OutBreak

iPhone Platform



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# Customization:

One of the key elements to our design enables users to customize each aspect of the game, from the virus avatar look, statistical data, player infection, and player healing. Giving players the ability to customize their character look-and-feel makes them feel more unique and special.

## Virus Design:

The virus design will be sleek and simple, designed using bind points and vectors to allow movement and mismatching among different parts. Each body will have bind points and default directions for all pieces. Each piece that attaches to the body will use the appropriate bind point and direction vector. By doing this, it allows not only a large library of mismatched accessories but it also lets us easily add items at will. As well, using this method helps to give animation to the avatar, which makes it seem as if the Avatar has come to life for the user. The players will be able to choose the basic shape of their virus and choose its limbs, eyes, and more. In Alpha and Beta, unfortunatelythere may only be a few options. However once it is up and running, it should be a simple matter of downloading more avatar bodies and accessories in patch. The advantage too this design is that it allows for scaling down the road.

## Virus Point Allocation:

Point allocation is in the early design phase, but the basic premise is that a player will have a number of points to allocate to a virus making each virus unique. The player will have two hundred point scales for the virus allowing a total of two-hundred points. One will be the viruses spread system and the other will be the virus infection system. Given each system is allowed five categories to allocate the hundred points system, there could be a multitude of combinations.

# Defenses:

## Building Antibodies:

Building antibodies will follow the same design and point allocation as the virus, thus allowing a simulation of the antibodies fighting the virus. If the antibodies are strong against a particular type of virus, the player will either not get sick or their infection time could be shortened.

## External

External defenses will follow a check and balance system to determine if a virus can infect another player. Depending on which external defense a player holds will allow him to be able to defend against incoming virus attack. External defense might be something that is awarded to a player for achievements or to spend points on. No player would be able to become immune, but it allows them further customization.

# Symptoms:

Symptoms boil down to three manin categories: Spread, Zone, and Severity. Spread concerns an active symptom that will ??? every so often happen, such as a cough or sneeze. Zone deals with things left behind by a sick person such as vomit. If a sick person is left to the same area too long they will make that zone infected for a certain amount of time. After the ‘hot zone’ has expired, the area cannot be a hot zone for a certain amount of time. Each of these will have three types, high medium and low. High means low range but faster and more likely results, while low means large range but weaker results, with medium being somewhere in between. Severity deals with unique effects of your virus, an example being a fever, which would extend the lifetime of your virus on somebody by a certain percentage.

# Remedy:

## Cures

Curing a virus infection will only be accomplished by the players. Our team liked the idea of implementing a mini-game into the game design. We think curing a virus is a good place to implement such a concept. Another option is to have a player successfully diagnose the virus and apply the right remedies to shorten the length of time of an infection.

## Time

A player will be able to reduce the time of infection with proper diagnoses or by having anti-bodies that would be able to fight off the infection. However once a player is infected, there will be a finite amount of time for the infection to mimic virus propagation. Virus propagating will be something that we can store on our data-base system that researchers would later be able to use.

# Communication:

Our game will be communicating directly with a web server. Communications with this server will mainly be geo-location data for given symptoms and events. For the spread symptoms locally a timer will go off every so often depending on the stats of the virus to have either a sneeze or cough. This will then send location data along with the radius of the event. The server will then find people in range and send each of them the virus and its range to be checked against their defenses to be infected. Zone infections work a bit differently. If a person is in a certain location for a given amount of time that zone will then be a ‘hot zone’. This will be sent to the server and registered on a hot zone list with the virus, its range, and the location of the zone. Every so often people will be syncing their location with the server automatically and if on one of these updates they are found to be within a ‘hot zone’ they will be sent the virus, and its range/location to be checked against their defenses. If a person becomes infected the owner of the virus will be rewarded through the account and stat tracking system in the server. The server will be in charge of keeping track of everything. It acts as a medium for all communication for devices, along with tracking account information and ‘hot spots’. NOTE

# Cross Platform

Using the geo-location that is imbedded into the majority of smart-phones is a key to our hot zone design. If we go off the location of two phones to determine infection, then it will help to speed up the time of cross platform infection (E.G. android, windows7, iphone). By doing this it also eliminates the need for having phones speak to each other, which is limited not only by the number of devices. An additional consideration is the interference of other devices, which could prove to be slow to implement, as well as cumbersome due to the use of passwords. We will also attempt to use the Bonjour networking protocols to help implement of cross platform.

JHL: Nice descriptions. I think that I understand the activities within the game, but I’m missing the thrills of the game. I’m also missing a discussion of scoring and other basic aspects of games.

You scored points with me in terms of your section descriptions, as well as the layout of this document. I was particular intrigued by your clever use of virus graphics in your original presentation, and feel that using them here would have made this a better document.

Another missing piece is any serious consideration of your overall system design. A graphic to show the server-side and another for the client-side would have worked well in this case.