

Circles

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Abstract. Made in the final days of 2015 this is a new work for self-made electronic instrument: Circles. This version is a wooden box that contains a single-board computer and two micro-controllers. Bespoke software is written in Pure Data and Arduino, running on Linux. Sampling is via in-built microphone. Semi-random and quasi-intelligent sequencing and the creative negotiation of imagined agency is the main agenda. The use of open-source tools is a conscious decision that is important to my aesthetic development and the project as a whole. Circles will be refined substantially throughout 2016 and all software will be available via GitHub soon.

Keywords: random, DIY, Arduino, Pure Data, Linux, open-source, post-digital, embedded computing, music technology.



Description

Focusing on real-time interaction and the multiple connotations of 'performing technologies' the goal is a situation where it is unclear whether I am performing the technology or it is performing me. This, to some extent, might seem to undermine what might be perceived as the autonomy of a musician. However, I am not attempting to remove my own agency from the creative process; this is not in any sense a 'chance' based approach, but one which involves maximum attention and involvement. My approach explores the features and quirks of digital systems, it pushes beyond the digital to digital-analogue hybrid systems, and it seeks renewal through continuous engagement. Less about being in control of a situation than about ways to find lifelike resonances with which to interact, the relationship between imagination, expectation and material is at the foreground.

Instrument

The more unique characteristics of Circles include the fact that it is self-contained and physical instrument (not a controller for an external computer), the tactile feel of the switches and the feedback offered by the LEDs is also important. Standard sampling and studio practices (re-pitching, time-stretching, filtering, reverberation) play an obvious role, alongside live sampling, sequencing, and drum-machine-style synthesis. However, the main performance strategy revolves around the various parameters that can either be manipulated directly, or via a number of layers of semi-random/stochastic processes. This leads to subtle variations, which is what gives the instrument much of its character.

The current version contains a single-board computer (Odroid C1) and two micro-controllers (Teensy LC and 3.1). Bespoke software is written in Pure Data and Arduino, running on Linux. Sampling is via in-built microphone and although not evident in this video, recording and playback of audio is as near to instantaneous as makes no difference.

Background

Although I often build bespoke software/hardware or configure commercial devices in unusual ways, my practice to date has been strongly informed by use of standard commercial systems. For example, I have used Ableton software 'Live' since 2003 and keep returning to this platform for three reasons. 1) I find it important to retain a rigorous performance/composition practice outside of the more idiosyncratic instruments that I build/configure. 2) Keeping in touch with commercial offerings is essential in exploring the affordances of genuinely new technologies. 3) Making music is a different kind of art to making instruments. My interest in open source technologies has emerged somewhat obliquely over the last few years as a follow up to activities that I have called 'Feral Technologies'. These former activities are perhaps best described as 'Nicolas Collins style' handmade electronic music i.e. lots of hands-on making with analogue/electronic components, simple logic chips, and wires, but nothing that one would recognize as 'a computer'. Circles aims to explore aesthetics similar to the DIY focus of 'Feral Technologies', but merge these ideas with practices that I have developed through commercial systems. In short: I seek to explore the creative potential and flexibility of digital processing within the realm of open-source DIY aesthetics.

Biography

John is a post-digital/electronic musician and senior lecturer/head of music technology at QCGU. Prior to this he was visiting assistant professor in the music department at Brown University (USA), and previously, lecturer in music/creative music technologies at Kingston University (UK). John's Ph.D. 'New Relations for the Live Musician?' was completed in 2009 under the supervision of Bennett Hogg and Sally Jane Norman at Newcastle University (UK). His thesis charts an idiosyncratic zone within the continuum of what it is to be a live musician at the dawn of the 21st century. John's work is published via Contemporary Music Review, Ashgate, Cambridge University Press, Creative Sources Recordings, and Clinical Archives. As well as academic conferences and festivals such as NIME, ICMC, NYCEMF, BEAM, and SEAMUS, he has presented live performance-based works at Borealis Festival for Contemporary Music in Bergen, Open Studio at STEIM in Amsterdam, and Club Transmediale in Berlin. <http://johnrobertferguson.com>

Notes (and thanks!)

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