

Project Proposal

Independent Study in Algorithmic Music Composition Theory
Advanced Computer Music

Objective

To build a more complex composition based upon my previous “Fibbass” sketch by looking at many aspects in greater detail.

Goals

- Study the history/theory of computer-aided music and algorithmic compositions (Independent Study)
 - Study the work done in the intersection of musical composition and mathematical structures
 - Using myself as a case study, utilize this knowledge to build upon my compositional ideas
 - Develop theories and a plan for a more complex composition based my previous “Fibbass” sketch
- Actually implement this composition on the computer (Advanced Computer Music)
 - Utilize the computer to generate various alternatives to rapidly build the composition
 - Develop/utilize more complex timbres and sound effects
- Document all work in a comprehensive paper

Details

Listed above there are two major categories, each of which I hope to spend equal time on throughout the course of the semester. The first focuses on the history and theory behind the composition, while the second focuses more on the composition itself and the implementation of the piece.

History/Theory:

Study History

I will begin by studying the history of computers used for musical purposes, such as when they were used to generate scores, or when they were used to study contrary motion and counterpoint to determine “rules” on what melodies are beautiful and which ones are not.

Use Myself as a Case Study

Incorporating theories developed by these computer musicians, I will produce a theoretical outline for the piece that I will iteratively develop upon as I begin to actually implement the piece. This outline will include such aspects as the overall structure of the piece, the structures of individual sections, or thoughts on melodic relationships.

Implementation:

Rapid Prototyping

I will build a “development” environment in Max/MSP, ChuckK, or Python that will allow me to rapidly test various scales and melodies, so I can determine what I like best for the composition. All of these decisions will be guided by the goals that I have developed in my history/theory study, which I will also be iterating on as the semester progresses.

Developing Timbre

Once I have a base composition that I am happy with, I will begin to spend time on the actual production of the piece. This will include experimenting with MSP/ChuckK patches that have already been created and attempting to manipulate various parameters of these effects based on Fibonacci sequence to assist in creating the texture/mood that I want for the different parts of the piece. I would also like to experiment with manual manipulation of some parameters to keep the performance aspect of the piece in mind.