.0 *Pierce Melee*	Hidden Blade v1.0 *Fling Melee*	Sonic Shot v1.0 *Tech Ranged*	Force Palm v1.0 *Magic Melee*	Throwing Knife v2.0 *Pierce Ranged*

Table 2 - Table showing how tier 2 cores combine into tier 3 cores

The abilities *Slash, Punch, Shot,* and *Throw* on each axis are the cores that start the forging process. The cores they create when combined are signified by were they cross of the table. The Keywords describe the type of ability it is, as well as its range. They are also an integral part of how they combine. The type being taken from one core. The range is simply balanced throughout the tables so that the combinations do not repeat themselves. The colours on the table signify the archetype of a core. When a core combines with itself it simply creates an upgraded version of itself, hence the same colour is used. When they combine into something new they fit into an archetype as defined by the colours in the table. Archetypes have same the keywords as each other, and so are fundamentally the same, however each core is named based on two cores that combines to make it, to keep a feeling of consistency and theme. The name of a core also changes its graphic in game. These archetypes are also used to make forging at the next level simpler.

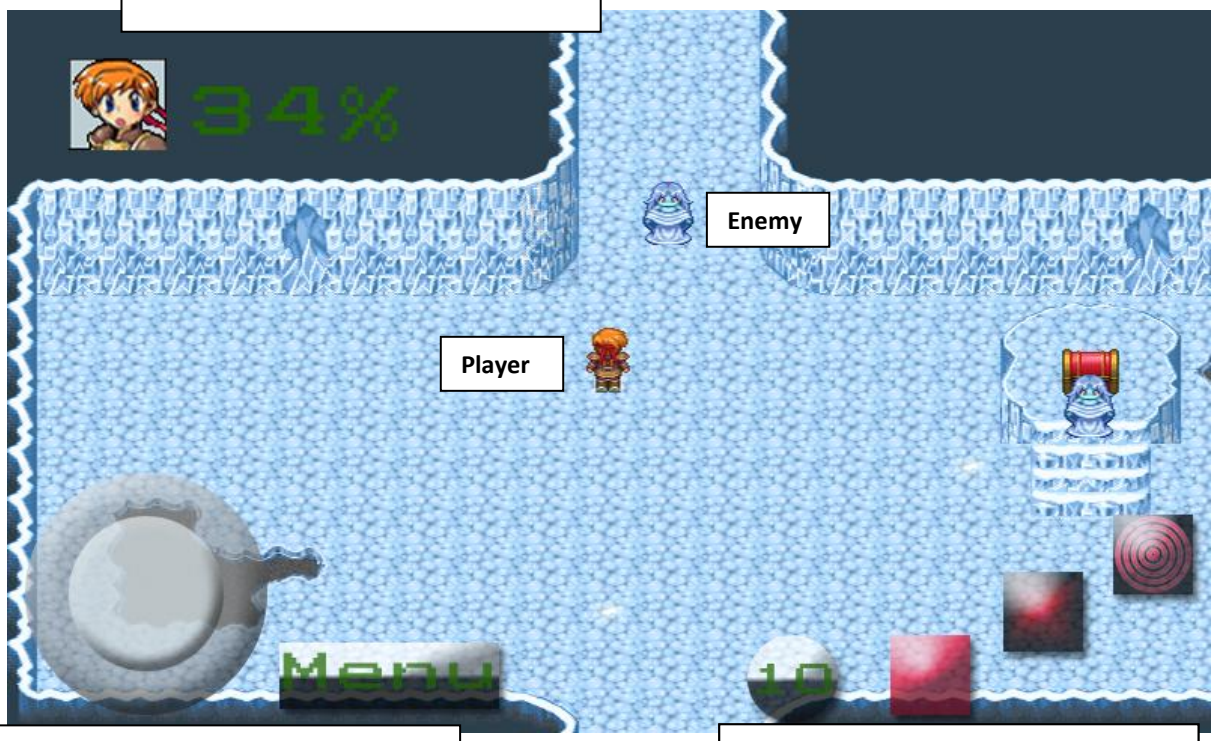
Controls and User Interface

A very mock up of the interface has been provided below. Images used are from the program RPGmaker XP and in no way indicate the look of the game itself. This example is provided for interface purposes only.

Data Integrity

Essentialy the health of the player. This is a percentage showing how much the player's avatar has become corrupted by the viruses. If it reaches 100, the avatar is deleted.

Figure 1 - Example Interface



Virtual Joypad and Menu

This is how the player moves. The player drags the middle circle in the direction they would like the player to move. Pressing the Menu Button opens the menu.

Cores and Data Restoration

The cores the player has equipped. Touching them activates their abilities. Touching the Data Restoration Icon reduces a players data corruption to 0 expends one of its uses.

Story & Gameplay Matrix

There is not much of a story in *The Network*, just a premise, having an avatar explore computer networks and liberating them. This fact, combined with the amount of character customisation available means that the players shall bring about the story. They shall bring out an emergent narrative through their actions.

Enemies

Enemies in this game work in a very similar way to most Dungeon Crawlers. There are many different types of enemy, that each have their own strengths and weaknesses. There shall be different tiers of each enemy, the higher the tier, the stronger that version of the enemy is. This shall be signified by colour changes to the enemy texture. This is so that players will be fighting stronger enemies when in higher level infected networks. Examples six different enemies will be given below.

Goblin

This is the most common form of virus found. It looks like a stereotypical fantasy goblin. They are rather week offensively and defensively, but they tend to attack in groups, which can sometimes overwhelm their opponents. Offensive Cores which can attack more than one enemy are well suited against them.

Ping Pong

This small virus is simply a pong bat which bounces an unlimited supply of pong balls at the player. They are annoying, but cause a relatively small amount of corruption. They are best defeated through using a defensive core to bounce the ball back at them a few times, or with strong long range cores.

Bomber

This virus looks like mischievous monkey. It throws bombs at the player from afar. The easiest way to deal with this is to throw the bomb, or deflect it back. It has relatively weak defensive data, and can also be taken out with other attacks. The bombs it's throw deal a high level of corruption, so the player must try their best to avoid them.

Spyware

This sneaky virus makes itself invisible, sneaks up on the player and attacks from behind, dealing a small level of corruption. It then makes itself visible, and proceeds to attack the player with a copy of whatever offensive core they have equipped. There are two main ways to deal with this. Notice it sneaking up on the player (when invisible is still has a small shadow), and take it out. Or defeat it with normal attacks when it is visible. When visible it takes the form of a floating trench coat, sunglasses and a hat.

Trojan Horse

This devious virus hides itself inside Data Disks, unleashing itself when you access them. It is a metal horse on wheels with strong offensive data. Players can avoid them if they do not access any Data Disks. They are most easily defeated with piercing attacks.

Creeper Worm

This is an annoying segmented metal, worm type virus. It leaves half its body above the ground, wiggling and taunting the player. As soon as the player gets near however it redraws into the ground and then springs out of the ground underneath the player, wrapping around and trapping them. This causes a small amount of damage to players over time, but more importantly it leaves them vulnerable to attack by other viruses. To kill them the player must either attack from long range before they burrow into the ground, or quickly step back before they pop out of the ground, and hit them with a close range attack when they do.

Dungeons

Being a dungeon crawler there shall be many different dungeons throughout the game, each with their own theme, which shall affect its aesthetic design of them, and the type of enemies found within. Examples of a few shall follow:

Heating System

Dungeon is themed around fire, full of pipes, fire, grills and flammable gasses. Viruses follow suit, many of them being on fire/ and or attacking with fire attacks, they will look alot more industrial than in other dungeons.

Air Filtration System

Dungeon themed around air and cleaning. Full of wind and clouds. Viruses are themed around wisps of air, clouds, gasses and cleaning apparatus.

World Time System

Dungeon themed around clocks and time. Digital and analogue clocks will be plastered to every surface, showing a variety of different times. Viruses will also be themed around clocks and time, may have bombs with countdowns etc.

Objects & Items

There are a few different types of items in *The Network*:

- Junk Data
    - The currency of *The Network,* spent in the NetShop
- Data Restoration Uses
- The three types of core
    - Offensive
        - Weapons and abilities used to attack with.
        - Examples of the Offensive cores are given in Tables 1 and 2 in the section on forging.
    - Defensive
        - Shields and abilities used to defend.
    - Hacking
        - Abilities which are used to buff, debuff and more.
- Appearance Data
    - Used to customise the avatar's appearance.
- Home Data
    - Used to customise the appearance of the Home Network.

Rules

- Players can move throughout the game world using the virtual joystick.
- They can interact with objects in the Home Network by tapping the action button.
- Players can customize their avatar and Home Network through a terminal in the Home Network.
- Players can forge Cores with other players.
- Players can travel to Infected Networks.
- In Infected Networks players can damage enemies and use other abilities by tapping the three cores on their screen.
- They can pick up any items on the screen by walking over them.
- Walking near a Data Disc opens it.
- Pressing the menu button opens the menu, were players can suspend gameplay, or return to their home network.

Graphics Style & Rendering System

The game shall be developed and published using the Unity3D game engine. Unity renders 3D graphics using the two systems Direct3D and OpenGL, both of which are 'next gen' rendering systems. The graphics shall have to be limited however due to that fact that the game is being created for a mobile platform, phones that run Android.

The graphical style shall be stylised, making use of simple objects and textures drawn in a cartoon-like style. The style of the environments and characters shall borrow very heavily from science fiction which explores computer networks.

An example game that the graphical style could be comparable too would be Samurai II, as shown below.

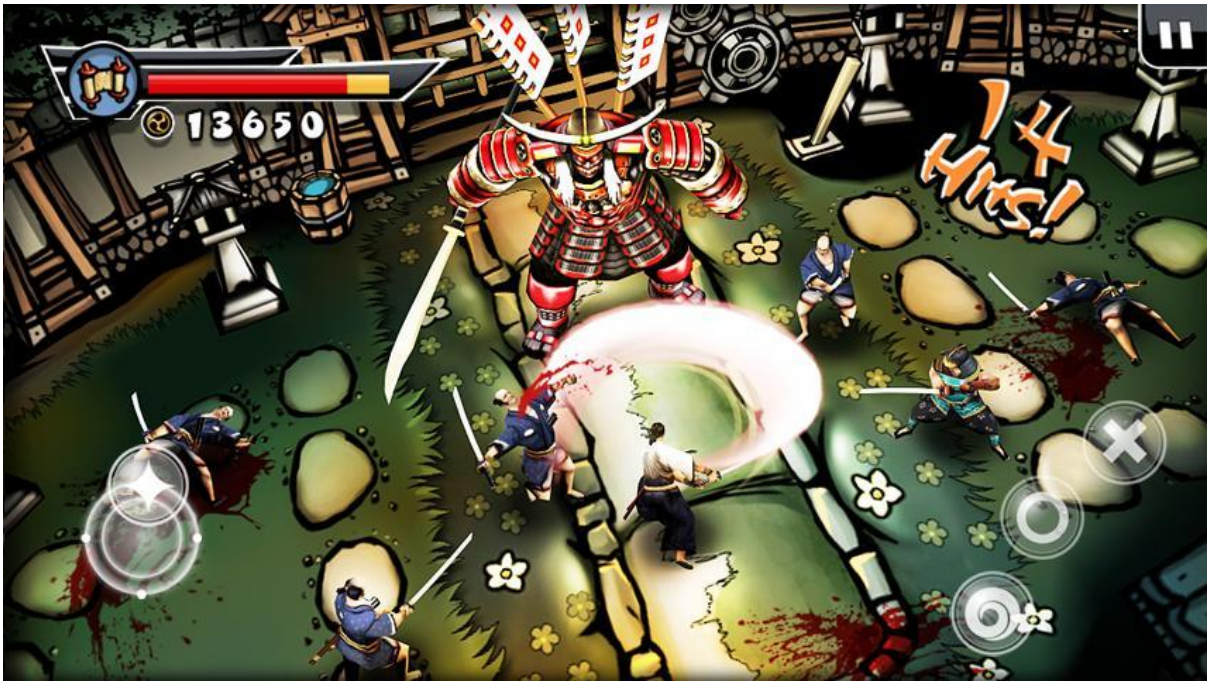


Figure 2 - Samerai II by Madfinger Games

Music & Sound Effects

Music and sound shall be not be created by the team, but will be outsourced to an experienced Sound Engineer. All music shall be provided as loops. An example of some of the music needed for this project, and the feel of them shall be detailed below:

- Home Network loop
    - Happy sounding. Should make the player feel at home, yet still sound rather technological.
- Forging loop
    - This should sound very data-like, synthetic, yet give rise to sounds of creation.
- Character Customisation loop
    - A slightly edited version of the Home Network Loop, should sound more fun.
- Home Network Customisation loop
    - Should sound like data is being processed.
- 10 different dungeon loops
- 6 different battle loops
- 3 boss battle loops

Sound effects needed shall include:

- Loading jingle
- Menu sounds
- Customisation sounds
- Forging sounds, and a forging complete jingle
- Ambient Data Disk sound
- Data Disk collection sound
- Player battle noises
- Enemy battle noises
- Player movement noises
- Enemy movement noises
- Door unlocking noise
- Network Liberated jingle

Bibliography

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