

## Media Laboratory

FY2010 was a significant one for the Media Lab, as it marked the long-awaited opening of our new Media Lab complex, centered around our fabulous new six-story building designed by Pritzker Prize-winning architect Fumihiko Maki. The 163,000-square-foot building (connected to the existing I.M. Pei-designed Wiesner Building) is an architectural showcase that offers a new model for how physical space can be fully integrated with a research program. The entire complex will function as a transparent, evolving research platform, seamlessly connecting the real and virtual worlds.

The new building was officially dedicated by MIT on March 5. On May 25, the lab hosted a research open house and daylong symposium, “Diagonal Thinking,” to celebrate the lab’s move into its new complex. The symposium used the complex’s innovative design as a jumping-off point to challenge preconceived notions about the intersection of physical space, technology, and creative thinking. At the event, led by Media Lab associate director Andy Lippman and hosted by award-winning National Public Radio commentator Tom Ashbrook, faculty members and guest panelists presented unconventional ideas on ways to cross intellectual streets rather than follow them.

Working within its beautiful new complex, the lab continues to advance a wide range of research activities that span broad societal needs. A sampling of 2009–2010 Media Lab research initiatives includes:

- Bokode, a next-generation barcode that uses a new optical solution for encoding information, allowing barcodes to be shrunk to less than 3 mm, be read by ordinary cameras from several meters away, and offer different information from different angles. Possible applications include encoding product information for consumers, exhibit labeling for museums, and advanced motion-capture systems for video games.
- Sourcemap, a volunteer-driven, social-networking Web application that presents easy-to-understand map visualizations of the environmental impact of consumer products—information that is rarely available to the public.
- NETRA, a simple, low-cost device that affixes to a cell phone to provide quick eye tests, offering the potential for widespread use throughout the developing world.
- BiDi, a new bidirectional screen that both captures images and displays them, allowing 3D gestural and 2D multitouch interfaces. Its applications can range from touch interaction with consumer electronics devices to seamless video communication.
- Cardiocam, which captures physiological data purely by image analysis over the Internet from a webcam pointed at a person’s face. The Cardiocam team has accurately captured heart rate during remote video-conferencing interactions. This approach will allow for more primary care outside the doctor’s office.

- HealthMap's Outbreaks Near Me iPhone and Android application, which provides real-time disease outbreak information, including news about H1N1 influenza. The project is a collaboration with Children's Hospital, Boston.
- Scratch, an open-source programming language for kids that allows them to create their own interactive stories, games, music, and animations for the web. Scratch has reached a broad, worldwide audience with more than 500,000 users who have uploaded more than one million projects.
- Mobility on Demand (MoD) systems, lightweight, electric vehicles placed at electrical charging stations strategically distributed throughout a city. MoD systems provide mobility from transit stations to a final destination. Three MoD vehicles have been developed: the CityCar, RoboScooter, and GreenWheel bicycle.
- *Death and the Powers*, an innovative opera scored for an ensemble of specially designed "hyperinstruments" and set on a first-of-its-kind robotic, animatronic stage. As the opera progresses, the stage "comes alive" as the main character in the drama. The opera will premiere in Monaco in the fall.

## Exhibitions and Performances

The Media Lab continued to exhibit widely during FY2010, with several works winning design awards. Some highlights are listed below.

Richard The (Design Ecology) was awarded first place in the Harold and Arlene Schnitzer Prize in the Visual Arts.

Jay Silver's (Lifelong Kindergarten) *Freeze!* was exhibited twice during the summer of 2009: at the Taiwan National Museum of Fine Arts and as part of the MIT Mural Competition at the Wiesner Student Art Gallery.

*IMPETUS: Works from the MIT Media Lab* was exhibited at the 2009 Ars Electronica Festival.

The Object-Based Media group's 3D TV and holographic video was included in the MIT Museum's *Sampling MIT* exhibit.

Neri Oxman's work was exhibited as part of the *Frontier of Ecological Design* exhibit at Boston's Museum of Science from August 2009 to February 2010.

Heather Knight (Personal Robots), Richard Whitney (Tangible Media), and alumnus Jamie Zigelbaum (Tangible Media) were among those who created a massive Rube Goldberg machine for the OK Go video *This Too Shall Pass*.

Marcelo Coelho (Fluid Interfaces) and alumnus Jamie Zigelbaum were selected as one of the four group winners in the 2010 W Hotels Designers of the Future Award. Their winning project, *Six-Forty by Four-Eighty*, is an interactive installation of thousands of graspable, luminescent pixels controlled by remote light brushes. The project blurs

boundaries between the digital and the physical while presenting a new solution for controllable, ambient lighting for interior spaces.

Several Media Lab projects have also been included in the *Why Design Now?* exhibit, the current design triennial at the Smithsonian's Cooper-Hewitt, National Design Museum. Projects that are part of the exhibit, on view through January 9, 2011, include the CityCar, HealthMap, and the XO laptop from the Media Lab spinoff One Laptop per Child.

## Fellows

Nine corporate sponsors—BBVA, Hasbro, IBM, the Industrial Technology Research Institute (ITRI), LG Electronics, Nokia, Orange Labs Boston, Procter & Gamble, and Telmex—funded student fellows. In addition, each year the lab awards the Steven R. Holtzman Fellowship for Digital Expression, funded by the family and friends of the late Steven R. Holtzman. The following were named fellows during FY2010:

- Dustin Arthur Smith (BBVA)
- Seth Hunter and Ryan Wistort (Hasbro)
- Richard The (Steven R. Holtzman Fellowship for Digital Expression)
- Drew Harry (IBM)
- Pei-Yu (Peggy) Chi (ITRI)
- Andrea Colaço and Matt Donahoe (LG Electronics)
- Sean Follmer (Nokia)
- John Moore (Orange Labs Boston)
- Daniel McDuff (Procter & Gamble)
- Andrés Monroy-Hernández (Telmex)

## Sponsors

The Media Lab, whose research and expense volume was approximately \$26 million in FY2010, continued to work on fostering a spirit of collaboration with lab sponsors and advancing a model for one-on-one relationships between sponsoring companies and individual faculty members.

The Media Lab welcomed 12 new sponsors: AOL Inc., BBVA, DenokInn, ENEL SpA, Hasbro, Infocast Limited, InterDigital Communications, Korea Telecom, NUL, RR Donnelley, the VF Corporation, and one company that wishes to remain anonymous.

## Patents

The lab filed 46 patent applications during FY2010, and six patents were issued.

## Directed Research

In FY2010, the Media Lab submitted 71 proposals for new and continuing directed research projects. Nearly 65 percent of these proposals remain under consideration, and 22 have resulted in awards. Approximately 55 percent of the proposals submitted were in response to government solicitations (National Science Foundation, National Institutes of Health, Defense Advanced Research Projects Agency, Department of Defense, and Office of Naval Research), with additional interest in directed sponsorship from foundations and nongovernmental sources. The proposals ranged in size from \$7,500 to \$2.25 million and spanned two months to five years, with awards averaging \$175,000 per year for two years.

## Human Resources/Administration

The Media Lab is pleased to welcome Mauro Nunez, who will serve as the lab's new finance director. For the past three years, Nunez was the business manager of the World Wide Web Consortium, an international industry consortium with 330 members based at the Computer Science and Artificial Intelligence Laboratory. Nunez brings extensive experience working in finance and academia to the lab. He replaces Mary Young, who now serves as the administrative officer for the Nuclear Reactor Laboratory.

## In Memoriam

All of us at the Media Lab will greatly miss William J. Mitchell, who headed the lab's Smart Cities research group and served as an inspirational thinker and mentor. A creative visionary who was a prolific writer and articulate spokesperson for radically transforming our urban infrastructures, Bill Mitchell inspired us all, and his passing is a profound loss to the lab and to the whole of MIT.

I would like to close by adding that this will be my last year as lab director, as February 2011 will mark the conclusion of my five-year commitment. Our goal is to name a new lab director by February, but I expect to stay involved with the lab through the New Media Medicine group after my tenure as director concludes. It has been an honor to work with all of the incredible people at the Media Lab and to see all of the positive advances we have brought about together: a spectacular new complex, an improved sponsor model, and compelling new research areas that address a broad range of business and societal needs. The faculty, staff, and especially students continue to amaze me with their brilliance, commitment, and creativity.

**Frank Moss**  
**Director**

*More information about the Media Laboratory can be found at <http://www.media.mit.edu/>.*

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### Corporate Research Sponsors

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