Methods and Procedures

The first task was to identify the various aspects of algorithmic composition that yield ‘scientific qualities in music theory’. Various methods undertook this responsibility including reverse engineering of similar programs, observing patterns in musical theory in order to determine a variety of potential implementations, and researching a variety of algorithms and their applications to musical generation. These aspects, once identified, included note variation, musical randomization, frequency parameters, limited step size, musical scales, dynamics, duration, polyphony, and silence.

The next step was to implement each of these aspects. Rather than tackling them all at once, it was more ideal to apply each one to the patch individually leading to an accumulation of each of them in the final product. As they were each implemented, consistent data was recorded regarding the three main components of musical definition: pitch frequency, velocity, and duration. These three components allowed comparing and contrasting various algorithms in order to tweak them for efficiency and determine whether one gets the job done better than another does. Qualitative data was consistently taken as well. This includes listening to the product at each version phase (see changelog/data book for comprehensive records) in order to juxtapose it to human compositions.

Once completed, the product was compared and contrasted to other programs sharing similar goals to yield future implications and current merits. To add, the final product was both quantitatively and qualitatively juxtaposed to human compositions to identify merit.