

Inflorescence

Chris Kiefer

Department of Informatics, University of Sussex, Brighton, UK, BN1 9QJ.

c.kiefer@sussex.ac.uk

Inflorescence explores musical expression in textual interfaces. In live coding practice, code is a powerful and flexible medium to express musical ideas and structures. It allows the live coder to directly engage with a sound synthesis engine in order to experiment with and realise their creative ideas, free from the confines of predetermined mappings and interface structures. The code could be seen as the bare interface to digital sound, a very direct way for the musician to configure the sound synthesis process.

While code gives the musician this expressive power, the physical act of programming is far from how a musician would typically interact with a musical instrument. The coder moves between time constraints rather than being bound to the moment, and creates code with a functional keyboard interface. In effect, there's a dissonance. Code gives flexibility and power, but the conventional means of writing code can be very unexpressive, both in terms of how the musician interacts with the computer, and from an audience perspective.

This performance is designed to explore this dissonance between the expressive power of musical code, and the utilitarian interfaces for creating it. *Inflorescence* is a semi-morphous instrument. It follows a plant-like theme, and consists of a set of motion sensing wire stalks, which are moved and manipulated by the player to control sound. The instrument is made from animators' armature wire, which holds its shape when it is deformed, allowing the player to morph the instrument between sounds and shapes. Its shape and position are translated into code using numerical representations borrowed from genetic programming techniques. The player can structure this code it generates in part of a larger script, and also code the building blocks that the instrument uses to create larger functions. It is designed to offer affordances in opposition to a text editor; it is non-linear, slightly unpredictable, and affords many ways to change its output.

The performance combines these two opposing forms of interaction that both express music through the medium of code. In doing this, it explores the relationship between musical code and musical expression.

Bio

Chris Kiefer is a computer-musician and researcher in the field of musician-computer interaction. He teaches computing at the University of Sussex and is part of the Embodied AudioVisual Interaction research group (EAVI) at Goldsmiths. He's interested in designing digital music instruments using large scale multiparametric sensing. Chris performs as *Luuma*, and has recently been performing at Algoraves with custom made instruments including malleable foam interfaces and touch screen software. His music has been released on algorithmic music label *Chordpunch*.