1
Single “electric plant”—
an acrylic tube with
an embedded array of 50 LEDs
and a conductive end.

When a user touches the
conductive end of the acrylic
rod, the LEDs light up.

The Electric Flora, a jungle-like
environment where the “plants”
hang from the ceiling.

08 DEMO HOUR

12 WHAT ARE YOU READING?

14 HOW WAS IT MADE?

16 DAY IN THE LAB

ENTER

During DIS 2014 Experience Night, conference attendees experienced a thought-provoking set of interactive systems, artworks, and techno-crafts. We selected interactive works that explore the reemergence of craft in the design of interactive systems, the role of craft in democratizing design, and the role of makers in interactive technology design.

Alissa Antle and Steven Dow, DIS 2014 Demo Chairs

DEMO
HOUR

1. Electric Flora

Electric Flora is an installation that creates interactivity by harvesting electrostatic energy from the human body to generate light choreographies. The user produces electrical charge with the friction of their feet on the floor. Wearing Teflon shoes amplifies the charge. Every time the user gets in contact with a single electric plant (an acrylic tube with embedded LEDs), the electrical charge from the body activates the lights. In this way we generate interactivity without using any power sources other than the human body.

<http://www.joannadauner.de/electricflora>

<https://vimeo.com/92498155>

Dauner, J., Glisson, M., and Karagozler, M. Electric Flora: An interactive energy harvesting installation. *Proc. of the 2014 Companion Publication on Designing Interactive Systems*. ACM, New York, 2014, 125–128.

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DO YOU WANT
TO HAGGLE?

WHAT HAVE YOU
GOT THERE?

THAT LOOKS
LOVELY!

THE QUESTION IS:
HOW MUCH DO YOU
WANT IT FOR?

NOW, THAT'S AMBITIOUS

HOW ABOUT
£2.80?

HMM

I TELL YOU WHAT, WE'LL
TALK ABOUT THAT IF YOU
FIND SOMETHING ELSE
TO BUY WITH IT.

THIS EQUALS:

THAT'S MORE LIKE IT!

YOUR PRICE IS

£3.50

GREAT DOING BUSINESS WITH YOU.
HAVE A NICE WEEKEND.

OXFAM

2

An interactive kettle mimics the negotiation process between a vendor and a customer.

2. The Hagggle-O-Tron

Secondhand retail in the U.K. charity sector plays a number of important social and economic roles: Charity shops are community focal points; money is generated for good causes; and goods are recirculated that might otherwise be discarded. However, like much of the U.K.'s retail shops, the prosperity of charity shops is under significant threat from the rise of Internet shopping. Access to online markets via smartphones equips customers to check

prices for secondhand items; some customers then use that information to haggle with shop staff. The Hagggle-O-Tron is an interactive kettle placed in an Oxfam secondhand shop that playfully subverts both normative and emerging secondhand retail valuation practices by revealing secondhand goods' financial, moral, social, and aesthetic properties.

Chris Speed, University of Edinburgh
Mark Hartwood,
University of Edinburgh
Eric Laurier,
University of Edinburgh
Siobhan Magee,
University of Edinburgh
Fionn Tynan-O'Mahony,
University of Edinburgh

Martin de Jode,
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http://www.iosht.org/dis_2014.html
<http://vimeo.com/98338383>
Speed C., Hartwood, M., Laurier, E., Magee, S., de Jode, M., and Hudson-Smith, A. The Hagggle-O-Tron: Design intervention in secondhand retail. *Proc. of the 2014 Companion Publication on Designing Interactive Systems*. ACM, New York, 2014, 137–140.

3
The Modular-Muse interface board shown with connected I/O.

3. Modular-Muse

Modular-Muse is a hardware and software toolkit for music. It is an exploration of design tools between off-the-shelf interfaces and digital-audio workstation (DAW) environments and common maker tools. It features input modules for interface design and output modules for physical sound actuation and controlling lights, as well as a software library to streamline sound design and hardware interaction. By offering an accessible and transparent platform that enables exploration in a creative context, Modular-Muse is a powerful tool for engaging users

in higher levels of design thinking and offers a new context in which to explore electronics and programming.

Website: <http://www.modular-muse.com>

<https://vimeo.com/100930033>

Harriman, J. Modular-Mus: Toward an interaction design toolkit for music. *Proc. of the 2014 Companion Publication on Designing Interactive Systems*. ACM, New York, 2014, 141–144.

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4. PianoText

In our search for faster text-entry systems, we were inspired by the high keying rates of skilled pianists, which are more than twice as fast as typists. We developed PianoText, which allows text entry on any MIDI-enabled piano keyboard. A computationally designed mapping assigns letter sequences of English to frequent note transitions in music, based on four concepts: redundancy, chords, sound feedback, and skill transfer. Our studies show text-entry rates of over 80 wpm and we estimate expert performance rates of 130–160 wpm. Our findings on those studies will inform the design of faster text-entry systems.

<http://www.annafeit.de/pianotext>

<https://www.youtube.com/watch?v=-ykkTXo2Zyg#t=155>

Feit, A. and Oulasvirta, A. PianoText: Redesigning the piano keyboard for text entry. *Proc. of the ACM Conference on Designing Interactive Systems*. ACM, New York, 2014, 1045–1054.

Feit, A. and Oulasvirta, A. PianoText: Transferring musical expertise to text entry. *Extended Abstracts on Human Factors in Computing Systems*. ACM, New York, 2013, 3043–3046.

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4
PianoText (here shown in a portable form factor) allows text entry on any MIDI-capable piano.