

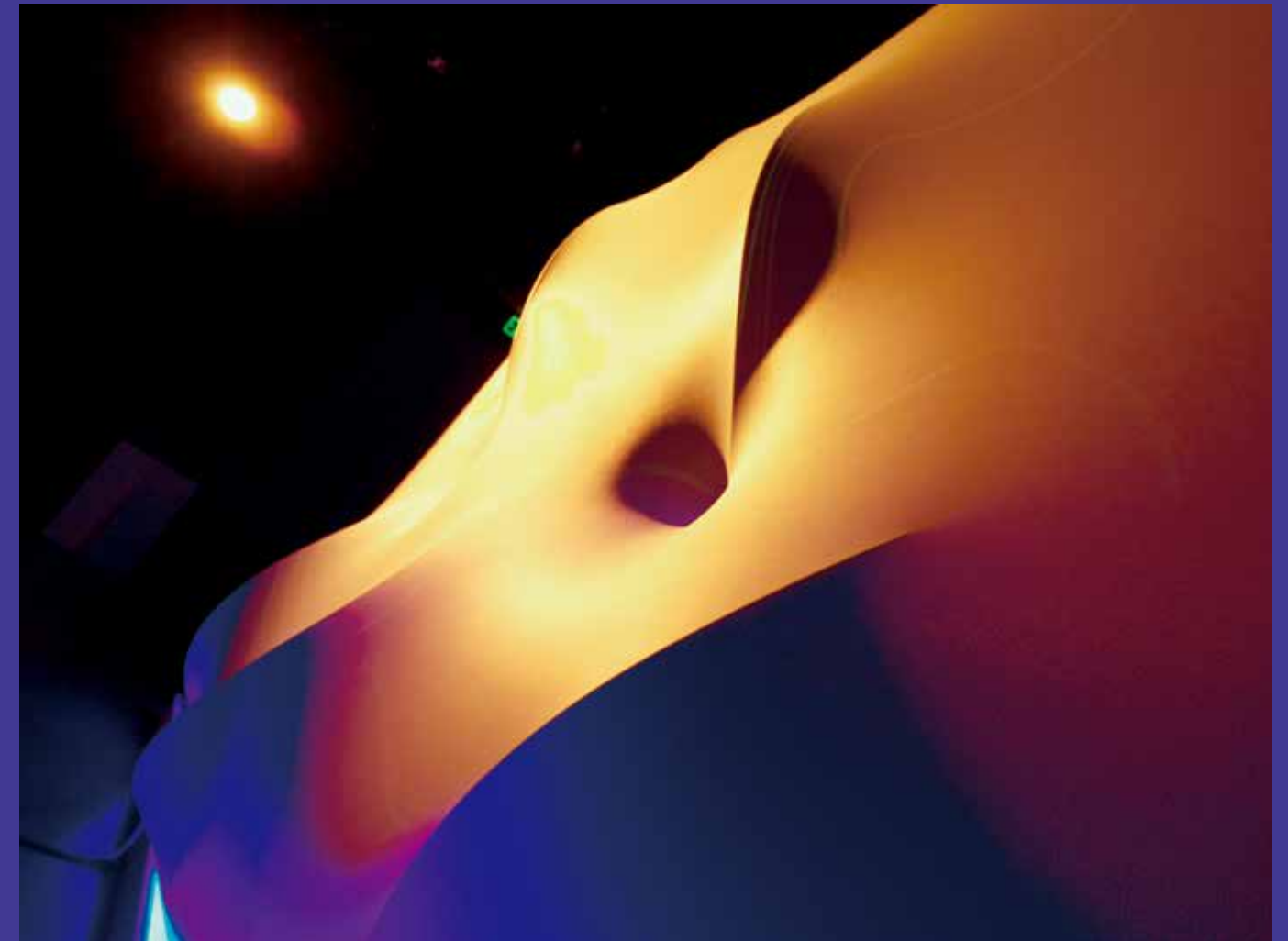
# HAND AND GESTURE AND BRAND COMMUNICATION

Hand is a symbol of creation. From ancient inscribing in caves to typing on smartphone touchscreens, mankind has been exploring what to create with hands. With the evolutionary development of motion-sensing technology, the motion of hands is now able to control lights and images, manipulate data and compose virtual reality out of thin air. It is a leap of mankind, with just a small wave.

# HANDS CONTROL

“Mobile devices already use techniques based on touch and gestures – swiping, clicking and dragging – as a natural, intuitive mechanism of control. Moreover, these techniques can also be used to control the entire environment. In the future, it may even be possible to design a direct interface, which allows users to interact with their surroundings without any intermediary mechanism. Such interfaces will make the control of physical environment much easier and more intimate.”

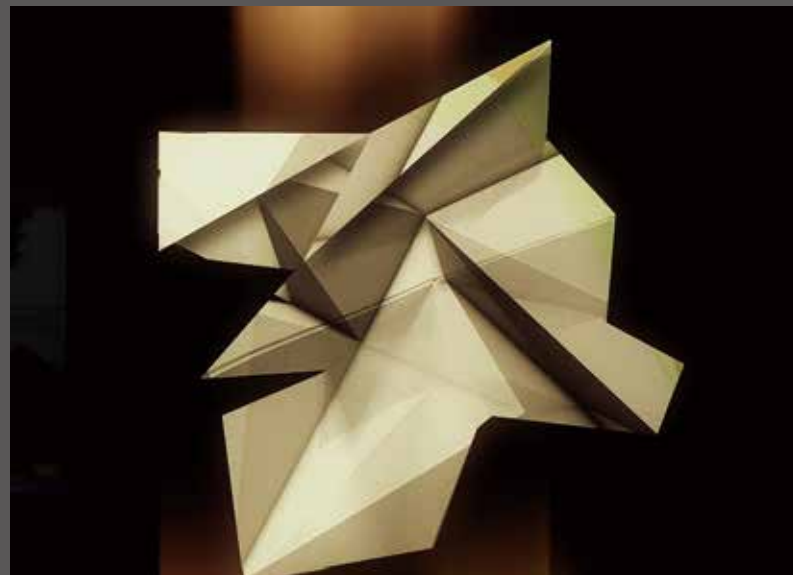
— Behnaz Farahi



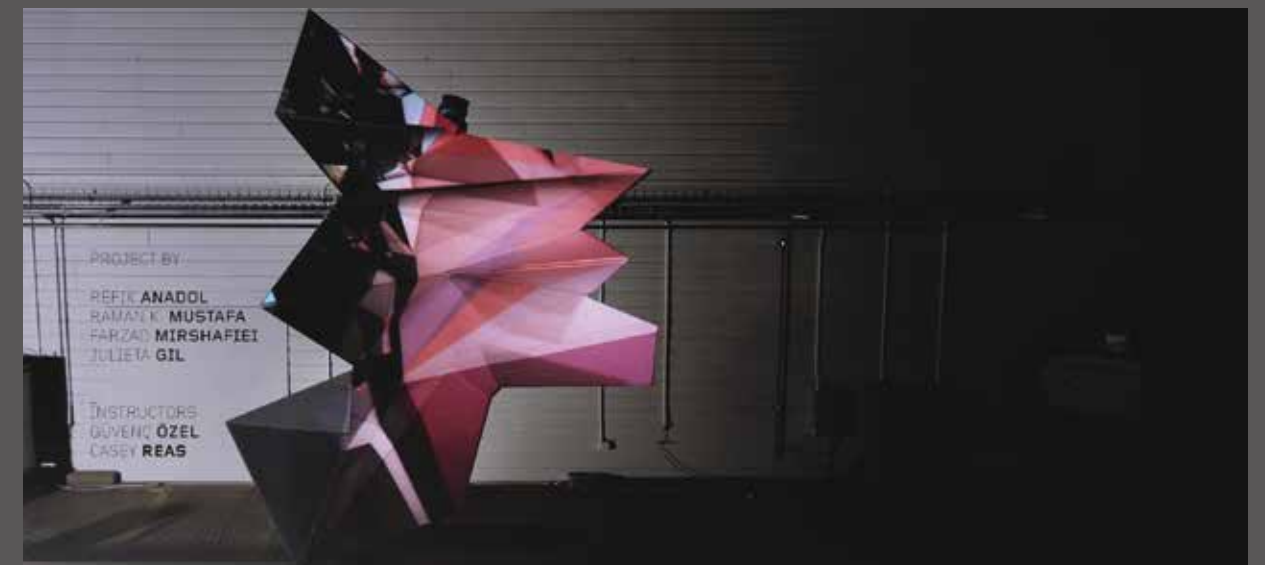
Breathing Wall 2.0 | Behnaz Farahi | 2014  
Photography by Ramtin khah

The project Breathing Wall 2.0 has two main objectives – to explore the potential for a gesture-based interaction with the dynamic architectural space through the use of a Leap Motion device and to explore the relationships among materials, forms and interactive systems of control in order to generate an empathetic relationship between users and their environment. There was an attempt to emphasize on the surface topography by adding real time projection mapping onto the surface of the wall. The depth camera captures topographic data of the surface in real time. It then processes this information in order to generate a series of topographic contour lines, which are projected on to the surface. In a way, audience generate various physical movements of the wall surface by their hand gestures while the new surface data information is processed and projected on to the surface. “What is interesting here is the fact that projection and physical movement are locked into a feedback loop”, said Behnaz.

The Aether Project aims to create an immersive interactive environment that seamlessly combines robotic actuation, formal transformation and real time projection mapping controlled by a sensory input device. With the input of hand and body motion, it explored potential scenarios of architecture as a responsive, robotically actuated technology which undergoes spatial iterations triggered by sense-based devices.



The Aether Project | Refik Anadol, Raman K. Mustafa, Julieta Gil & Farzad Mirshafiei | 2014



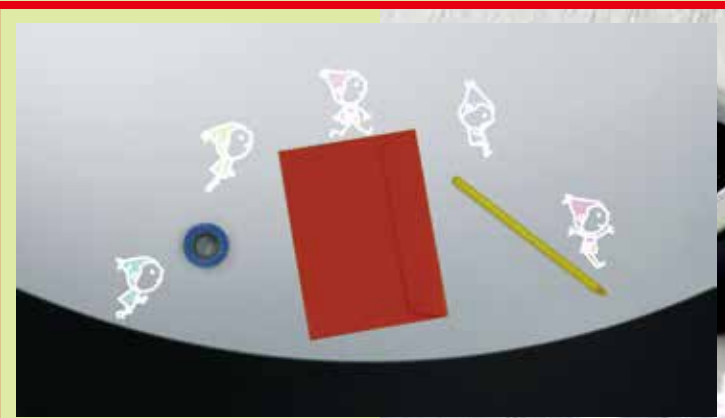


Chinook Arc is an interactive, illuminated sculpture that reflects impressions on the Beltline neighborhood. The form draws inspiration from the historic Beltline Streetcar loop, as well as the Chinook arch phenomenon. Visitors to Chinook Arc have complete control over the lighting through an optical sensor that projects the movements and colours it sees onto the sculpture. Visitors can wave their hands, move coloured objects or play a movie on their cell phones in order to create their own light sequences.

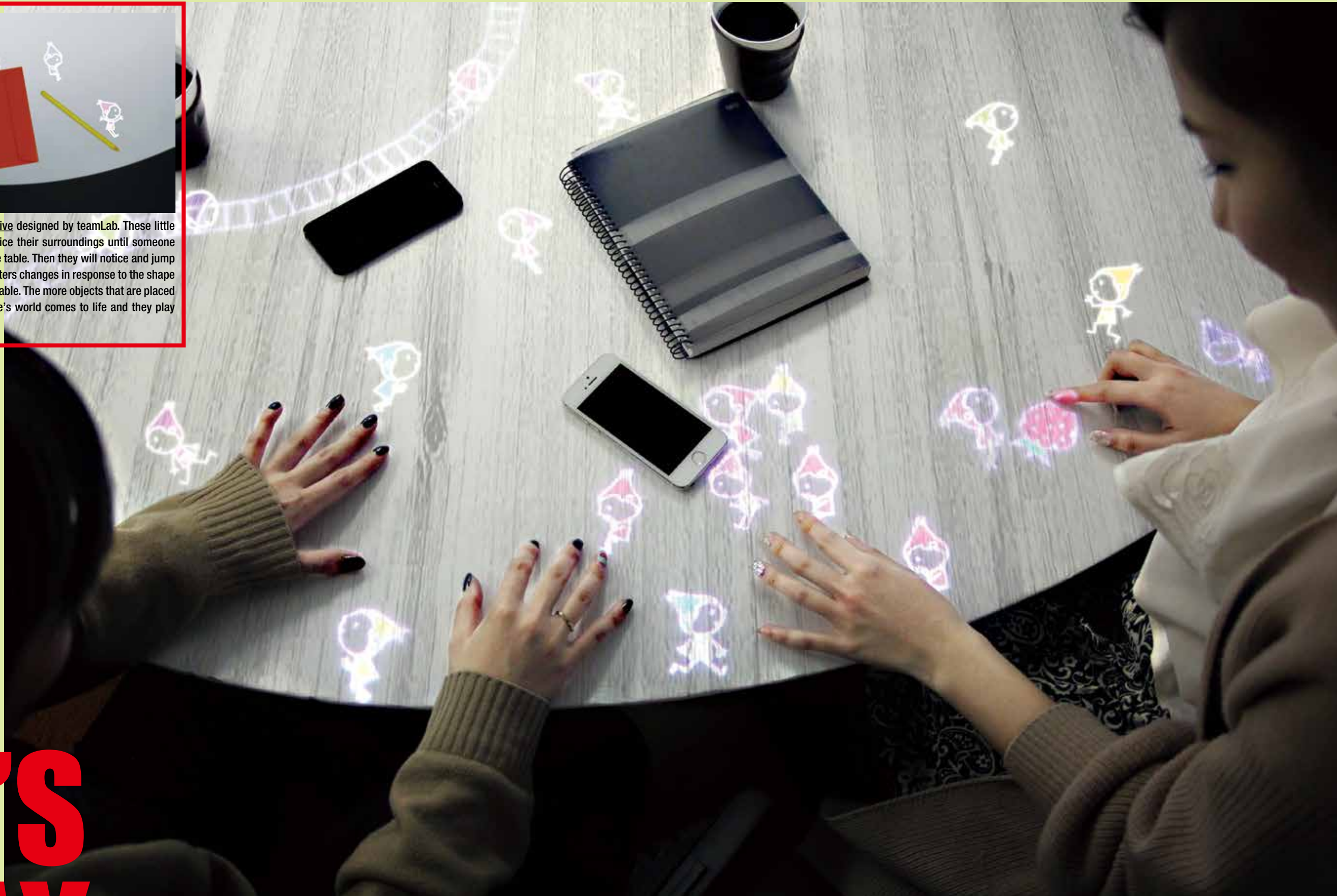




Chinook Arc | Joe O'Connell & Blessing Hancock | Creative Machines | 2014  
Photography by Paul McGrath



This is A Table where "Little People" Live designed by teamLab. These little characters run around and do not notice their surroundings until someone places his/her hand or an object on the table. Then they will notice and jump onto it. The action of these little characters changes in response to the shape and colour of the object placed on the table. The more objects that are placed on the table, the more the little people's world comes to life and they play with delight.



# LET'S PLAY

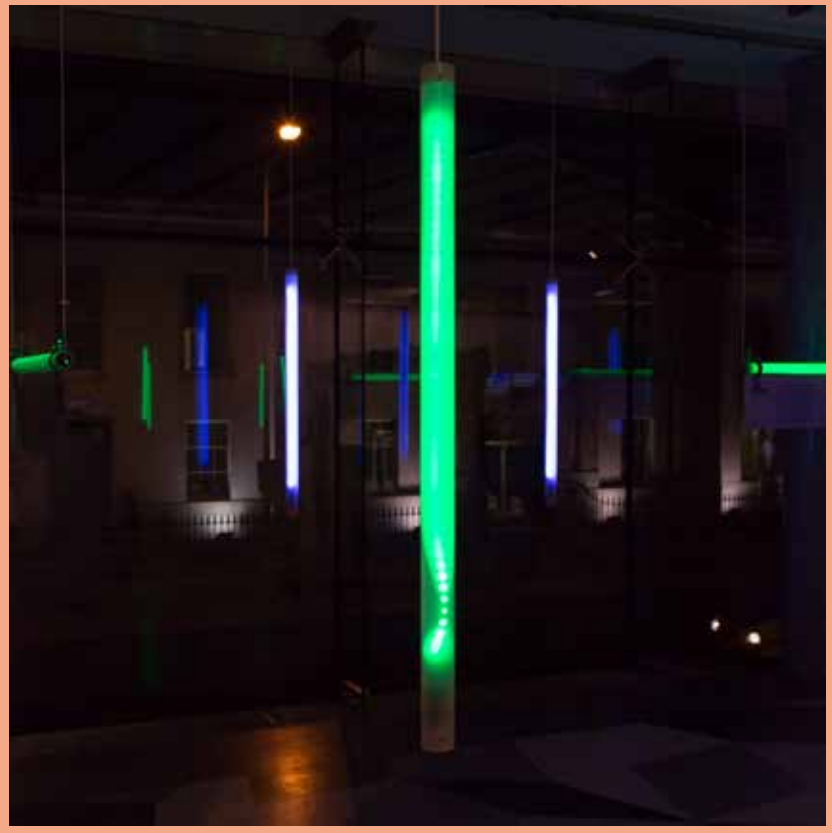
A Table where Little People Live βVer | teamLab | 2013



Designed by Your Majesty and Red Paper Heart, *Art & Sound of Tennis* is an installation that invited tennis fans to participate in the creation of abstract generative art. Two participants per session stand before a LED screen equipped with customized racquets. The swings of their racquets were tracked with motion sensors, generating a tennis-themed abstract art visualization and soundscape.



US OPEN FAN EXPERIENCE | Evan Anthony, Prakash Nair & Phil Stranga | Red Paper Heart & Your Majesty | 2013

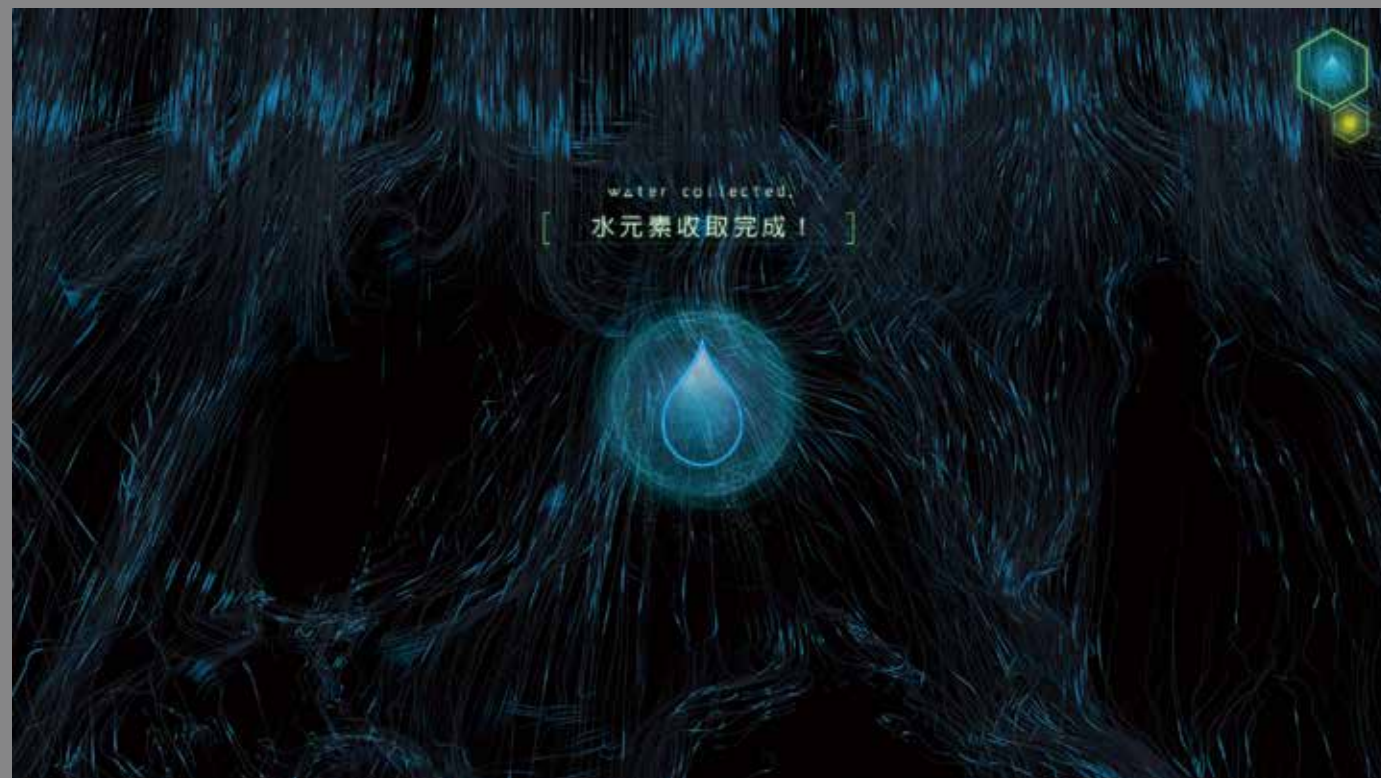


GAME | Sam Russell & Nick Russell | Russellworks | 2012

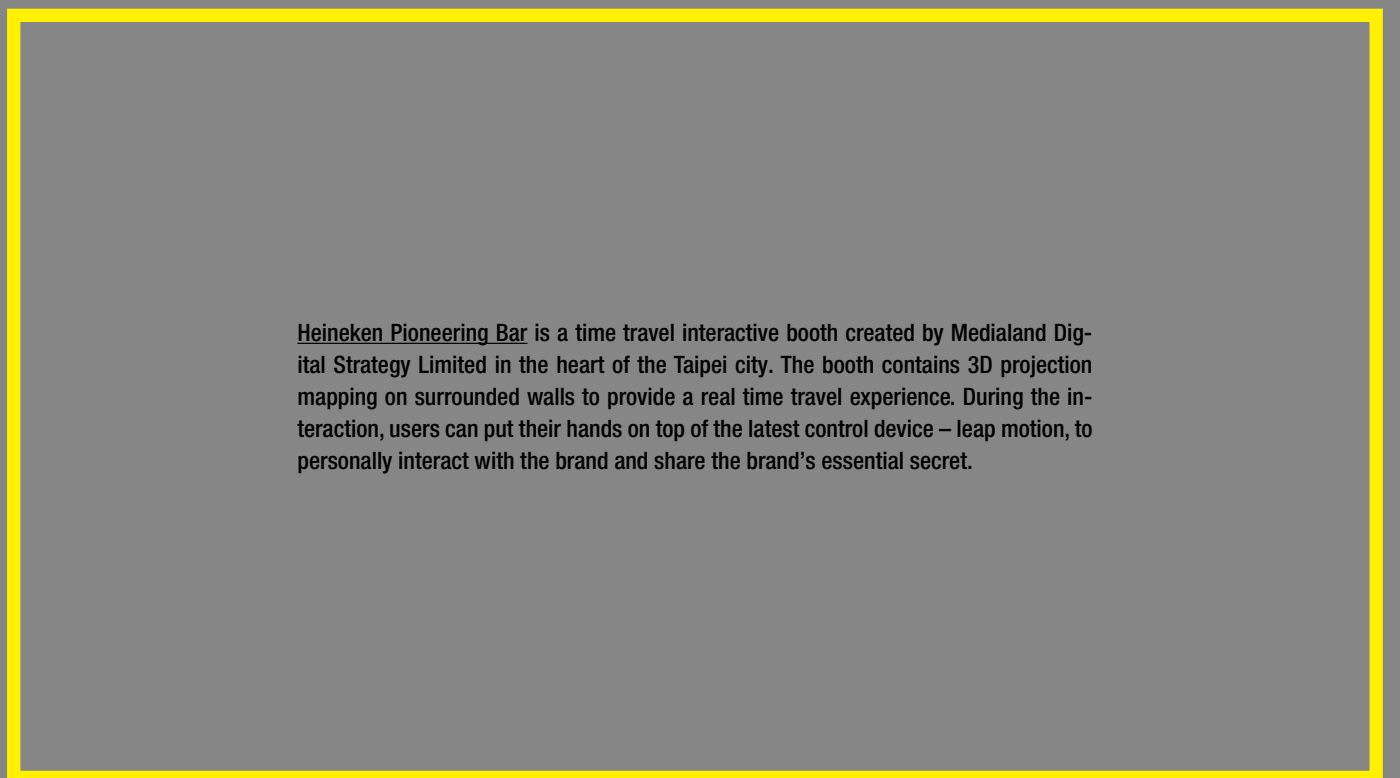
The concept for the exhibition *GAME* at the Science Gallery was to create a space that would continually change and evolve in response to playful interaction from exhibition visitors. A range of green and white LED tubes were designed to divide the exhibition space into a grid layout reminiscent of early digital gaming platforms. These lights have a motion sensor and they will switch and change colours as visitors swipe their hands past the tubes.



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Heineken Pioneering Bar | Vicky Lee | Medialand Digital Strategy Limited | 2013  
Photography by Angelo Gabriel Noziglia Araya



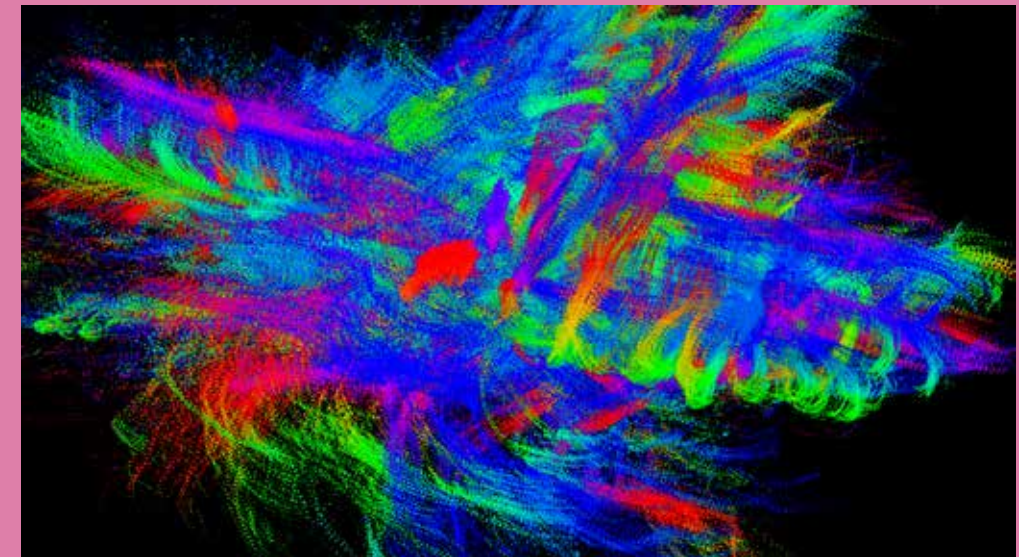
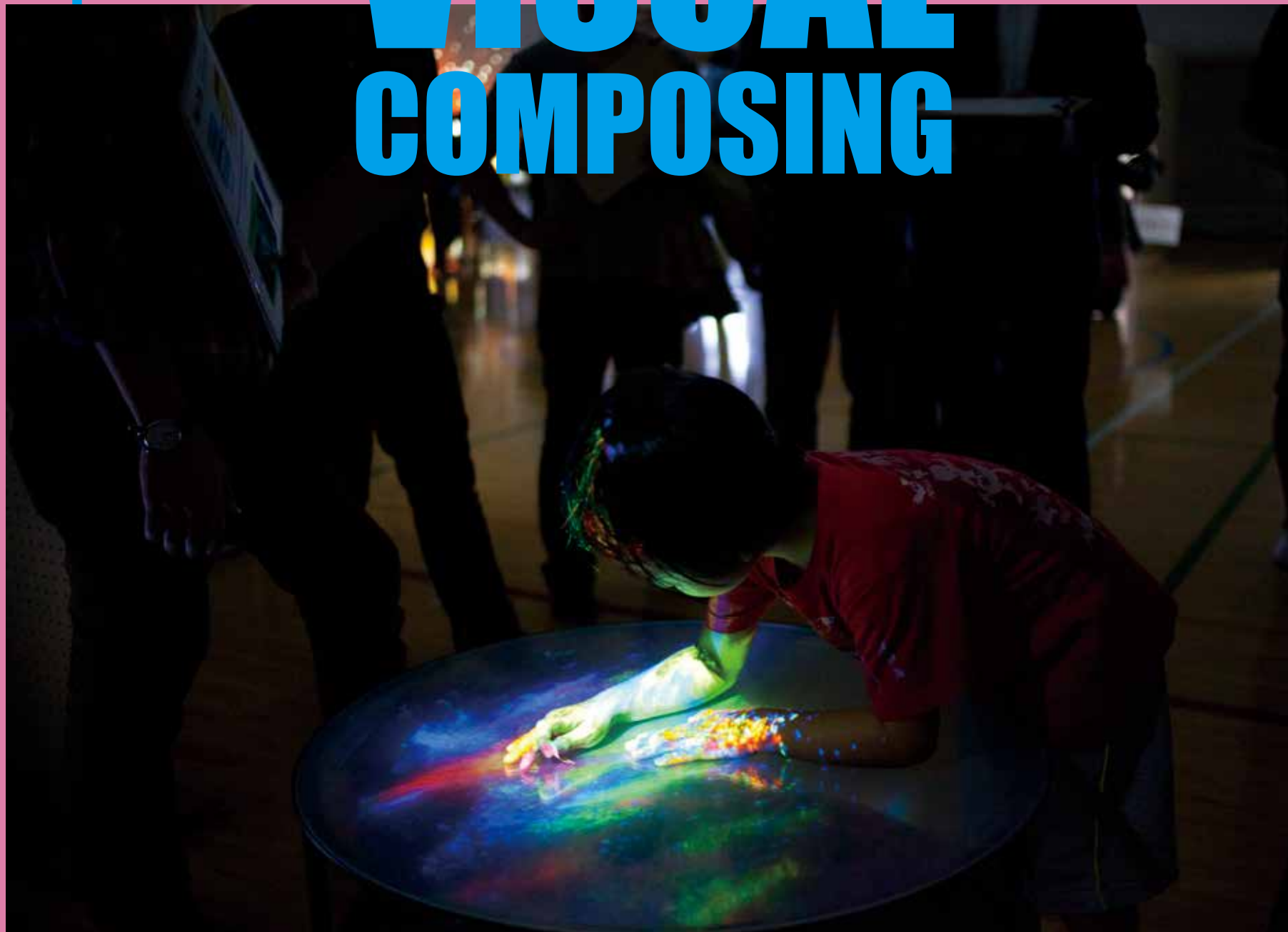
Heineken Pioneering Bar is a time travel interactive booth created by Medialand Digital Strategy Limited in the heart of the Taipei city. The booth contains 3D projection mapping on surrounded walls to provide a real time travel experience. During the interaction, users can put their hands on top of the latest control device – leap motion, to personally interact with the brand and share the brand's essential secret.



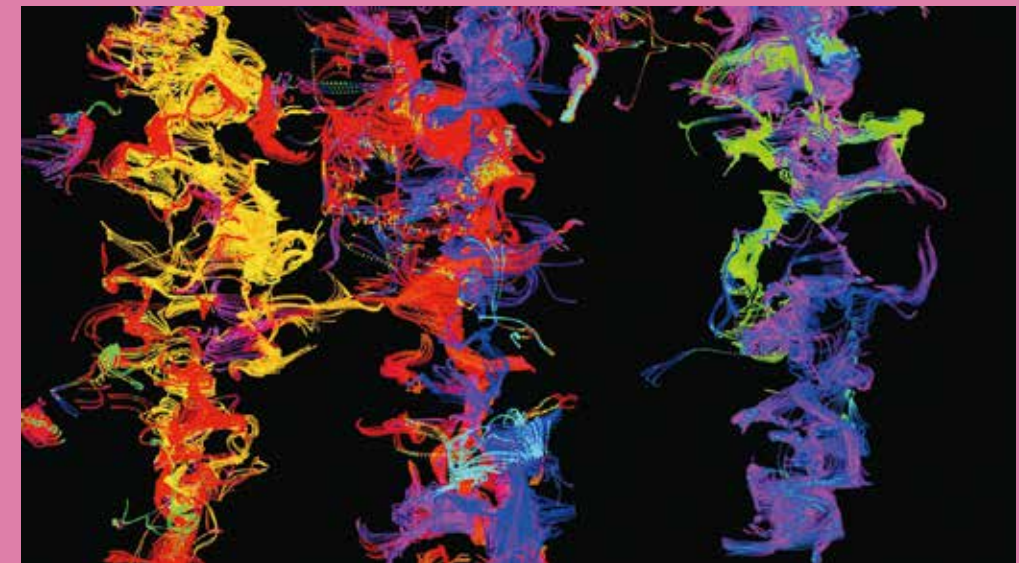
"The evolution of technology reveals an aspiration to place mind into matter in order to create tools that are subservient yet autonomous from humans. Design as a form of technology does not exist outside of this cultural aspiration. Concurrently, experiments in sensing technology express this desire to transform designs into an intelligent form of technology that can autonomously negotiate between the human body, human psyche, the environment and other physical and perceptual parameters."

-- Shuhei Matsuyama

# VISUAL COMPOSING



Digital Action Painting | Shuhei Matsuyama | 2014



**Digital Action Painting** is an installation piece that uses motion sensors to draw with hands and body movements. The retrieved data of body movements, such as the position of the body, the amount of hand rotations and the speed of hand movements is applied to the parameter of the ink's "movement".

Since digitally expressing the method of action painting made famous by Jackson Pollock, it is possible to visualize the process of painting now. By projecting the painting onto walls or desks, it is possible to use a variety of objects and places as canvases. There are different styles of paintings, which are based on various genres such as sand art and ink-wash painting. Every style uses different parameters for the change in ink's movement, which is comparable to using different pens or brushes. Microsoft Kinect and Leap Motion devices are used as motion sensors. The outcome changes depending on the different sensors and therefore the possibilities are endless.



Scan for the full video of Digital Action Painting.

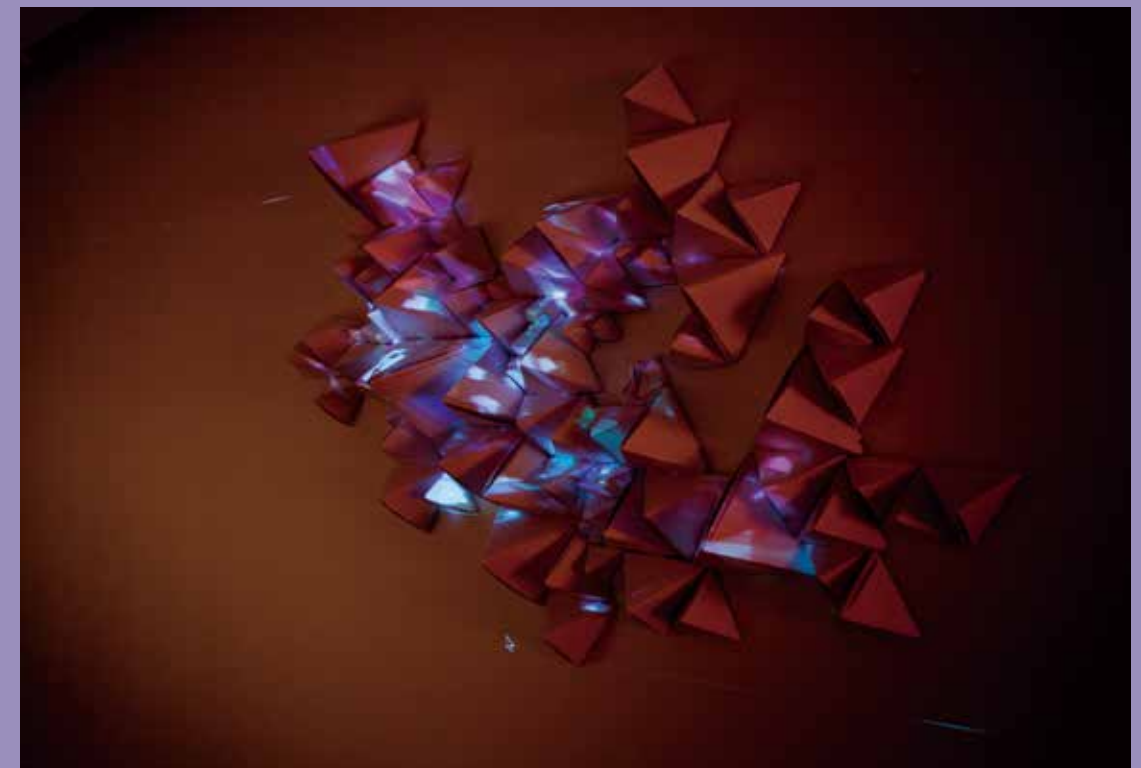




Designed by WILLPOWER studios, *Color Warriors* builds an immersive environment with walls that have projection reacting to the people in front of it. The walls become mirrors that reflect what is in front of it with projection mappings. On one, the drawing was made by an 8-year old boy named London with an amazing intuiting vision. On the other wall, origami tetrahedrons were created and an animation onto them using the colours of one of London's paintings was mapped.



Scan for full video of Color Warriors.



*Color Warriors* | WILLIAM WILLPOWER TAMEL | 2014

