

Media Lab

At the [Media Lab](#), AY2014 was a year focused on expanding our global network, encouraging entrepreneurship, and realizing real-world impact. The Media Lab hosted workshops and conferences in Abu Dhabi, Dubai, Mumbai, Nairobi, and Tokyo. The Nairobi event, held in May, was hosted by the Media Lab's Director's Fellows and was the program's first international off-site activity. It involved collaborating with local organizations on projects that ranged from using advanced sensors designed to catch poachers to improving prostheses for those who have lost limbs.

To help recent Media Lab alumni and researchers become successful entrepreneurs, the lab established an investment fund run by the independent, not-for-profit firm E14 Fund Management Inc. By offering stipends, mentoring, introductions to investors, and basic legal and accounting services, the fund provides a six-month runway for recent Media Lab graduates to start new companies while encouraging current students to focus on academics. In FY2014, this fund helped launch seven new startup companies.

Within the lab, we have begun fundraising for the new Center for Extreme Bionics. Led by Media Lab professors Ed Boyden, Hugh Herr, and Joe Jacobson and Institute Professor Robert Langer, this interdisciplinary organization will draw on existing strengths in synthetic neurobiology, biomechanics, microelectronics, and biomaterials to take radical new approaches to eliminating human disability.

Now in its third year, the Media Lab Conversations series welcomed 19 guests whose conversations were live-streamed to the public: Katy Croff Bell, Rob Pardo, George Church, Peter Grauer, Vladimir Kilatchko, Shawn Edwards, Jaron Lanier, Martha Minow, Chris Woebken, Colleen Macklin, Jillian York, Daniel Suarez, Mark Bauman, Jack Schulze, David and Tom Kelley, Media Lab alumna Judith Donath, and Media Lab Director's Fellows Shaka Senghor and Khalida Brohi.

In June, we announced nine new Director's Fellows who will begin their term on July 1, 2014: entrepreneur and designer Marko Ahtisaari; Arab affairs columnist and commentator Sultan Sooud al Qassemi; ocean explorer Katy Croff Bell; social entrepreneur Gillian Caldwell; Van Jones, CNN host and cofounder of Rebuild the Dream; entrepreneur Joyce Kim; game developer Colleen Macklin; Kenyan rally driver Quentin Mitchell; and Pashon Murray, co-founder of Detroit Dirt. The program continues to be funded by gifts from Media Lab Advisory Council members Reid Hoffman and Jeff Walker.

Research Initiatives

A sampling of 2013–2014 Media Lab research initiatives includes:

- Illuminating neuron activity in 3D, a new imaging system that reveals neural activity throughout the brains of living animals. This is the first technique capable of generating 3D movies of entire brains at the millisecond timescale, and it may help scientists discover how neuronal networks process sensory information and generate behavior.

- CityScope, an urban design system that combines high-definition video projectors, advanced modeling and simulation technology, 3D projection mapping, and physical models to create a real-time, interactive data environment for understanding and designing relationships between people and places in cities.
- inFORM, an interactive dynamic display table that can render 3D content physically so that users can interact with digital information in a tangible way. inFORM can also interact with the physical world around it, for example, moving objects on the table's surface.
- ScratchJr, a new tablet-based version of Scratch for children ages 5 to 7. With ScratchJr, children can program their own interactive stories and games and, in the process, learn how to create and express themselves with the computer.
- A glasses-free 3D projector, a new multi-perspective technology that could provide a cheaper, more practical alternative to holographic video.
- Doppellab, an immersive, cross-reality virtual environment that serves as a repository for the multi-model sensor data produced by a building and its inhabitants. It transforms an architectural model into a digital environment, allowing real-time sensor data visualization.
- You Are Here, a series of 10,000 urban data visualization maps.

Events

The Media Lab was well represented at TED 2014. Lab speakers included Hugh Herr, Nicholas Negroponte, Joi Ito, Pattie Maes, and Director's Fellows Marco Tempest and Shaka Senghor.

In May, a large Media Lab contingent participated in the first O'Reilly Solid conference in San Francisco with keynotes, presentations, and breakout sessions.

The Media Lab presented more than 20 panels, demos, talks and workshops, and other activities at SXSW Interactive.

Exhibits and Performances

Le Laboratoire in Paris exhibited *Vocal Vibrations*, an interactive sound and sensory installation by Tod Machover and Neri Oxman with contributions from Opera of the Future students Elly Jessop, Rebecca Kleinberger, and Charles Holbrow.

The Opera of the Future group premiered two additional collaborative symphonies (following *A Toronto Symphony*): *Festival City*, for the Edinburgh International Festival (August 2013), and *The Devil and the Deep Blue Sea: A Symphony for Perth*, for the Perth Festival (March 2014).

The Silk Pavilion, an exhibit in the Media Lab lobby, featured a dome that was created with silk fibers woven by a robotic arm and was then finished by live silkworms.

In February, the Dallas Opera gave an encore performance of Tod Machover's *Death and the Powers* featuring a global, interactive simulcast.

Three Pioneers, an exhibit honoring lab professors Muriel Cooper, Marvin Minsky, and Seymour Papert, opened in the Media Lab lobby in May.

TRANSFORM, a dynamic shape display developed by the Tangible Media group, was shown at the Lexus Design Amazing exhibit at Milan Design Week 2014.

Communications

During FY2014, the number of Media Lab Twitter followers doubled to more than 200,000, and the number of Facebook followers tripled. We also established a more robust presence on Google+, with an increase from a few thousand followers to more than 250,000. The lab held its first Google Hangouts on Air and expanded internal and external communications through Yammer and LinkedIn.

The lab also continued to receive considerable media attention. It conducted press campaigns around a number of research programs, including *The Silk Pavilion* (Mediated Matter group), a project to design a bionic dancing ankle for a survivor of the Boston Marathon bombings (Biomechatronics), MAS.S65 Science Fiction to Science Fabrication (Object-Based Media and Fluid Interfaces), inFORM and *TRANSFORM* (Tangible Media), FingerReader (Fluid Interfaces), City Science (Changing Places), and ScratchJr (Lifelong Kindergarten).

Media outlets covering the lab included ABC, the Associated Press, BBC, Bloomberg, CBC, CBS, *Christian Science Monitor*, CNN, CNN International, *Fast Company*, *Forbes*, *Fortune*, *The Guardian*, *Huffington Post*, MSNBC, NBC, *New Scientist*, *The New York Times*, NHK, NPR, Reuters, RTL, *USA Today*, *US News & World Report*, *The Wall Street Journal*, *The Washington Post*, *Wired*, and *Wired UK*.

Finances

The Media Lab's annual operating budget of approximately \$47.3 million was an increase of about 9% from FY2013. Lab revenues increased 7% to \$50.5 million, creating a \$3.2 million surplus for the lab and a break-even budget for the lab's consortium. Some 37% of funding came from the consortium (\$18.7 million), which added 20 new members with a net annual membership revenue increase of \$2 million. Sponsored research funding was \$13 million, accounting for 26% of the FY2014 budget. Gift income grew to \$8.9 million, an increase of \$1.8 million over the previous year. Notably, the lab also created a bad-debt reserve of \$450,000 to protect from any downside risk. In all, FY2014 was a year of financial growth and one in which the lab added systems to manage even stronger anticipated growth in the future.

Fellows

During FY2014, the following companies and organizations supported students and postdoctoral researchers at the lab through fellowships:

Audi-Volkswagen: postdoctoral fellow Michal Gordon

Cisco: Aithne Pao, Lining Yao

Damon Runyon Cancer Research Foundation: Daniel Schmidt

Draper Laboratory: Achuta Kadambi

Toshiba: postdoctoral fellow Dan Dubois

Wellcome Trust: Nir Grossman

The lab is also hosting two Marie Curie Fellows (both postdoctoral), paid for by their home institutions: Dominik Hartmann (University of Hohenheim) and Szymon Fedor (University of Cambridge).

Members

In FY2014, the Media Lab welcomed 20 new members: 21st Century Fox, Asahi Shimbun, Bloomberg, Colgate-Palmolive, Dentsu-Aegis Network Ltd., EMC, Globo, Gucci, ICICI Bank, Jaguar Land Rover, Mitsui & Co., Monex Group, Mori Building Co. Ltd., Ooredoo, Otsuka America Pharmaceutical Inc., RECRUIT, Starcom Mediavest Group, Trends Media Group, Welspun, and one anonymous sponsor.

Patents

In FY2014, the Media Lab filed 60 patent applications (including provisional patent applications), and 19 patents were issued.

Directed Research

In FY2014 the Media Lab submitted 75 proposals for new or continuing directed research projects, including graduate and postdoctoral fellowships. Approximately 20% of these proposals were for sub-awards in collaboration with other research institutions. Thirty-nine proposals remain under consideration, and 23 have resulted in awards. Slightly fewer than half of the proposals submitted were in response to government solicitations (e.g., National Science Foundation, National Institutes of Health, and Defense Advanced Research Projects Agency), with the remainder submitted to foundations and nongovernmental sources. The new awards ranged in size from \$9K to \$2.1M and spanned six months to three years.

Human Resources/Administration

Peter Cohen, formerly of Carnegie Mellon University, was hired as the Media Lab's director of development and strategy in January. He was joined by development associate Signe Swenson, who transferred from MIT's Office of Philanthropic Partnerships. The lab saw three retirements this year: Felice Gardner, director of sponsor

relations; John Maloney, research scientist; and Cynthia Wilkes, senior administrative assistant. Bill Lombardi, the lab's events assistant, was the recipient of an Infinite Mile Award from the School of Architecture and Planning.

Joi Ito
Director

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