1
The design of the garment evokes images of star fields and nebulas.

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ENTER

Interactivity is a unique forum of the ACM CHI Conference that showcases hands-on demonstrations, novel interactive technologies, and artistic installations. At CHI 2015 in Seoul we hosted more than 30 exhibits, including an invited digital interactive art exhibit. Interactivity highlights the diverse group of computer scientists, sociologists, designers, psychologists, artists, and many more who make up the CHI community.

Julie R. Williamson and Juhyun Eune,
CHI 2015 Interactivity Chairs

DEMO HOUR

1. Nebula

Nebula is an interactive prototype used to examine the properties of textiles, fashion accessories, and digital technologies to arrive at a garment design that brings these elements together in a cohesive manner. Bridging the gap between everyday performativity and enactment, Nebula is part of a longer project addressing aspects of the making process, interaction, and functional aesthetics. The studs seen on the garment are the endpoints of a live electronic circuit. When the garment moves, the studs touch and create connections that are used to envelope the wearer in an electronic soundscape.

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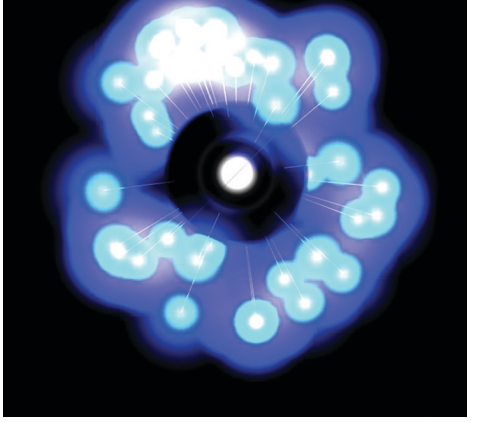
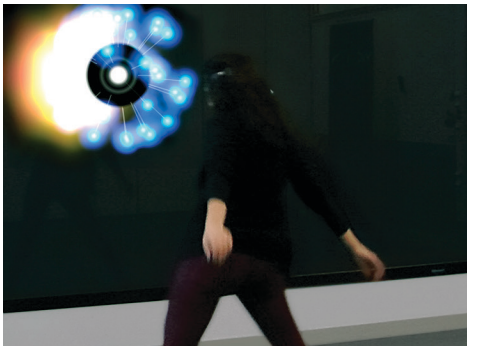
2
Feeling the textures of different paints.



3
A sphere of blue lights represents one user on the screen.

Three users twisting together, coordinating their spheres to also move to the side together.



A swing of the hips to the left triggers color flashes on the left side of the user's sphere.

2. Harmonious Haptics

In this project, we propose a new interaction technique named Harmonious Haptics, which provides users with enhanced tactile sensations by utilizing smart watches as additional tactile displays for smartphones. When combined with typical mobile devices, our technique enables the design of a wide variety of tactile stimuli. To illustrate the potential of our approach, we developed a set of example applications that provide users with rich tactile feedback, such as feeling textures in a graphical user interface, transferring a file between a tablet and a smart watch, and controlling UI components.

http://www.uxinventor.com/projects/harmonioushaptics.html
https://www.youtube.com/watch?v=wl0XrRMGre8
Hwang, S., Song, J., and Gim, J. Harmonious Haptics: Enhanced tactile feedback using a mobile and a wearable device. *Proc. of CHI EA'15.* ACM, New York, NY, 2015, 295–298. DOI: 10.1145/2702613.2725428

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3. Canvas Dance

Canvas Dance is a dance visualization for parties. The visualization takes the motion input from the users' smartphones and represents each of them with a sphere of lights that embodies a set of mappings: Vertical movements "marking the beat" make the lights blink, and swinging the hips to the side flashes colors on the same side of the sphere. These simple mappings provide users with a vocabulary of visual effects that they can combine and appropriate into their own dancing style, and when dancing with friends they can use them to coordinate their dance steps and create visual effects together.

https://www.youtube.com/watch?v=X-aojebqNIk
Griggio, C. and Romero, M. Canvas dance: An interactive dance visualization for large-group interaction. *Proc. of CHI EA'15.* ACM, New York, NY, 2015, 379–382.
DOI: 10.1145/2702613.2725453

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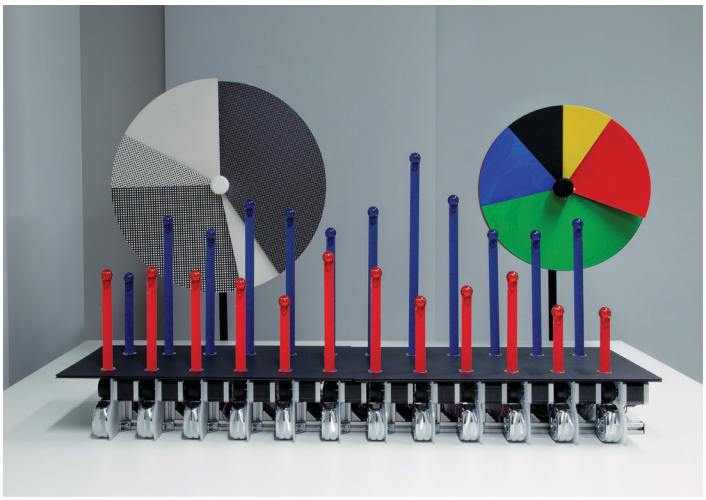
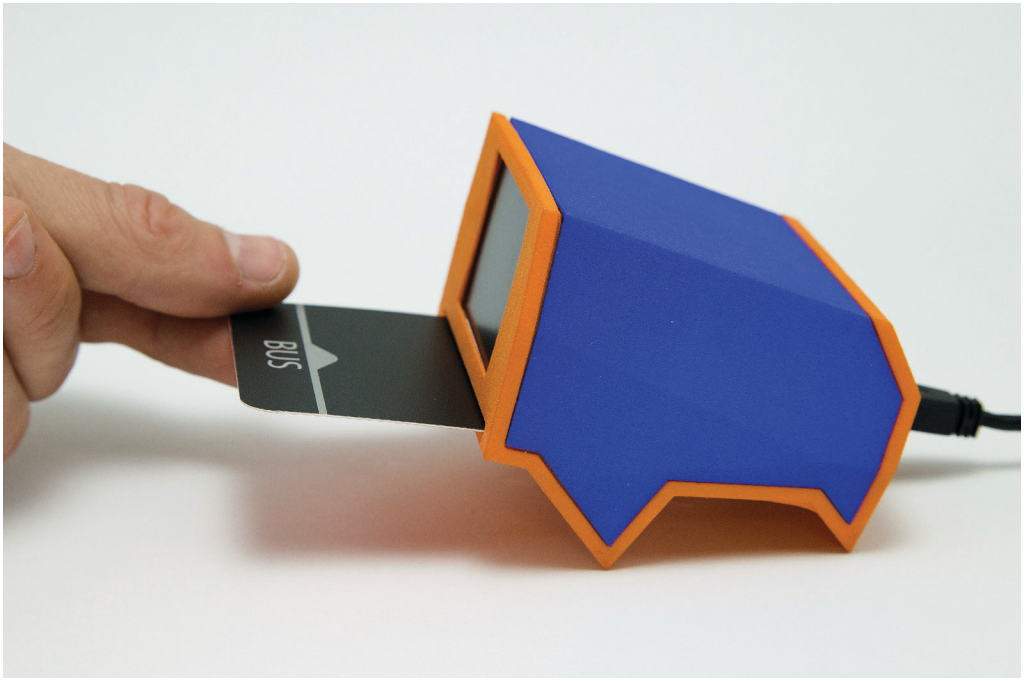


4
Physical pie charts and bar charts for public data display.



4
Bullfrog device for household polling and voting.

4. Data and Its Street Life

The Bullfrogs and physical charts are two outcomes of a year-long project engagement with a community on Tenison Road in Cambridge, U.K. The engagement sought to better comprehend how the community understands data and to experiment with ways of enriching and expanding how they might use their own data. The Bullfrogs are devices built for people's homes in the community to enable local polling and voting. The physical charts have been designed to display local data and draw people in to seeing and using relevant data in different ways.

http://tenisonroad.com
@tenisonroad
https://vimeo.com/107824462

Taylor, A.S., Lindley, S., Regan, T., and Sweeney, D. Data and life on the street. *Big Data & Society 1*, 2 (2014). DOI: 10.1177/2053951714539278; http://bds.sagepub.com/content/1/2/2053951714539278

Taylor, A.S., Lindley, S., Regan, T., Sweeney, D., Vlachokyriakos, V., Grainger, L., and Lingel, J. Data-in-Place: Thinking through the relations between data and community. *Proc. of CHI'15*. ACM, New York, 2015, 2863–2872. DOI: 10.1145/2702123.2702558

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The engagement sought to better comprehend how the community understands data.

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