10 DEMO HOUR

15 WHAT ARE YOU READING?

16 HOW WAS IT MADE?

18 DAY IN THE LAB

ENTER

1

Shapes made in MARSUI might be mapped onto apps such as wristwatches, mobile phones, and media players.

DEMO
HOUR

The four projects shown here are from CHI 2013 Interactivity in Paris, France, selected to reflect the diversity of approaches to embodied interaction. HCI research commonly features contributions more keenly experienced through embodied engagement rather than via a presentation or video. CHI Interactivity provides the venue for such work, allowing attendees to touch, squeeze, hear, or even taste interactive visions for the future, be they research, invention, the arts, or design.

— Florian Mueller, Steve Benford, Danielle Wilde, and Atau Tanaka, CHI 2013 Interactivity Chairs

1. MARSUI

MARSUI (Malleable Audio-Reactive Shape-retaining User Interface) is a deformable hardware prototype exhibiting shape-retaining behavior. It can track the shape the user creates when deforming it. We envision that a set of predefined shapes could be mapped onto particular applications or functions. In its current implementation, we present three shapes that MARSUI can be formed into: a twist, a fold, and a bend. Since the malleable interface can also take other forms, feedback plays an important

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2

The art of self-reflection
via Mind Pool.

(CONTINUED FROM PAGE 11)

role in guiding the user toward the predefined shapes. In this project, we focus on investigating the possibilities that auditory feedback could offer in guiding the user toward reaching the intended shapes.

<http://sopi.media.taik.fi/research/flint/>
<http://vimeo.com/74310106>
 Wikström, V., Overstall S., Tahiroğlu, K., Kildal, J., and Ahmaniemi, T. MARSUI: Malleable Audio-Reactive Shape-retaining User Interface. *Proc. CHI '13 Extended Abstracts on Human Factors in Computing Systems*. ACM, New York, 2013.

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2. Mind Pool

Mind Pool is a brain-computer interface designed to provoke self-reflection experiences based upon real-time representations of a participant's brain activity. Brain activity is sonically and physically represented via a magnetically reactive liquid sitting in a pool built into a tabletop. Feedback may be intentionally altered by those sitting at the Mind Pool by entering into differing mental, sensory, and bodily states or passively through observation of inherent brain activity.

The aim of the system is to present this information ambiguously to encourage sustained interactions and self-reflection by engaging

participants in relating the ambiguous feedback with their brain activity.

<http://kiellong.net/the-static-organ/mind-pool/>
<http://vimeo.com/13885305>
 Long, K. and Vines, J. Mind Pool: Encouraging self-reflection through ambiguous bio-feedback. *Proc. CHI '13 Extended Abstracts on Human Factors in Computing Systems*. ACM, New York, 2013, 2975–2978.

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3

Hold the salt, and add a touch of cathode current.

4

Cell, an installation that breathes new life into the body beautiful.

3. Enhancing Saltiness with Cathodal Current

Weak cathodal current applied to the tongue inhibits the taste of salt, but perceived saltiness tends to increase after the current is released. In this study, we propose a saltiness enhancer that uses this phenomenon. Our system applies weak cathodal current for a short time when the user eats or drinks. The user can thus perceive a salty taste without the use of salt.

<http://www.apapababy.com/>
<http://youtu.be/idnJ7l9mbSY>

- Nakamura, H. and Miyashita, H. Enhancing saltiness with cathodal current. *Proc. CHI '13 Extended Abstracts on Human Factors in Computing Systems*. ACM, New York, 2013, 3111–3114.
- Nakamura, H. and Miyashita, H. Development and evaluation of interactive system for synchronizing electric taste and visual content. *Proc. CHI 2012*. ACM, New York, 517–520.

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4. Cell

Cell is a pneumatically controlled wearable/sculpture/installation. In installation form, the piece is suspended in space as a flayed skin, coming to life as users breath into its overhanging tentacles. As groups of balloons swell and shrink the piece transforms, extruding shapes in various directions.

In performance, the piece augments and distorts the performer's body as it metamorphoses, fusing its own body with that of the performer to create uncanny anthropomorphic hybrid forms. As the balloons swell they push outwardly, at the same time applying pressure on

the body itself, realizing for the performer the skin's boundary with the environment.

- <http://www.eunjin.kr>
- <https://vimeo.com/62088576>
- Kim, E., Achituv, R. Cell. *Proc. CHI '13 Extended Abstracts on Human Factors in Computing Systems*. ACM, New York, 2959–2962, 2013.

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