INVENTING THE FUTURE @ THE MEDIA LAB

When the MIT Media Lab first opened its doors in 1985, it combined a vision of a digital future with a new style of creative invention. It pioneered open computer gardens, personal computing on every desk, and a multimedia network to every room—a radically new set up for the time. It brought together researchers from far-ranging fields who were passionate about creative expression, with pioneers in the emerging field of digital technology. Many visitors and sponsors came to see not only what the Lab did, but also how it did it. Emphasis was less on current market needs and more on imagining the future.

In its earliest years, some saw the Media Lab as a house of misfits. The Lab, on the other hand, saw itself as an exciting new paradigm for research. Here, the emphasis was on building; the Lab's motto was "demo or die." As early as 1985, the Lab was developing image technology for the "home delivery" of movies; new approaches to data compression; and Csound, one of the most widely used software synthesis systems. Frequently the Lab developed a concept that was so far ahead of the curve that it took years—sometimes decades—for society to catch up. Early on, for example, Lab founders demonstrated the Aspen Movie Map, a revolutionary hypermedia system that allowed the user to take a virtual tour through Aspen, Colorado—a system that pre-dated Google Earth by some 25 years. The Lab demonstrated electronic postcards in the mid 1990s, and conducted breakthrough research on personalized news delivery. It was an early developer of wearable computing, pioneered digital tools for constructionist learning, and was experimenting with online sociable media long before there was Facebook or Twitter.

Throughout the 1980s, Lab researchers developed the first programmable bricks for LEGO construction kits, as well as research for "television of tomorrow," where Lab researchers drove the industry to scalable, extensible, digital generations of television. In 1985, the Lab created the world's first multi-color, computer graphic hologram; in 1990, it demonstrated the world's first real-time, moving synthetic hologram.

The next decade brought about research breakthroughs in sensors that could detect a user's actions by measuring the body's influence on an electric field; software agents with collaborative filtering that help tap into other people's collective wisdom; systems that allowed 3D interaction with virtual creatures that could "see" and "hear"; and NetSound, capable of delivering an entire Beethoven symphony over the Internet in about 10 seconds. It also introduced the world to computers that could recognize and respond to emotion, as well as inexpensive, wireless "digital town centers" capable of providing even the most remote and underdeveloped areas of the world with digital access.

The twenty-first century brought about even broader-reaching Media Lab work with a strong emphasis on improving the human experience. The Lab focused on new technologies that seamlessly merge with our bodies to forever change our most basic notion of human capabilities. This includes the development of the world's first robotic ankle-foot and knee prostheses capable of successfully mimicking the action of a biological ankle, and, for the first time, providing amputees with a truly humanlike gait. Lab researchers are also advancing an ingenious new technology for analyzing and precisely controlling neural circuits, including those in the brain—research that has implications for developing radically new medical technologies to treat brain disorders such as Parkinson's disease, or for changing mental and emotional states, such as severe depression.

After more than 25 years, the Lab remains committed to the fundamental principle that the most imaginitive work comes from a unique "antidisciplinary" culture advanced by a dedicated group of passionate researchers. Looking forward, the Lab's formula for success will continue to be a renegade research environment that not only allows for, but encourages, researchers to ask the questions that no one else has thought to ask.