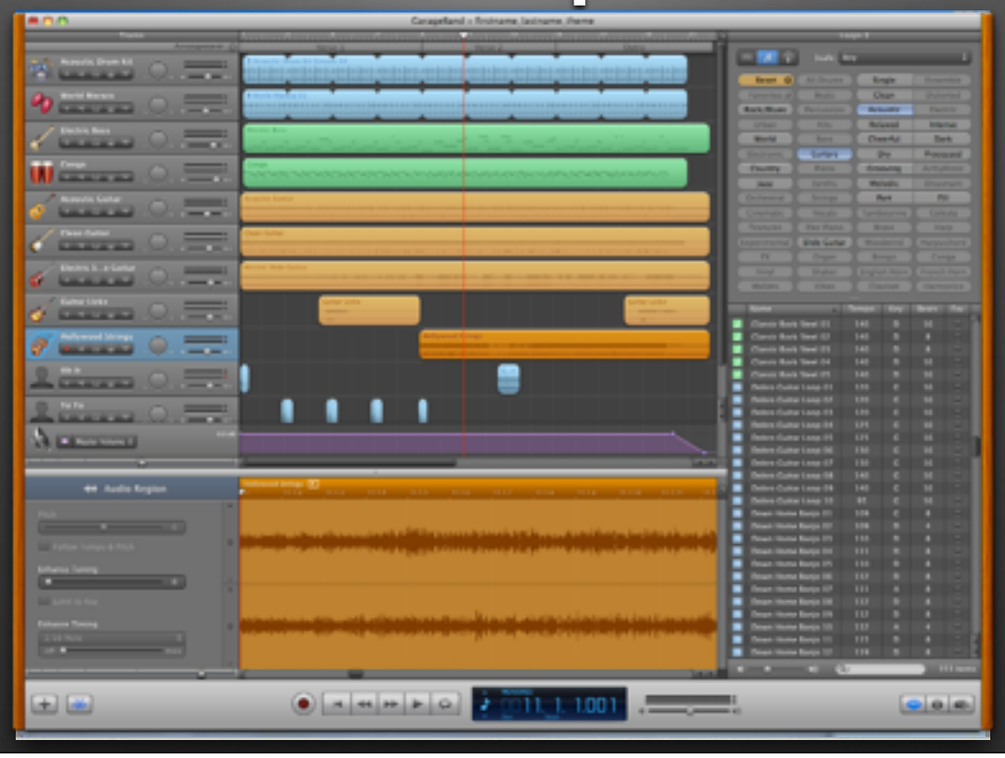
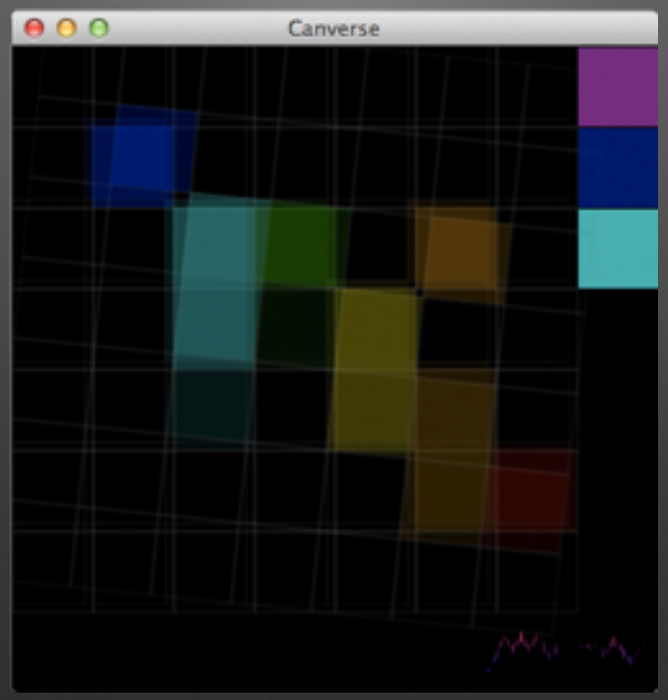
Hello, as you know, my name is Marc, this is Alex and this is Camilo. Today we have something very exciting to share with you. We have taken the need for complicated music creation tools and have simplified to the point that a child could potential create a musical track.

Existing music creation tools are too complicated!



Whether you have or haven't tried to create music, one thing you can attest to is that these user interfaces not only look intimidating and but they are also very complicated to use, but …

was created from one simple interface.



imagine if, the music playing right now, with the same qualities of music being generated from the complicated tools was created from just one simple window?

Revisiting the Problem Statement

Create an easy to use music creation tool that enables musically inclined users to create original music based on visual feedback.

So, we're about to show you our product and it's features. But let's first revisit the problem we are trying to solve. While there were many iterations on our end goal, the main problem we were trying to solve was to provide a graphic interface that used visual feedback that was used to create original music. With that in mind, we'd like to introduce you to CanVerse

Feature List

Enhanced Loop Toggle

- *Ability to quickly create synth loops. Then toggle a loop turn on and off to control when a particular loop plays.*

Control Volume Level of a Loop

- *Ability to adjust the volume of a particular loop in real-time.*

Add over 15 synths

- *Select from over 15 synths to use in real-time while playing music*

Toggle Drum Beat

- *Add a drum loop by simply right clicking on the canvas. Then Adjust the tempo of that drum loop by pressing the right or left arrow keys.*

Audio Visuals

- *Intuitive visual canvas that provides immediate feedback related to the sound omitted while also providing a playground effect, eliminating a strict right to left timeline implementation.*

As we discussed, we did struggle in the beginning to set a definite end goal. Our struggle mainly dealt with how we could use visuals to create music.

Iteration 1 - While we were originally excited about the the idea of using an existing photo to create original music, we quickly ran into an issue ensuring that we were able to produce something melodic. In addition, assignment of sounds to colours or colour patterns didn't necessarily always match a painting. One takes a picture like the Mona Lisa, where you expect something sounding like Mozart, may not work for a more modern photo using a similar colour palette.

Iteration 2 - So when we realized that using pictures to generate audio wouldn't work we began to look at an option where the user would create abstract art on a canvas that would then be interpreted based on colour, length and width of an abstract shape and position of the shape on the canvas to generate the audio. While we did move a step closer to a direction that would work, we quickly realized interpreting the order in which to create music and more importantly how to create something melodic would still be a struggle.

Iteration 3 - With the experiences from the two above iterations, we were able to come up with a visual canvas that would provide real-time feedback to the user on the audio that would be played based on their position and colours being returned upon a mouse click. Users now paint notes with their mouse, letting their movements and rhythm control the sound while the program comes alive in a burst of colour.

Challenges

- Functional nature of Clojure made for a longer than expected learning curve.
- Defining a concrete goal for the application
- Dynamically editing synths is a continued struggle

1) As our team was far more familiar with using imperative languages for software development the learning curve using Clojure took longer for some to get used to. This unfortunately meant that time was lost implementing potential further features to CanVerse
2) Defining our projects end goal was a challenge. As we've mentioned above we did have several avenues for which the application could have taken. Due to this it wasn't until

Demo

- Now let’s see it again

So now let’s create a song with CanVerse.

Future of CanVerse

- Enable modifiable synth parameters
- Session/synth persistence
- Dynamic Recording and Importing of sounds?
- Ability to remove a loop
- Change the instrument used in a specific loop

So some of our thoughts moving forward with CanVerse would be:

Talk about each spot.

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