Sonoma State University
Computer Science Department
CS 330 – Spring 2014 – Watts

Project 2 – Game Design Document

Title: Tranceform

Author(s): Kenji Johnson

Genre: Side-scrolling Shooter

Player mode: Single

What is the goal of the game? Score as many points as you can my shooting down enemy ships while avoiding fire.

Describe the game screen: The game presents the side view of an air and ground space. The player can fly around freely as wells as transform to a ground vehicle to escape enemy fire. Enemies spawn on the right, while the player is on the left.

Describe the initial set up employed by this game: The player starts on the left with five hit points. There is infinite ammo for infinite enemies. However, in ground form, the player has only access to three screen clearing missiles.

Describe the rules of the game: The player uses directional keys to move around a 2D space to avoid fire. Each enemy shot takes 1 hit point away from the player's five starting points. Colliding with an enemy ship directly destroys the player outright. The player must select the correct laser type to shoot down the randomly spawned ships. There are three color coded types: green, red, and blue. Similarly, the player selects (with the 1, 2, and 3 number keys) which color laser to equip.

What scoring system will be used by the game? Each enemy ship shot down grants 100 points which is shown tallied at the end of the game.

Will time be a factor in this game? In a way yes, the enemies spawn in increasing waves as time progresses. The first wave has only 1 random enemy, then 2, then 3 and so on.

What will constitute a win in this game? At the moment there is no win condition besides gaining as many points as possible and as a byproduct having fun. In the future, I'd like to implement chapters with events and boss fights.

What will constitute a loss in this game? Losing all five hit points to enemy fire or colliding with an enemy ship.

How long should each playing session of this game last? Depending on player skill, a game could take as little as 10 seconds or up to five minutes or possible longer.

What will a player gain from playing this game? The frantic and random nature of avoiding enemy fire and selecting the correct laser to fire provides for an interesting dexterity and mental speed challenge. The addition of musical elements to the performance of game mechanics add to the experience.

What will draw the player into the game and keep them playing? Ideally the gameplay will be enjoyable enough such that the player attempts multiple playthroughs to attempt higher scores.

List games that are similar to this game: Gradius (arcade by Konami), Guitar Hero (for color coded notes)

Production Notes (Problems with development):
This was my first experience with Unity, so there was some learning curve to understanding the development process. Overall, I felt like it was a good system to actuate gameplay ideas quickly and relative ease. There was some frustration with the enigmatic black box nature of some of the behind scenes aspects of Unity. For example: correctly getting layers to work with sprites, text to show over sprites, and the overall direction towards developing a 3D game. Perhaps it would be better to redo parts of the game to be 3D, but behave in a 2D way.

I'm also proud to say the I created all my own art and music and most of the sound effects (recorded my car!).

Overall, I was more pleased with the outcome of this project over the first, as I had a more enjoyable game to play. I learned a lot in the first project, however, as I built the entire game from the ground up with SFML and C++. However, in terms of building a portfolio piece where I can demonstrate I've followed through with the completion of a project, this Unity game with its ease of development will be a good example. I plan on finishing it this summer.

Thanks for the class!