VA402 PROJECT PROPOSAL

Roksan Sarioglu
14004

PROJECT DESCRIPTION

My project is all under the wide umbrella of wearable technology. It constitutes three elements such as; fabric, LED and music. The user will wear the hoodie and as soon as the music starts to play, LED which will be implemented on the head and the chest sides of the hoodie will move according to the rhythm of the sound. The system will recognize every single beat. All the visuals which will appear will be different from each other. Each one of them will symbolize another element of music. For example, one for bass, one for melody, one for wind instruments, one for guitar..
The outcome of this project will be creating a much more fun and memorable way to listen to music through visual music. LED is a tool which enables us pretty magnificent things to do. I do believe that the combination of LED and music will bring joy and excitement to our daily musical experience.

GOALS & OBJECTIVES

The project will get to show us the detailed visualization of every beat and instrument on a fabric. It will show us how exciting can be the implementation of LED onto a fabric.
My objective is to catch people's attention with the concept of wearable technology which is a field with endless and striking opportunities. I want to create a great and different experience of listening to music. Want to make a difference in a daily-life experience.
My goal is to create a functional and visually attractive product which can be used by newcomer DJs who cannot affors expensive motion graphics to support their stage performance. This product can appeal both to professionals who deal with music on a daily basis and to us, humble listeners who want to create an extra joy out of the action of listening to music.

TARGET AUDIENCE

Music is a field which is so universal and broad, it does appeal to every single human on earth. Whether they are infant, teenager or an adult. Every song has a different impact on different people. The experiences that we go through, the things that we witness, the feelings that we feel in our lives determine how we get affected from music. In this context i cannot restrict the project with a certain age or gender group. But specifically, i believe that DJs can make use of this product and make their performances even more stunning. Apart of that anyone who would like to have a memorable experience of listening to music can be the subject of this project.

BACKGROUND INFORMATION

The project is based on the invention that is called 'wearable technology'. Wearable technology is formed from the marriage of electronics and fabric. The designs often incorporate practical functions and features. In some cases there is a particular goal (in case of fitness gadgets) and some are designed only for fun. I've been following latest news and inventions in the wearable technology field for quite some time. Especially Hussein Chalayan's projects amazed me. In addition to that in my researches, i encountered several wearable technology projects related to sound. The idea of creating visual music seemed pretty fun and also i thought that it would be very attractive to the eye watching the whole process. So eventually my project was born out of this feeling of excitement.

In 21st century, music is always supported by visuals; video clips, short screenings, graphics.. Creating video mapping and graphics for a stage performance is a very expensive job. I believe that this project can really speak to DJs who are new in the field or can't afford high prices to transform their performance into a visual feast. This project can solve the problem of anyone who wishes to support their music with LED visuals in an affordable manner.
First challenge in this project will be the creation of different graphics for different elments of music. Next step will be the creation of the video and making the visuals interactive with each other. Biggest challenge will probably be the implementation of those visuals onto the fabric. Honestly, i have no idea how that process will be done. I think i'll ask my CS major friends for help. This project may will open up some new fields of expertise for me in the future. I'll learn how LED works, how to combine it with sound and the most of all, the implementation of LED and graphics onto the fabric.

RELATED LINKS

http://www.youtube.com/watch?v=uvwwMNx9DPU

http://www.youtube.com/watch?v=C0EAIlgUJmU

http://www.youtube.com/watch?v=AFVgNdLzAsU

http://www.youtube.com/watch?v=OUX4JDSBbYs

http://www.youtube.com/watch?v=XhxD68mQDxs

http://www.youtube.com/watch?v=6MyjFHd04R8

www.neonstring.com

visualmusic.blogspot.com

wearabledevices.com

wearabletechworld.com

centerforvisualmusic.org

PROJECT DESCRIPTION

My project constitutes three elements such as; fabric, LED and visuals. The user will wear the hoodie and as soon as the music sreaches to a certain frequency, graphic visuals will start to move, integrate into each other and slowly disappear when the music is slowing down. The system will recognize every single beat. All the visuals which will appear will be different from each other. Each one of them will symbolize another element of music. For example, one for bass, one for melody, one for wind instruments, one for guitar.. The visuals have to move very fluently and have to look very homogenous.

SCOPE OF THE PROJECT

Will be covering
LED strings
Fabric
Motion graphic visuals
Sound sensitivity
Augmented vision

Won't be covering
Psychology
Environmental issues

REQUIRED KNOW HOW

I think i know how to deal with neon strings and its implementation onto the fabric. I will draw the visuals first by hand and then illustrate them on the computer. But i have no idea how to implement those visuals onto the fabric. And also i don't know how to transform those visuals into beat and rhythm sensitive sensors.
I do need help of my CS major friends and also i need help from someone who has enough experience on visual processing. There are lots of websites about wearable technology and all but they are not answering to my specific problem.

DIFFICULTIES & RISKS

The most difficult part will probably be the implementation of the visuals onto the fabric. Actually i do need the advice of someone who has expertise on wearable technology but i'm not sure where i'm going to find that person. The most significant risk would be after completing drawing visuals and implementing the strings onto the hoodie, me being not able to implement those visuals onto the hoodie. If that happens, all would go to waste.

PHASES

1. Acquiring necessary sensors and writing necessary codes for sensors to be sensitive to the music.
2. Acquiring neon strings and the implementation of them onto the hoodie.
3. Creation of all visuals (motion graphic).
4. Finding the necessary medium to implement the visuals onto the hoodie.
5. Hopefully, having a successful functional product.

CRITERIA OF SUCCESS

The first two phases have to be completed by the end of this term. Because creation of the visuals will take lots and lots of time.
The criteria to judge this projct will be based on the visuals. If i can create really homogenous and fluent, powerful visuals and of course if the implementation is correct, then the project will be a success.

REFERENCES

visualmusic.blogspot.com

wearabledevices.com

wearabletechworld.com

centerforvisualmusic.org

http://www.youtube.com/watch?v=N_E67xbfQak