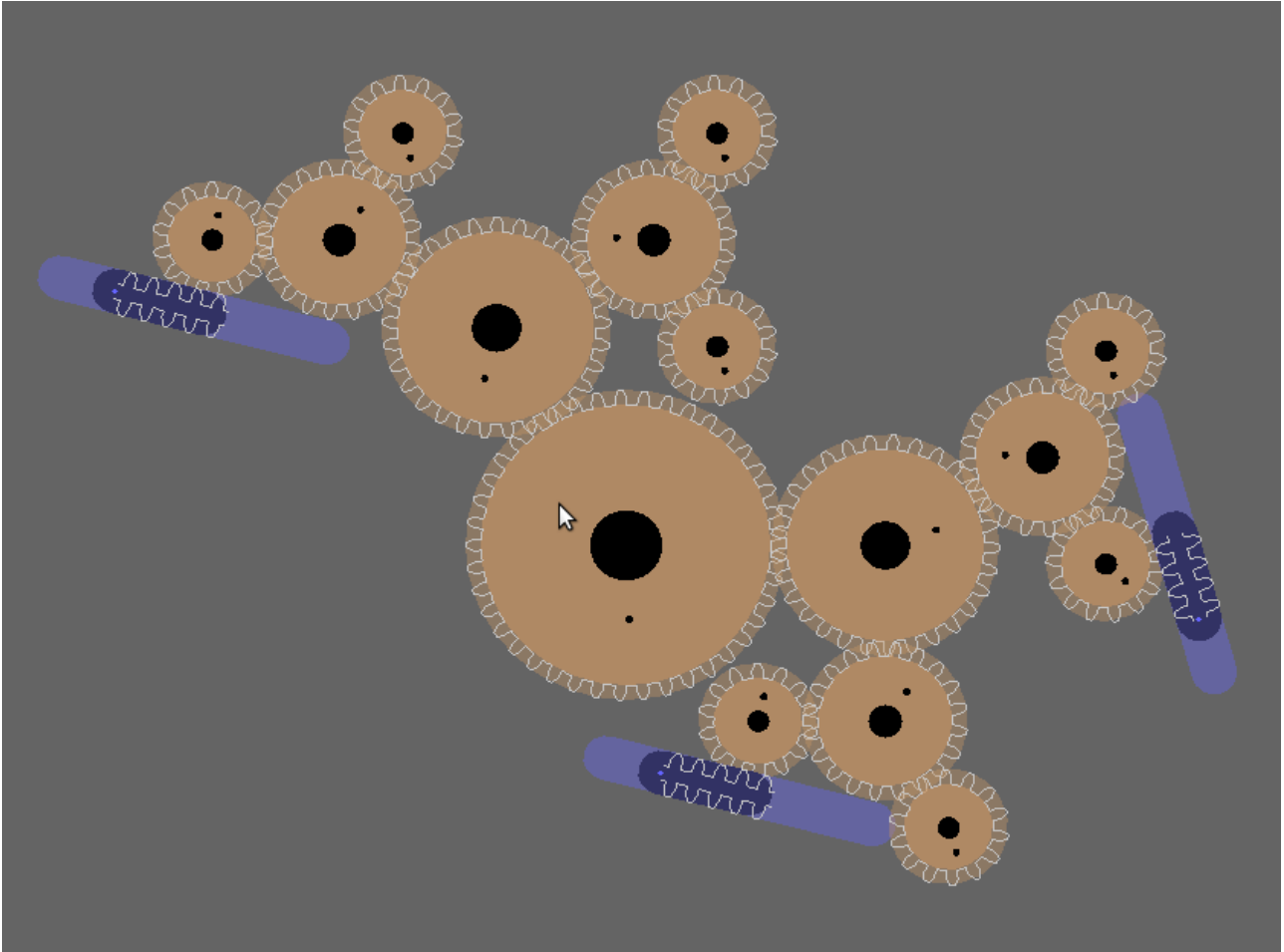Goldsmiths MA Computational Studio Arts

Final Project : Pot Jockey / Machine Gardens

By Phil Jones

A more detailed overview of this project, including my inspirations and motivations, sketches, source-code etc. can be found here : http://www.doc.gold.ac.uk/~ma001pj/final_project/index.html

Machine Gardens

My most recent works explore themes of "digital craft" and physical output from computational processes. I am evolving a pattern of work that I now call a "triptych" which consists of three parts : input / model / output. I aim for a "consistency" of theme and form between the three parts, a flow, some kind of surprise or intrigue about the elements chosen, and a sense of the system rewarding "practice". The more time you spend with the work, the more you should be able to achieve with it.

For this project I'm presenting two works of this form : Pot Jockey and Machine Gardens.

Pot Jockey is inspired by a "visual pun" between the DJ's turntable and the potter's wheel and involves motifs of circularity and rotation in a "making system" to produce spindles that can be output on a 3D printer.

In Machine Gardens I'm also looking ahead to two themes I may want to continue in a PhD proposal: the artistic "practice" of programming and the interplay between a linguistic mode and the spatial.

Whereas Pot Jockey is about *circularity*, Machine Gardens is about *trees*. I experimented with recursive algorithms and grammars to derive tree-structured mechanical systems.

Implementation

Both pieces are based on Processing sketches which I wrote with the aid of some invaluable external libraries (to accept Midi input and to output stereolithography files). For Machine Gardens I also experimented with the Prolog language to prototype recursive algorithms and to create a "little language" for machine design. In the event, this has not been used in the final version but is documented on the site.

Pot Jockey was exhibited at a joint show in June 2011, and included a 3D printed object that I made on the Makerbot Cupcake of the London Hackspace. I'm grateful for the support of several hackspace members for the help they gave me with this. Unfortunately it was not possible to print further objects. The presentation of the work also included DJ controller and computer running the sketch.

In lieu of on-site printing I offered a competition to print the "best" object designed and submitted by participants in the exhibition.
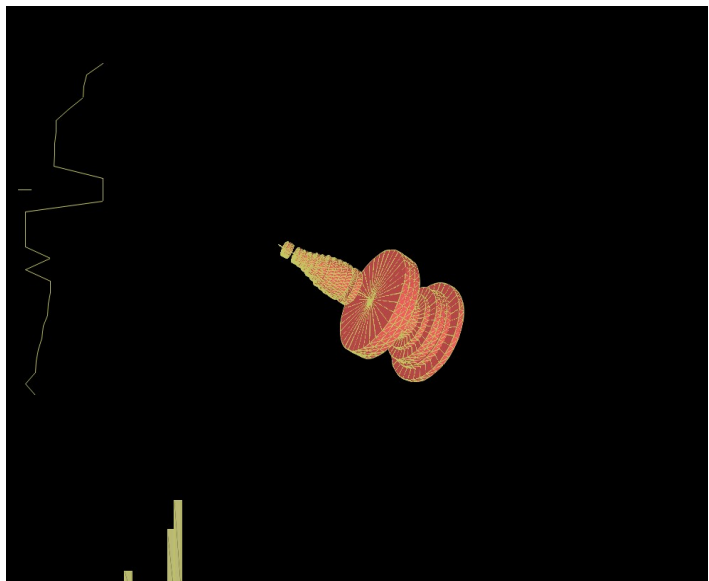
Pot Jockey 1) The DJ controller and 3D printout (behind) mounted in the exhibition, 2) Screenshot of designer

Machine Gardens will be shown at the end-of-course exhibition in September by which time I will have made machines from designs produced with the program, and will again show the running sketch.

Evaluation

Of the two pieces, Pot Jockey is obviously the most "finished" (having made an object and been shown in a gallery). Some thoughts are in my personal evaluation document and on the site, but briefly I was happy that I achieved what I had hoped with the complete arc from input device to object and the "feel" of the interaction. The caveat is that it was hard to get gallery visitors to use it and *no-one* entered my competition.

In light of this I am still working out how Machine Gardens should be presented in the September to create the interaction that I want. But I have some suspicion that I may end up packaging it an alternative way : perhaps experimenting with making it a Processing library or a piece of "net art" which runs in the browser. Then I would show physical outputs as "documentation" rather than as the work itself. I am, so far, undecided on this question.