1
A user interacting with
the sculpture.

08 DEMO HOUR

12 WHAT ARE YOU READING?

14 HOW WAS IT MADE?

16 DAY IN THE LAB

ENTER

For the 10th anniversary of the TEI conference, *The Body In Translation* exhibition presented artworks exploring the body's transformation through technology. The nine works selected invite speculations on the kinds of futures, experiences, and practices that arise from extending, translating, and connecting the body. Here we present four of the nine works portraying novel interfaces for the creative translation of bodily interaction.

🔥 Lian Loke, George Khut, and Ineke Neutelings,
TEI 2016 Arts Track Chairs

DEMO
HOUR

1. What We Have Lost/ What We Have Gained

This project investigates embodied electronic music performance using large upper body movements. It also explores how to transform viewers into performers, participants, and players through tangible interactions with a sculpture. In doing so, it explores the experience of using one's physical body to manipulate the digital representation of another person's body.

The project presents an interface that is both familiar to musicians and visible to a live audience. Originally conceived as a MIDI drum pad, the object now serves as a pressure-sensitive multitouch audio-video playback device that uses infrared presence detection.

📄 http://matthewmosher.org/portfolio_entry.php?art_id=78

📺 <https://www.youtube.com/watch?v=rMy0p4P9owo>

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David Tinapple,
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2

Tangible Scores installation.

2

Manipulating sound via tactile patterns on a tangible score.

3

A motion-capture system studies how dancers' movements are shaped when interaction is established between the virtual environment and dancers in the real world.

2. Tangible Scores

A "tangible score" is a tactile interface for musical expression that incorporates a score into its physical shape, surface structure, or spatial configuration. With sound as a continuous input signal, both synthesis and control are available simultaneously through direct manipulation of the engraved patterns on the physical score. Every interface is conceived from a different graphical score. These tactile patterns suggest specific gestural behaviors due to the different affordances and

constraints of the patterned object. Sound is generated through polyphonic concatenative synthesis driven by real-time analysis and classification of input-signal spectra.

- <http://interface.ufg.ac.at/tmg/projects/tangible-scores/>
- <https://vimeo.com/80558397>
- <https://vimeo.com/142229848>
- <https://vimeo.com/93246088>
- Tomás, E. and Kaltenbrunner, M. Tangible Scores: Shaping the inherent instrument score. *Proc. of NIME 2014*, 609–614.
- E. Tomás. Tangible Scores Installation. *Proc. of the 10th International Conference on Tangible, Embedded, and*

Embodied Interaction. ACM, New York, 2016.

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3. Dividual Plays Experimental Lab

"Dividual Plays Experimental Lab" is an extract from the dance piece *Dividual Plays*. *Dividual Plays* was produced as the first research outcome of Reactor for

Awareness in Motion (RAM), a research project we have been involved in since 2010. "Dividual Plays Experimental Lab" consists of essential elements of *Dividual Plays*: virtual environments for dance "scenes," a programming toolkit (RAM Dance Toolkit), and a motion-capture system (MOTIONER). With these systems, the lab allows the visitors to explore and create their own body movements to correspond with the experience of the dancers in *Dividual Plays*.

- <http://special.ycam.jp/ram/en/>
- <http://thecreatorsproject.vice.com/blog/bots-lights-and-body-sensors-star-in-augmented->

4

In *POEME: A Poetry Engine*, movement is captured through a user's mobile device, such as a smartphone. Each participant is granted access to a private performance space behind a black curtain, where they can create poetry by moving.

dance-performance-series

➤ <https://vimeo.com/143458235>

➤ Konno, K., Owaki, R., Onishi, Y., Kanda, R., Sheep, Takeshita, A., Nishi, T., Shiomi, N., McDonald, K., Higa, S., Jo, K., Ando, Y., Abe, K., and Ito, T. *Dividual Plays*. Experimental Lab: An installation derived from *Dividual Plays*. *Proc. of the 10th International Conference on Tangible, Embedded, and Embodied Interaction*. ACM, New York, 2016.

Keina Konno, Richi Owaki, Yoshito Onishi, Ryo Kanda, Sheep, Akiko Takeshita, Tsubasa Nishi, Naoko Shiomi, Kyle McDonald, Satoru

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4. POEME: A Poetry Engine

POEME: A Poetry Engine is an interactive installation that invites participants to create poetry through movement. We explore the relationship between bodily, mechanical, and digital interpretations of movement while referencing

the choreographed routines of mass transit. Each participant receives a virtual ticket that grants them entrance to a private performance space. The participant's poems and sensor readings are conveyed outside of the space on a public display reminiscent of a departure board. The installation grew out of designing **POEME**, a website that allows users to create movement poetry with their mobile device.

➤ <https://poeme.iat.sfu.ca>
➤ <https://vimeo.com/124877348>
➤ Cuykendall, S., Soutar-Rau, E., Schiphorst, T. *POEME: A*

poetry engine powered by your movement. *Proc. of the 10th International Conference on Tangible, Embedded, and Embodied Interaction*. ACM, New York, 2016.

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