A Discussion of the Creative Process Composing, "Spatialized Soundscape 1"

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After brainstorming how I wanted to approach this project, I found that this would be a great opportunity to experiment with different compositional strategies utilizing audio spatialization techniques inside of the "Max" programming environment. Typically I am a tonal composer, often dealing with film and game scores as well as choir arrangements. I had originally wanted to create a tonal composition in "Max" that utilized additional sound design, as well as live instruments or singers. Though that is a project I am still very interested in, I came to the realization that I hadn't really dug into the field of electro-acoustic music (except for a few assignments in previous classes). I decided that a project at IRCAM would be a perfect opportunity to create a real electro-acoustic piece. After listening to some old "sound memos" on my phone, I found some that I thought were particularly cool or funny (one that stuck out was my roommate and I saying the weird catch phrases that are on the wall of our local gym). Getting some enjoyment out of these recordings, I decided to conduct the experiment of creating a composition made entirely out of these "found sounds".

A fun part of the initial process was recording each of the samples. I utilized mainly sounds in my apartment, recording any sound I could find that had a remote musical element to it. Some of this included: smashing packing paper in the

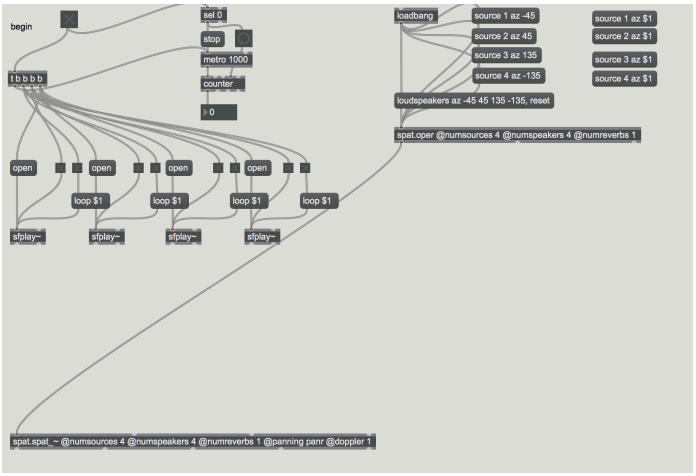
bathroom, scraping knives together, dropping cups on the floor, or scraping a comb against the microphone on my iPhone. A problem, however, is that the iPhone is not a very high quality recording device. Therefore, most of my recordings sounded dry, uninteresting, or in some cases had poorer quality than I desired. Later on in the process, the low fidelity of the initial recordings gave the piece its own unique voice and I was ale to exploit this low fidelity to give the sounds distinguished characteristics in the sound design stage.

I decided to edit the sounds a bit inside of Logic before beginning the composition. This quickly turned into a sound design session. As I began to EQ the samples and add some reverb or compression to give them life, I slowly started to add some modulation, pitch shifting, exciting frequencies and adding general manipulation techniques to the sounds. The initial "foley-style" recording process turned into a simultaneous exercise in sound design, sometimes utilizing the same sound multiple times in different contexts that utilized different techniques of sound manipulation.

The first challenge I had to overcome was creating the composition, itself. "Max's" greatest quality can also be its greatest hindrance. In my case, the creative open-endedness it allows can be very intimidating when attempting to compose a piece of music. Whether on staff paper or inside of a DAW, I am very used to composing in a linear environment. I had begun with 2 initial iterations of my project in "Max". Iteration 1 was simply a map to get my thoughts down in code. It was a slosh of patch chords resembling the thought process of how I began to

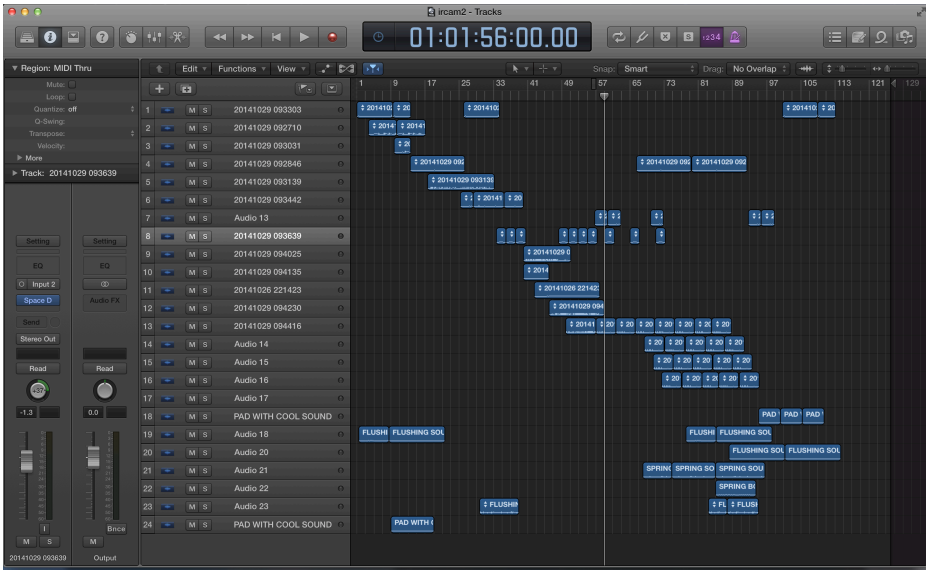
envision combining composition with spatialization code and effects triggering.

With iteration 2, I decided to attempt a template for myself.



An image of the top-level "patch" of my second iteration of code

However, I quickly realized I was simply designing myself a DAW, an endearing task for future projects, but very inefficient for the current undertaking. After coming to this realization, I decided to layout and map the composition, itself, inside of "Logic".

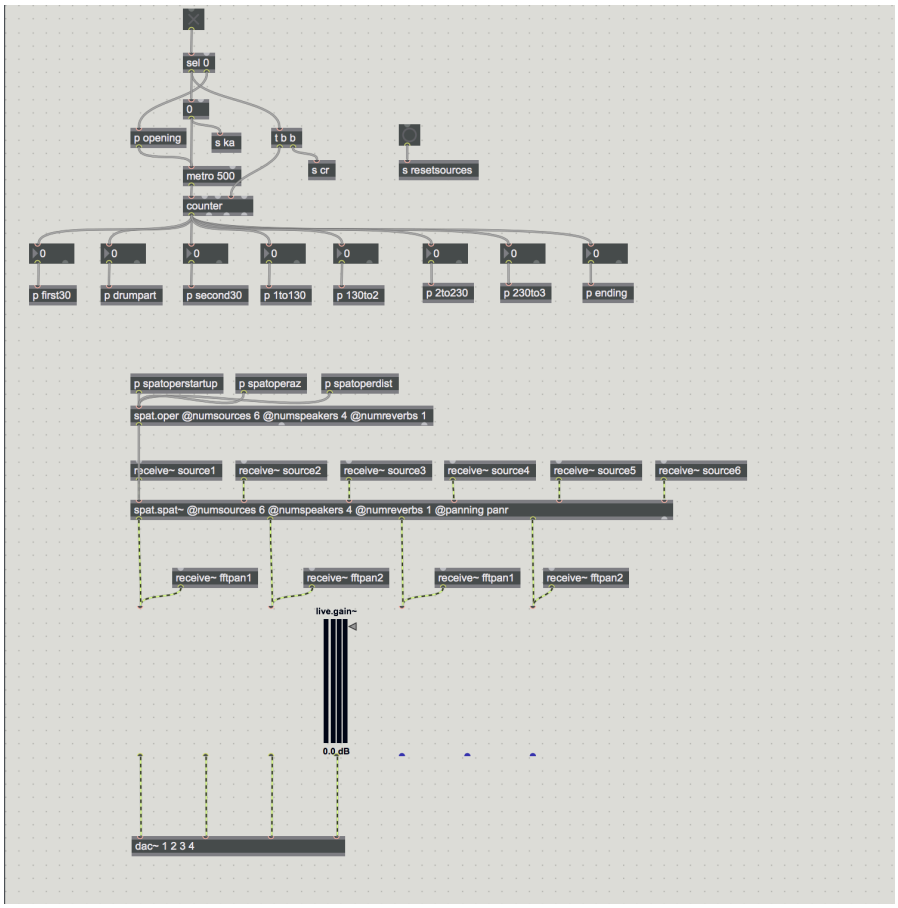


An Image of my project in the "Arrangement" window of "Logic Pro X"

Working in "Logic" allowed me the advantage of jumping to anywhere in my composition and listening to how samples and effects were building off of each

other in real time, something I would not be able to when composing inside of "Max" with the strategies I was attempting to utilize.

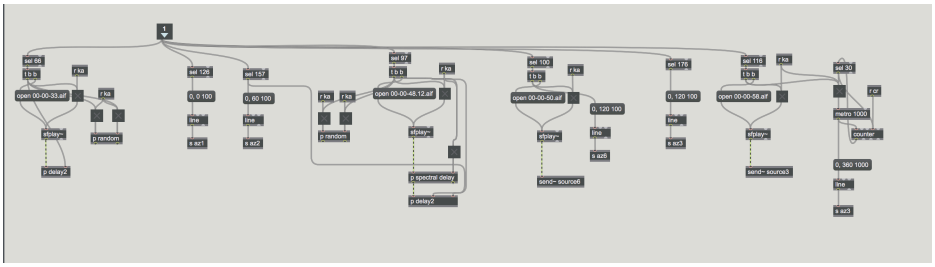
With the composition done, I had returned to the task of implementing the work itself into "Max". I decided to export each sample of music individually as a way to directly control the effects and positioning of each of the sounds. I found this much more creatively advantageous compared to exporting the entire project as one file, which offered a more limited palette of creative options in programming.



An image of the top-level patch in my third and final iteration of code

The organization of my "Max" file is relatively straightforward. A master metronome controls the triggering of each sample and effect. The samples are organized in sub-patches based on 30-second intervals in the timeline of the piece. Each sample and effect is triggered based on a value on the master metronome. In some cases, effects

then operate on their own internal “metro” clock until they are completed, and often trigger further sub patches and effect loops.



An image of code from a 30-second time interval in the composition

Using 6 sources in SPAT, each sample is sent to one of the sources as is logical in the piece. The sources have a similar operation utility as different tracks in a mixer. However, the variability of each of the sources’ azimuth and distance from the listener adds an additional dimension when choosing which samples to place on each of the sources.

The organization of the final “Max” patch turned out relatively well. It gave me a very clear idea of where to trigger each sample and effect. However, figuring out which SPAT source was doing what was often challenging, especially at “climax” sections in the composition. It would be helpful to implement a system that organizes this better throughout the composition, something even as simple has a hand drawn map would have been helpful. As I had mentioned previously, it was also a challenge listening how each individual effect was affecting the entirety of the composition. I had to be very meticulous about triggering effects and samples when testing out new effects. In order to test it in context, I had to listen to the whole piece up to the time frame that I was working in. The composition, itself, turned out exponentially more interesting in “Max”. The ability to program completely original automation utilizing Binaural strategies and spatializion techniques truly added

another dimensional layer to the composition. A compositional form similar to this could be very interesting to utilize with tonal compositions and I am looking forward to experimenting with the skills I have developed over the course of this project. The project allowed me to utilize my skills in composition, sound design, programming, effects design and triggering, and spatialization techniques. It has improved each of them drastically. I look forward to continuing to utilize each of these on future projects.