

Media Lab

During 2014–2015, the Media Lab expanded its commitment to unconventional, interdisciplinary research, working across and outside traditional academic disciplines to engage all of the Lab’s 24 research groups in a holistic approach to create a new design ecosystem. This spans pioneering work in synthetic neurobiology, to a new generation of smart wearables and interfaces, to designs made with and by nature—with the possibility of even designing nature itself. Above all, the Lab remains committed to the kind of disruptive research approach that breaks the rules and pushes academic boundaries.

As part of this effort, in April, the Lab announced its Digital Currency Initiative. This will bring together global experts in areas ranging from cryptography, to economics, to privacy, to distributed systems. The effort will reach across the entire Institute and will also include leading experts around the world to address some of the most critical challenges to creating a safe, stable, and secure digital currency. Brian Forde, former senior White House advisor for mobile and data innovation, has been hired to serve as director of the initiative.

Other new initiatives for the 2014–2015 academic year include OpenAgriculture, focused on creating a network to bring together partners from industry, government, and academia to develop the world’s first open-source research collective focused on advancing global agriculture for the 21st century.

In addition, the Lab received a \$1 million grant from the Robert Wood Johnson Foundation to establish the Advancing Wellbeing initiative, which is exploring the role of technology in promoting healthier workplace and lifestyle behaviors.

The Lab continues to extend its global network of individuals and organizations committed to bringing about broad societal change. A major part of this effort is the Director’s Fellows program, now in its third year. When the Lab inaugurated the program three years ago, we initiated a collaboration to bring together individuals of unorthodox creativity who are as varied in their pursuits as they are in their geographic diversity. This year’s nine fellows, announced in June for a term beginning in July, are: Ophelia Dahl, Gabriella Gomez-Mont, Eman Jaradat, Sam Kass, Christine Sun Kim, Viktoria Modesta, Rob Pardo, Tenzin Priyadarshi, and Allison Tauziet. The program continues to be funded by gifts from Media Lab Advisory Council member Reid Hoffman.

The Lab also continues to attract numerous visitors from around the world. This year the Lab was honored to host Japanese Prime Minister Shinzo Abe.

Now in its fourth year, the Media Lab Conversations series welcomed more than 20 guests, including several past and present Media Lab Director’s Fellows, whose conversations were live-streamed to the public. They included: Christine Sun Kim; Moran Cerf; Alfredo Corchado; Temple Grandin; “Guts and Genius,” part of 92Y’s Seven

Days of Genius Festival, with Joi Ito, Kevin Slavin, David Sun Kong, and special guests; Cam Kerry and Isabelle Falque-Pierrotin; Sam Kass; Ophelia Dahl (Partners in Health); Masashi Kawamura; B. Alan Wallace in conversation with Joi Ito and Venerable Tenzin Priyadarshi; and Sarah Parcak.

Sampling of 2014-2015 Media Lab Research Initiatives

Mushtari, the world's first photosynthetic wearable that combines multi-material additive manufacturing and synthetic biology. The work is a prototype for an external digestive system embedded with living matter.

Vision-Correcting Displays that automatically correct for vision defects—no glasses (or contact lenses) required.

A Global Language Network, developed in collaboration with Harvard's Steven Pinker, which correlates the number of prominent people to their native languages.

Expansive Microscopy, a new technique to physically enlarge brain tissue samples, giving researchers high-resolution images of cellular activities.

A big data study that finds that 90% of “anonymous” credit card users' metadata can be reidentified with just a few pieces of information.

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.

BioGlass, a wearable device that uses sensors embedded in Google Glass to robustly measure physiological signals (heart rate and breathing rate) to help the wearer better interpret and communicate his or her feelings.

TRANSFORM, an interactive dynamic display that fuses technology and design to convert a tabletop into a dynamic machine driven by a stream of data and energy. It comprises three dynamic shape displays that move over 1,000 pins up and down in real time.

Events

In November, the Lab co-presented the reThink Food conference with the Culinary Institute of America in St. Helena, California. The two-day event featured talks and presentations from speakers from the food and packaged goods industries, as well as journalists and academics.

Media Lab speakers at TED 2015 included Neri Oxman and director's fellow Baratunde Thurston.

In June, a large Media Lab contingent participated in the second O'Reilly Solid conference in San Francisco.

The Media Lab presented more than 20 panels, demos, talks, workshops, and other activities at SXSW Interactive in March. Media Lab Director Joi Ito and Institute Professor Robert Langer gave a featured talk, and Associate Professor Hugh Herr was a featured speaker.

The Media Lab had 20 submissions accepted for CHI 2015, held in April. Members of the Affective Computing, Camera Culture, Civic Media, Fluid Interfaces, Living Mobile, Object-Based Media, Responsive Environments, Tangible Media, and Viral Communications groups all participated in the conference.

In September, the Media Lab collaborated with the Peabody Essex Museum as a part of their PEM/PM series. The Museum's once-a-month Thursday evening event featured the Playful Systems group's radiO_o and other musical projects from around the Lab.

On September 20 and 21, the Lab hosted the Make the Breast Pump Not Suck Hackathon, with students working together with parents, medical professionals, designers, and engineers to radically redesign the breast pump and advance other innovations that could improve life for children, families, and employers.

Exhibits and Performances

Hiromi Ozaki had a solo exhibit, *Tranceflora—Amy's Glowing Silk*, at the Gucci Gallery in Tokyo, April–May 2015.

The work of Neri Oxman and the Mediated Matter research group is included in the exhibit *This Is for Everyone: Design Experiments for the Common Good*, at the Museum of Modern Art in New York City.

A custom-built version of the Tangible Media group's inFORM project was on exhibit at the Cooper Hewitt, Smithsonian National Design Museum in New York from December 2014 to May 2015, as part of the exhibit *Tools: Extending our Reach*.

Composer Tod Machover and creative studio artisan closed the Annual Meeting of the World Economic Forum with a multimedia performance celebrating the spirit of dialogue and reminding us of our collective responsibility.

Vocal Vibrations, an interactive sound and sensory installation by Tod Machover and Neri Oxman, with contributions from students in the Opera of the Future group, moved to Le Laboratoire in Cambridge, Massachusetts, from its original location at Le Laboratoire in Paris, France.

Communications

Working with the design firm Pentagram, in the fall of 2014 the Lab unveiled a new visual identity. This includes a new black-and-white Media Lab logo, and also a set of "glyphs" that use the same underlying grid to generate a unique identity for each of the Lab's research groups. The result is an interrelated system that not only establishes a fixed identity for the Media Lab, but also celebrates the diversity of activity that makes

the Lab great. This new identity system was honored by the Design Museum and *FastCoDesign* as one of the best designs of 2014.

During FY2015, the Media Lab's Twitter followers increased from just over 200,000 to 292,000; its Facebook followers increased to 119,000; and followers on Google+ increased to 435,000. The Lab also established a robust presence on Instagram, with 6,500 followers, and switched its blogging platform to Medium, where it has gained a substantial following (42,000); several blog posts have gone viral, earning top status on Medium and leading to media follow-up.

During FY2015, in parallel to the rollout of the new Lab identity, the Lab began a full-scale website redesign to modernize both the public and internal portions of the site. After an internal site audit and RFP process, the Lab hired Brooklyn firm Type/Code for the project. Upgrades will include both new digital asset management and content management systems.

The Media Lab continued to garner very positive media coverage in national and international markets. Announcements and press campaigns were launched around key initiatives, including the Laboratory for Social Machines, the Digital Currency initiative, and the Center for Extreme Bionics, and research projects such as Wanderers (Mediated Matter), Huggable (Personal Robots), TRANSFORM and Social Textiles (Tangible Media), Expansion Microscopy (Synthetic Neurobiology), Bioglass (Affective Computing), NailO (Living Mobile and Responsive Environments), Breast pump hackathon (Civic Media), CityFarm (Changing Places), Cellphone Metadata (Human Dynamics and Macro Connections), as well as numerous awards and recognitions.

Media outlets covering the Media Lab included: Associated Press, BBC, Bloomberg/*Businessweek*, *CoDesign*, CBS, *Coindesk*, CNN, *Dezeen*, Discovery International, *The Economist*, *Fast Company*, *Focus*, *Folha de S. Paulo*, *Forbes*, Fuji TV, *Huffington Post*, *The Los Angeles Times*, *Metropolis*, *MingPao*, *New Scientist*, *The New York Times*, NHK, *Nikkei Shimbun*, NPR, PBS, Reuters, *Scientific American*, *TIME*, *Times of India*, *Verge*, *Wired*, *Wired UK*, *The Wall Street Journal*, and *The Washington Post*.

Finances

The Media Lab's annual operating budget of approximately \$57.6M was an increase of about 21% from FY2014. Lab revenues increased 33.5% to \$67.4M, creating a \$9.7M surplus for the Lab, and a break-even budget for the consortium. Some 35% of funding came from the consortium (\$23.4M), which added 23 new members with a net annual membership revenue increase of \$5.2M. Sponsored research funding was \$16.6M, and accounted for 25% of the FY2015 budget. Gift income grew to \$20.4M, an increase of \$11.5M over the previous year. The Lab wrote off two members in FY2015 with \$362.5M, and kept a bad-debt reserve balance of \$203K to protect from any downside risk. In all, FY2015 was a year of financial growth, and one in which the Lab applied a new financial reporting tool to manage PIs' financial activities.

Members

In FY2015, the Media Lab welcomed 24 new members: AchuaTech; Biogen; Brookstone; The Coca-Cola Company; Converse; DAQRI; Estee Lauder; Expo 2020; General Electric; GoDaddy; Hoffmann-La Roche Inc.; IKEA; KYOCERA; LKK Health Products Group; MedImmune; Robert Wood Johnson Foundation; TED; Thales; Unilever; Univision; Viacom; VSP Global; and two anonymous sponsors.

In addition, during FY2015, the following companies and organizations supported students and postdoctoral researchers at the Lab through fellowships: Cisco Systems, Inc.; Intel; NEC Corporation; and Volkswagen Group of America, Inc.

Patents

In FY2015, the Media Lab filed 74 total applications (Provisional, Ordinary, PCT, DIV), and 23 patents were issued.

Directed Research

In FY2015 the Media Lab submitted 85 proposals for new or continuing directed research projects, including graduate and postdoctoral fellowships. Approximately 30% of these proposals were for sub-awards in collaboration with other research institutions. Forty-six proposals remain under consideration, and 12 have resulted in awards. Sixty-two percent of the proposals submitted were in response to government solicitations [e.g., National Science Foundation (NSF), National Institutes of Health (NIH), and Defense Advanced Research Projects Agency (DARPA)], while the others were submitted to foundations and non-governmental sponsors. The new awards ranged in size from \$25K to \$750K, and spanned six months to three years.

Human Resources/Administration

Greg Tucker, the Media Lab's director of facilities, retired after nearly 30 years at the Lab. He was succeeded by Jessica Tsymbal, who holds a master's degree in architecture from MIT. Kudos to Program Manager Ryan McCarthy, who won the School of Architecture and Planning's Infinite Mile Award for his outstanding recruitment of new members and his support of current consortia members. The Lab added several administrative positions to support a growing number of researchers and research areas at the Lab.

Joi Ito
Director

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