

Color Music Project

Abstract

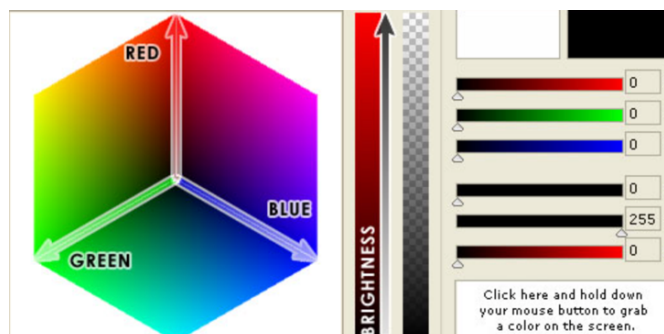
The Color Music project is based on making sound by the values of color in 3D color tools. Syntona is used as an instrument to make the sound and ran with Java to play it.

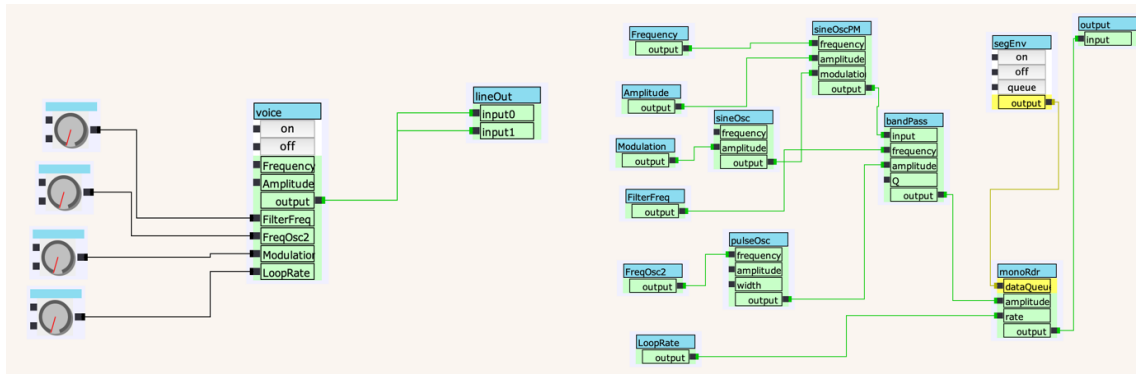
Through this project, it is eventually expected to show the direct connection between color and music and has the insight for future work.

Introduction

The inspiration for this project is from my experience when I first visited the EDM festival, “Camp Bisco” in Pennsylvania. While I was watching the show, I heard someone say, “each layer of sound seems visible” and “each color of laser beam seems to have pitches”, and that motivated me to make this project Color Sound. The purpose of the project is therefore to create the sound by color, and after being familiar with the Color Sound tool, it has the potential to be expected to get the insight to predict the color by analyzing the sound.

Detailed description





The 3D Color tool has been chosen as a reference for color. As the picture shows, 6 elements decide the color, Red, Green, Blue, Height, Side, and Back. The sound is fundamentally created by Syntona, since Syntona makes the users enable to set the sound element easily. Syntona patch contains 6 inputs since there are 6 elements from the 3D color tool, and the 6 inputs will decide the character of the sound.

Technical description

Each 6 element from Syntona patch represents each different element of the sound: Red -> frequency, Green -> Amplitude, Blue -> Modulation, Height -> Filter Frequency, Side -> Frequency Oscillator 2, and Back -> Loop Rate. Each element is normalized to the range of value 0 to 1. After creating the patch from Syntona, its java source is exported to eclipse. There are four different classes of java, Color Data Provider (Interface), Color Music Instrument, Color Music Piece, and Color Music Performance. Firstly, the Color Music Instrument class uses “getInstrument” to let other classes access the “ins” in it. Color Music Piece class then indicates each input value to each representative name, and finally, the Color Music Performance class plays the sound with 30 times repeats. There are also two test classes: one sets a constant value to each element, and the other has a random value to each element. After having thirty results, it can predict the color by analyzing the value of each result.

Artistic Analysis

The purpose of this project is fundamentally concentrated on creating a tool that shows a clear & direct connection between sound and color. By running the program, the values can be interpreted to the location for color, and this was the first step that I've wanted to achieve. However, I believe that it will need more works in the future to set the program more intuitively. For instance, pointing a random location on a 3D color tool directly create the sound and the user can experience the sound changes while he/she drags his/her mouse.

Conclusion

I believe that the development of color music projects in the future can be used in more efficient ways for not only more vivid experience of music performance with color and music but also the color music for a deaf person.