Forks in Sockets brings together people that are interested in doing strange things with electricity in a cross-disciplinary context.

In 2012 engineer Josh Bailey, media artist Anne Niemetz and sonic artist Dugal McKinnon first brought musicians and engineers together to perform with and through the Tesla coil. The project has since grown as an experimental playground for science and art, and now includes engineers, contemporary composers, designers and artists.

Forks in Sockets is conceived as an annual event in which the exciting results of these interdisciplinary collaborations are shared with the public.

http://fis.vicinnovate.ac.nz

PROGRAMME 20.9.2013 – The Atrium, VUW School of Design

Introduction

Vela by Jack Hooker
Vela is a homage to vast, open and high-up spaces, and narrates a satellite caught in an oncoming storm.

Vela is written for PYRAMIDER and fixed audio, with the PYRAMIDER in a sense acting as a featured soloist. The fixed audio element of Vela features big synth textures, abrasive percussion and an array of sound recordings. Musically, the piece is a continuation of the dark, cinematic style of music Jack has been interested in recently.

Jack Hooker is a composer/musician based in Wellington. Jack has a diverse range of musical interests and outputs, ranging from loud, abrasive and epic electronic music to instrumental acoustic guitar music. Jack is probably best known locally as a member of the Wellington group “the shocking and stunning”.

Interruption123 by Mo H. Zareei & Jim Murphy
Interruption123 is a semi-improvised composition. In the piece, the cold, soulless sounds of the Tesla coil have been merged with computationally derived synthesized noises. These sounds together have been placed on a rhythmic grid, allowing each pulse to gain temporal significance.

A key goal of this composition is to explore the means by which the physically created electronic sounds can coexist in a space with virtually created noises. The rhythmic pattern is present as a tool to anchor the Tesla coil's output to the downbeat of the synthetic pulses; in doing so, it is hoped that a cohesive sense of musicality between both instruments evolves.

Plain Changes 2^{30} by Mark Lentczner
Change ringing is a musical and mathematical art performed on bells hung in towers so they swing under control of ropes. Like PYRAMIDER, the bells are large, round, metal, and notably loud with no volume control. It takes a team that’s part musician, engineer, and mathematician to play either instrument.

Generally, the aim in change ringing is to play every possible permutation of a set of bells according to some method. In this work, the raw melodic materials are solely complete sequences for sets of five or fewer bells using the method known as “Plain Changes”.

Mark Lentczner studied electronic music composition with Ivan Tcherepnin at Harvard’s Electronic Music Studio. This is his fourth work based on change ringing. The prior three were written 30 years ago and premiered at Stanford and Harvard. The present work is both Creative Commons and BSD licensed, with the code available on GitHub.

Q&A
Audience and Performer exchange session

INSTRUMENTS AND SYSTEMS

PYRAMIDER by Patrick Herd & Josh Bailey
PYRAMIDER is a Tesla coil, using a water-cooled, computer controlled, high voltage transistor to pump out musical two-meter arcs of electricity. Patrick designed and built the high voltage power system and Tesla coil itself; Josh designed and built the computer control system and contributed some design elements.

MechBass by James McVay, resulting from his engineering honours project at VUW, is a robotic bass guitar that is capable of playing faster than any human on the planet. Forks in Sockets is the first performance featuring a composition specifically written for MechBass.

Visuals by Rhazes Spell (Assisted by Byron Mallett, Oliver Ellmers, Steven Lam)
Throughout history humans have been enthralled with the awesome power and beauty of scientific processes as they manifest in nature. This fascination has led to various experiments to control and direct scientific processes for enhanced productivity, on one hand, and to create awe-inspiring demonstrations on the other. The visual design for the performance is inspired by these fascinations.

The visuals are an edited and curated mix of historical depictions of control mechanisms from the laboratories of "mad scientist" characters in famous films, and real-time generated computer graphics responding to the rhythm and volume of the Tesla coil.

Power Play by Anne Niemetz is a kinetic sculpture designed to be displayed with, and wirelessly illuminated by, the Tesla coil. The hanging mobile installation consists of aluminium rods and circular fluorescent tubes that gently hover and rotate above PYRAMIDER and light up with its activity.

Forks in Sockets is organised by Anne Niemetz, Josh Bailey and Patrick Herd, and supported by Victoria University of Wellington's School of Design and School of Engineering and Computer Science, and Te Koki New Zealand School of Music.

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The young dissident naturally wanted to play tricks - and misuse all technology. That's how electronic music was born.
We started making music with devices made for other purposes.
Technology won't take control as long as man can misuse it.

Erkki Kurenniemi

TE WHARE WĀNANGA O TE ŪPOKO O TE IKA A MĀUI VICTORIA UNIVERSITY OF WELLINGTON

FORKS IN SOCKETS

TE KOKI NEW ZEALAND SCHOOL OF MUSIC