

Here's Some Of The Futuristic Technology Being Developed By The Geniuses At MIT

MEGAN ROSE DICKEY | MAR. 11, 2013, 8:29 AM

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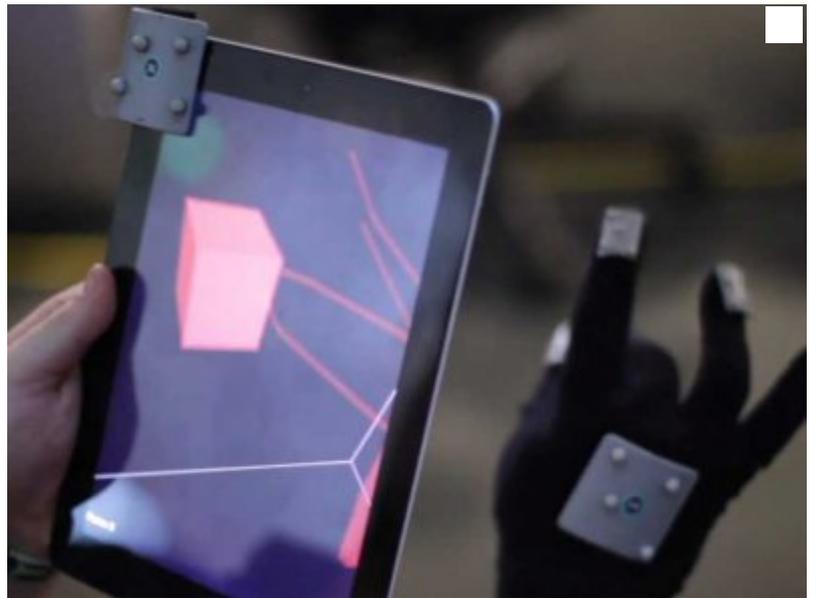
If you want to know what life will be like in 10 years, just take a look inside the MIT Media Lab.

We recently took a quick tour of the MIT Media Lab, where students are working on anything from robotics to programs that let you interact virtually with the real world. The slew of projects on display are guaranteed to get anyone thinking about the future.

MIT Media Lab has [more than 20 different groups](#) working on computing, speech technologies, tangible media, fluid interfaces, and much more.

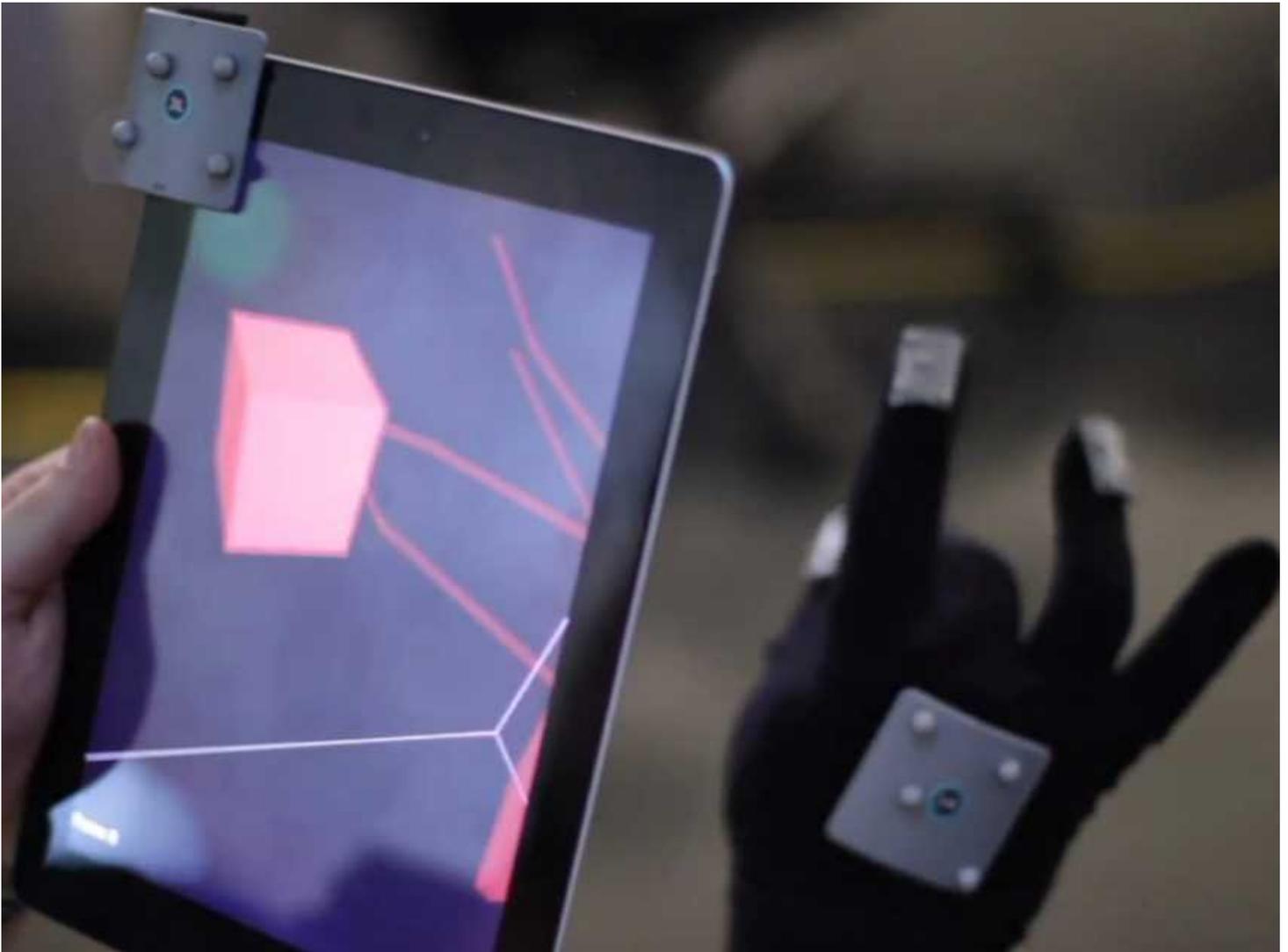
The Tangible Media group, for example, focuses on the intersection of physical objects with computation systems. Its goal is to bring the virtual world and all of its information physically closer to us.

T(ether) creates a spatial connection between the real world and the virtual world



Screenshot

T(ether) bridges the gap between the real and virtual world



Screenshot

MIT Media Lab Group: Tangible Media

Creators: David Lakatos, Matthew Blackshaw

About: This tablet-based technology lets you manipulate virtual objects and collaborate with other people. Automobile engineers could, for example, use this technology to work together in real-time to create a model of an engine.

Tether tracks your head movements using a motion capture camera, as well as your hands with a motion-tracked glove. The glove lets you interact with and morph virtual content, like shapes and other geometric elements, on the iPad. Multiple devices can also connect for collaboration purposes.

InTouch uses "force feedback" to physically connect people separated by distance



Megan Rose Dickey/Business Insider

MIT Media Lab Group: Tangible Media

Creators: Scott Brave, Andrew Dahley, and Professor Hiroshi Ishii

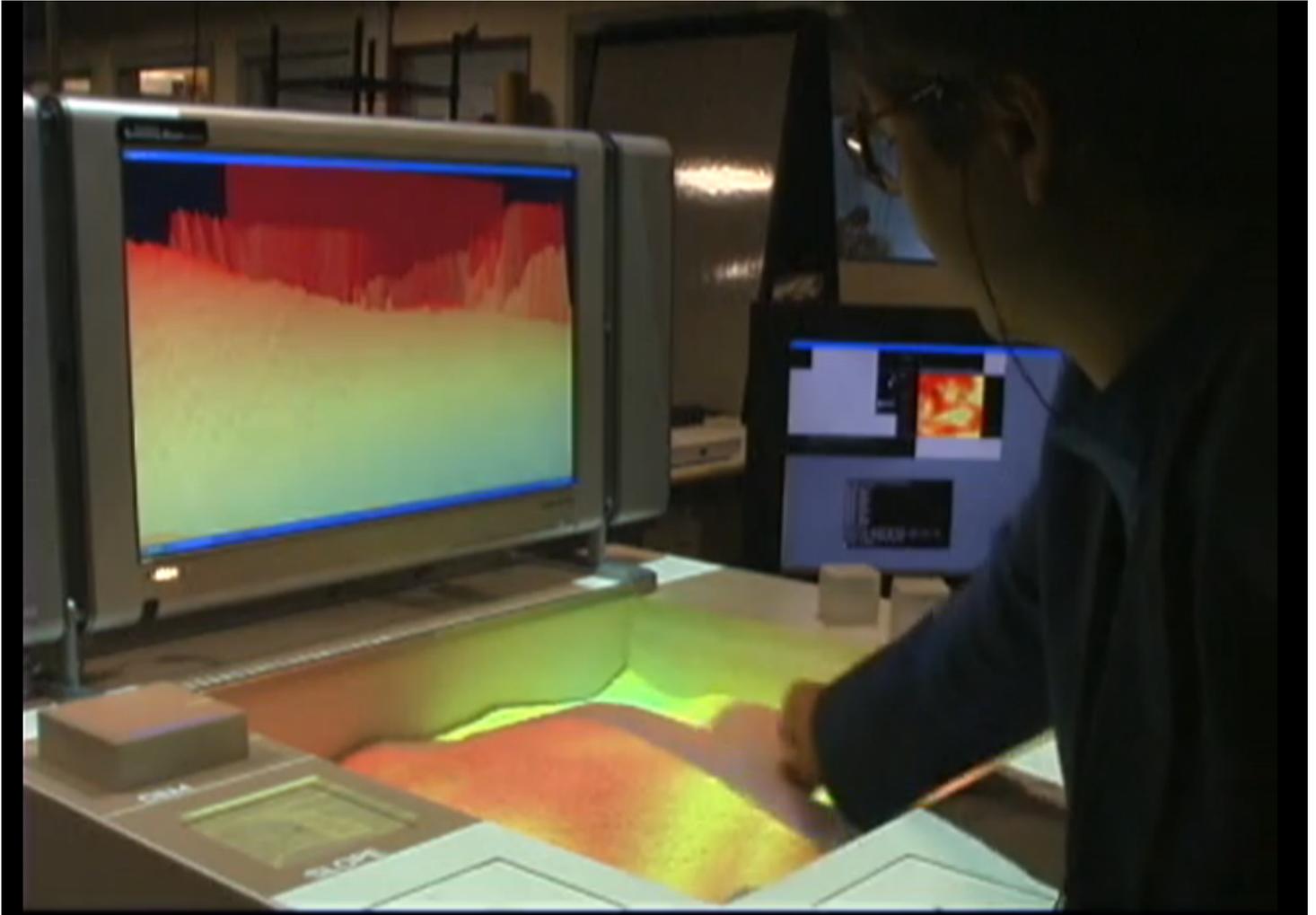
About: [inTouch](#) has two physical elements connected through computer software. The two connected objects consist of rollers attached to a base. When one person rotates the rollers on his or her respective device, the person on the other object can feel it on their device.

Even though you're physically separated, inTouch creates an illusion that you're right there with the person, as you can feel their hand movements.

Touch plays an instrumental role in feeling connected to other human beings. If a

loved one is located across the country, inTouch could help provide a level of closeness that is otherwise unattainable.

SandScape captures 3D geometry in real-time using laser range finders



Screenshot

MIT Media Lab Group: Tangible Media

Creators: Yao Wang, Assaf Biderman, Ben Piper, Carlo Ratti, and Professor Hiroshi Ishii

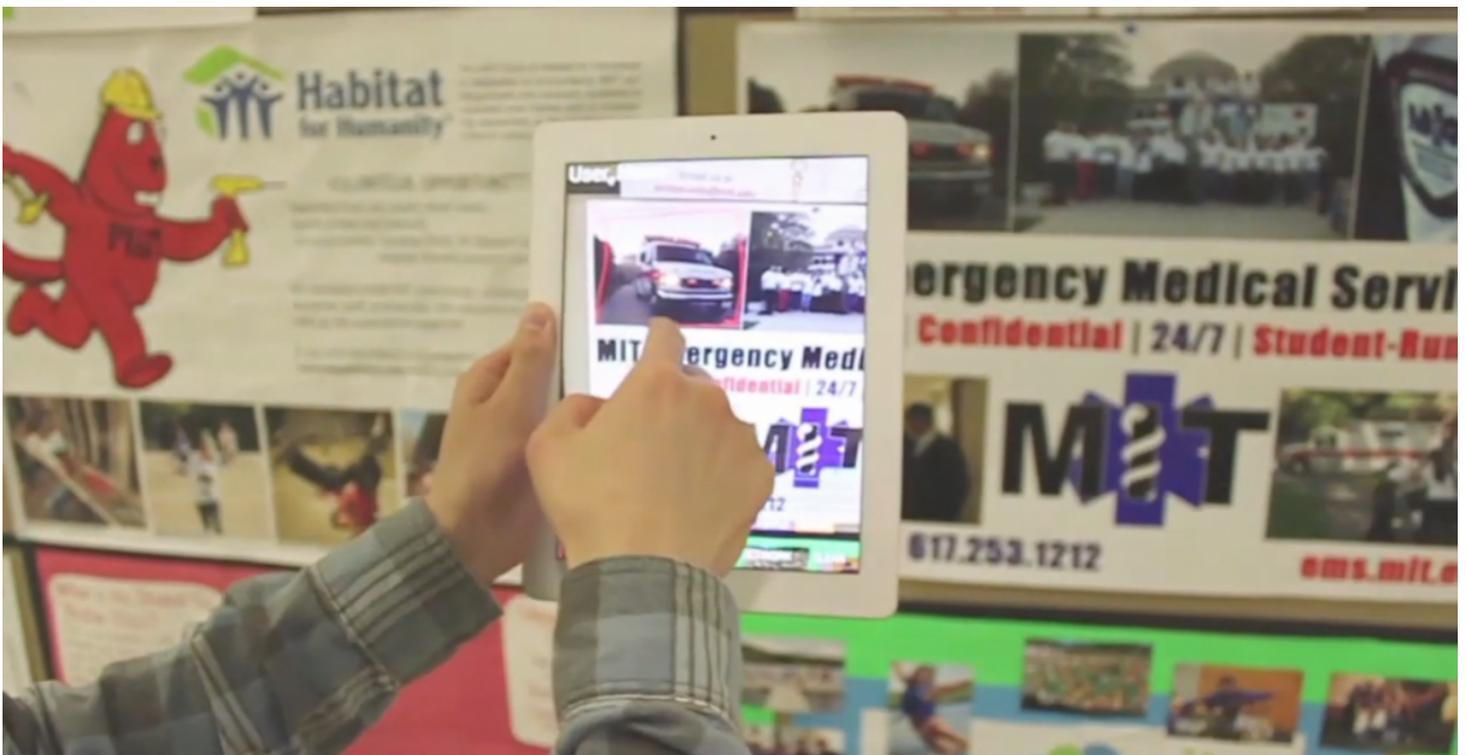
About: [SandScape](#) makes it possible to design and better understand landscapes through computational simulations.

The computer interface works in conjunction with a sandbox to simulate the

elements of a typical landscape. As you manipulate the sand, or objects in the sand, the computer will calculate how those changes affect the height, slope gradients, shapes, shadows, and drainage in a landscape setting.

Those are all things that a landscape designer needs to take into account when deciding where to place a garden or a fence, for example. The system then projects that landscape analysis using a variety of colors back onto the sand surface.

Second Surface creates a virtual layer on top of real-life places and objects



Screenshot

MIT Media Lab Group: Tangible Media

Creators: Shunichi Kasahara, Valentin Heun, Austin S. Lee and Hiroshi Ishii

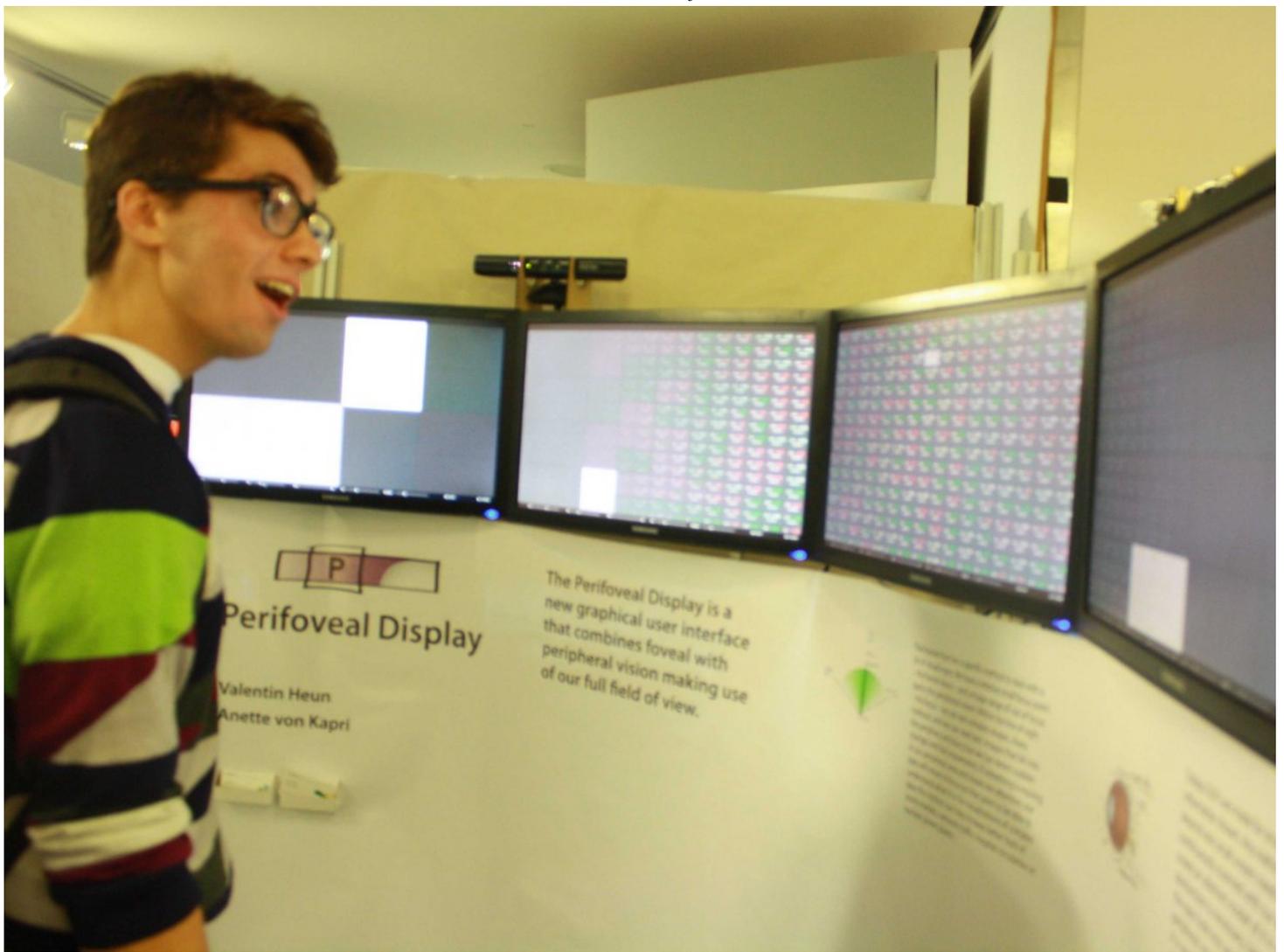
About: With iPad-based [Second Surface](#), it's possible to annotate the real-world. If you're in a park, for example, just hold the iPad camera up to a park bench to leave a note, photo, or drawing. When someone else goes to that same location, they can see your note, along with annotations from anyone else whom has visited

that same spot.

As of now, Second Surface is designed for fun, recreational use. Though, a professor could use the technology to provide feedback to a student on a physical work of art. Instead of altering the original work, the professor could leave notes and annotations on any aspect that needs fixing.

Second Screen envisions integrating its technology into computational devices like Google Glass, or any other head-mounted devices to make the viewing process much more seamless.

Perifoveal Display tracks your head movements to display relevant information



Megan Rose Dickey/Business Insider

MIT Media Lab Group: Fluid Interfaces

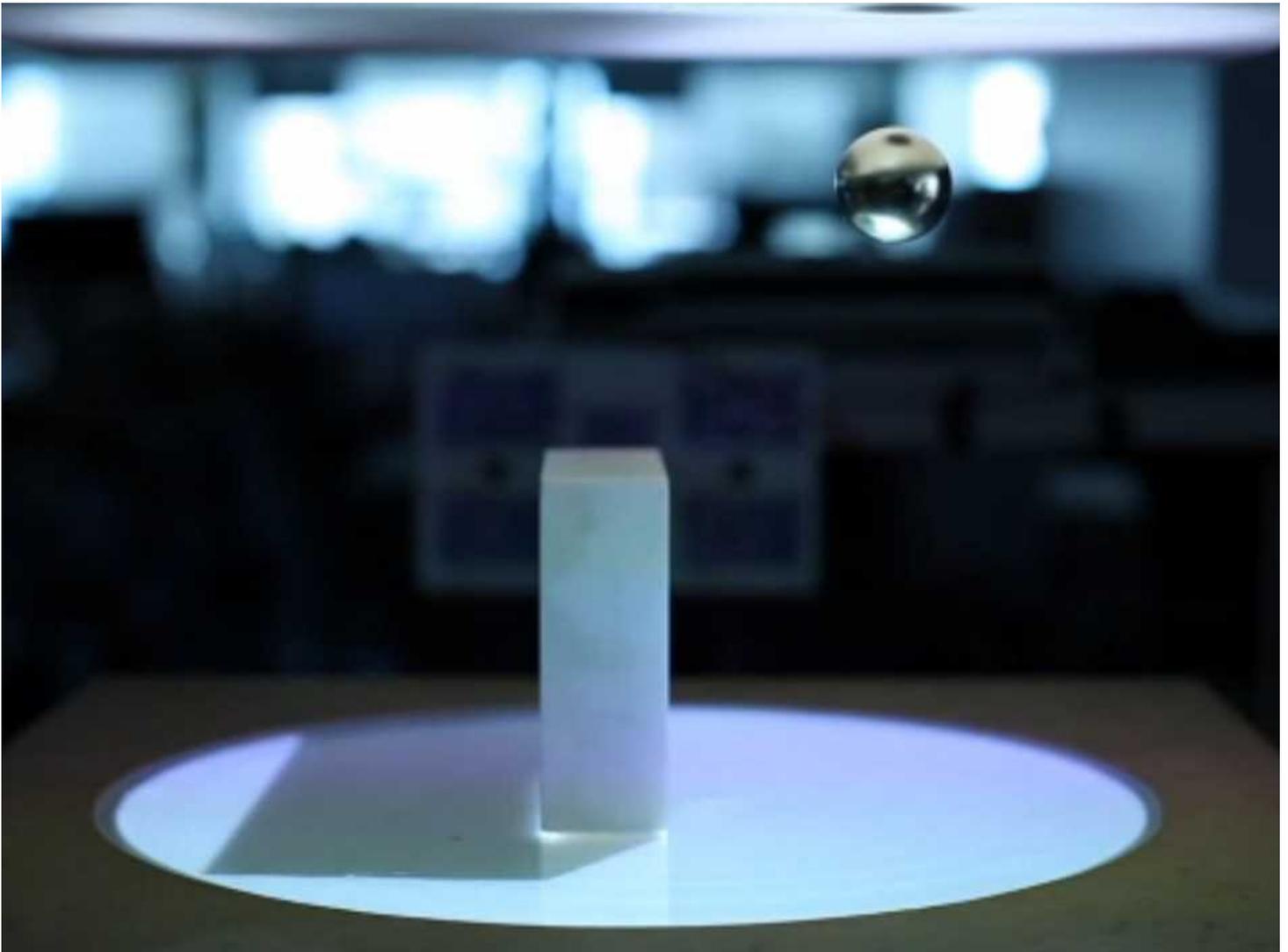
Creators: Valentin Heun, Anette von Kapri, and Pattie Maes

About: Powered by Microsoft Kinect, detection software, and four huge screens tracking new information in real-time, [Perifoveal Display](#) takes data monitoring to the next level.

As your eyes move to one screen, that screen will turn brighter and the others ones will dim. When something changes on another screen, like a stock price or new tweet, a white screen will pop up and your peripheral vision will spot it. That white spot will slowly fade as you start to turn your head to the new information.

Financial analysts, transit dispatchers, and security guards, for example, have to constantly monitor several sources of information. Perifoveal Display could help them scan and monitor all of that changing information in real-time.

ZeroN defies gravity



Screenshot

MIT Media Lab Group: Tangible Media

Creators: Jinha Lee, Rehmi Post, and Hiroshi Ishii

About: The [ZeroN](#) is a magnetic ball that floats and moves in a 3D space. Packed with infrared cameras, a magnetic levitator, motor controller, and two projectors, users can place and manipulate the ball anywhere within the 3D space.

The magnetic ball can also move entirely on its own, and interact with virtual objects in the 3D environment. If you wanted to simulate planetary motion, you could place two additional circular objects in the space, and see how the magnetic ball's orbit changes.

Using ZeroN as a camera, you could also create a 3D camera path for rendering virtual scenes of architectural models. Since the ZeroN remembers how it's been moved, any gesture-controlled paths can be played back for educational purposes.

PingPongPlus is table tennis for the digital age



Flickr/jeanbaptisteparis

MIT Media Lab Group: Tangible Media

Creators: Craig Wisneski, Julian Orbanes, Ben Chun and Professor Hiroshi Ishii

About: Imagine playing a game of ping pong in which the table can sense where you hit the ball. **PingPongPlus** detects ball movements and projects visualizations onto a ping pong table upon impact.

While you're playing, you might see water ripples as the ball bounces, and hear music that reacts based on the speed of the ball. The creators behind PingPongPlus [have since open-sourced the software](#) so that anyone can create their own visualizations.

PingPongPlus doesn't seem to have any use-cases beyond games, but it makes for an unforgettable table tennis experience.

water ripples

Six-Forty by Four-Eighty lets you digitally transfer colors contained inside physical cubes

MIT
Media
Lab



Flickr/haar

Group: Fluid Interfaces

Creators: Marcelo Coehlo, Jamie Zigelbaum

About: **Six-Forty by Four-Eighty** is an interactive light installation consisting of 220 "pixel-tiles." Each tile contains a circuit board, controller, micro-battery, an RGB LED, and a wireless communication system.

If you touch one cube, it will change colors. But if you hold it down for a little longer, and then touch another cube, the color will transfer from the first cube to the second cube.

Since it's designed to let people interact with computers in a more physical way, we could easily see this technology used in physical video gaming environments. Just imagine playing a game like Minecraft, or even Scrabble, with physical, virtual blocks.