

Interactive Projection Motion Tracking Game

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Project name

The Textersizer

Project definition

In this project I will make a simple interactive projection motion tracking game where a person will try to mimic the letters on the screen with their body gestures and complete series of words. This way while they are playing game they will also be doing exercise.

Objectives and goals

This project will achieve people to have fun while they physically exercise. My goal is to create a game that people play with their mates and without them realising make them exercise. My objectives are creating an attractive user interface design for the players so that they want to play this game. It has to look fun and charming. Also it should be easy to play that's why I will try to create all the letter-forms before and make all the letters available and give hint on the side. This way people will not get angry if they can't do a letter many times. I should learn about the tracking system and apply it to my game. Finally I need a platform which I can put a background so that tracking system will not get confused with the background. This also creates the guidelines of their moving spaces. My last objective is to create interesting sentences which is made by moving and in addition to that I need to make a mode which people can write their own letters but this is just luxury at this moment.

Background information

The reason why I come up with this idea for this project is my interest in typography and enthusiasm at microaesthetics of letter structures. In addition to that I wanted to make this as a game where people can actually interact and even more to that people can make exercise. Lately with the extreme development in technology made people stay in front of the computer all day long, this game will make people have fun while they are exercising. Also people always draw letters, not getting in their shapes and that will be both fun to watch and play.

My challenge in this project is that I am new to the coding and I have no idea about neither motion tracking nor coding a game. I have to learn these things from zero.

This project will teach me to create a gaming code and learn to use motion tracking system but most importantly I will strengthen my typography skills as a designer. Learning about microaesthetics will be hard yet fun. Also another challenge will be creating a real good interface that can make people want to move and play the game.

I will be able to learn to create an interactive motion tracking game. Also I will be proving the theory that fun may change the way people act.

Target audience / user

My target audience is the people who enjoy playing games (preferably Wii or playstation move players). The theme will be disco. Approximately 15-45 years old will be the target audience. I have chosen 15 as the lowest because it will need an approximate height, highest 45 because it is a game (older ones are not much computer game generation) and involves disco music with energetic mood.

Detailed project description

People created the letters and they are used all the time whether writing with a pencil or typing it. This project will break this norm and make the player get in the shape of the letter. To create this I have to design a game platform. Which is basically created by webcam, a background (probably with a curtain), a projection and a computer. The idea is that computer opens the game and projection will give it to the big screen where players can see it close to their own body size. In the screen there will be some sentences which player needs to write with their body gestures. 2 people will play at the same time because some letters are impossible to solo play. After the sentence disappears, its letters will come to screen one by one and players have to imitate it in 5 seconds each. The webcam will take players views and sends it to computer and in the game they will be seen as themselves by using motion tracking. The background will make the recognition better. If the players created the letter form more than 70%, they will be considered as success. At the middle of the game webcam will take a picture of the players and at the end players can send it to their emails if they want to. If they complete a sentence better than 90% they will be given a harder sentence, which is equal to higher points. There will be a list of best points after every game (which players can add their name on the computer).

Scope of the project

The project will have a disco theme for the interface, the sentences will be mostly from movies which 20-40 year olds appreciate most. Project will cover playing a game which player actually moves a lot.

Required know-how and resources

First of all I have to test all the letters and make a way to create the impossible ones. Then I have to learn how to write a game code, in addition to that I need to learn how motion tracking works. As resources I need a decent computer (currently have it), a web cam, a projection, a curtain and I am guessing but probably an arduino. I need a probably a cs student to help me with the coding.

Difficulties & risks

The most important risk is that I have a really small amount of knowledge on coding which is not even a bit close to what I have to learn to make this project work. Other than the technical part I can solve the interface and little details. I don't know if I can ever write a code which seems extremely complicated to me at this point. Major failures can cause unfinished work at the end of the semester.

Phases of the project

- 1) Create the interface.
- 2) See if all the letters can be made by two people, if not create a way to make it happen.
- 3) Buy the needed material.
- 4) Connect them with coding.
- 5) Accomplish to make a webcam visual effect anything in the computer.
- 6) Write the code as the game works properly.
- 7) Add taking photography and sending via e-mail, highscore list and hints.
- 8) Place the game in a corridor so that people can actually play it.

Criteria of success

Phases 1 and mostly 2 will be completed in this term and some of 3 maybe.

The success in my opinion as a designer to have really good looking, and working interface for the game. Creating almost a real looking model for the game. Make computer understand at least 1 letter made by the player and effect the game.

Bibliography and References

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