

[A look to the future](#)

The next big thing: convergence

By ELIZABETH MALLOY, The Daily Transcript
Thursday, February 22, 2007

The next big thing might not be an everlasting battery or a miracle drug, but rather a theme encompassing all facets of science and technology -- less is more.

In the years ahead, the most successful technology will be that which makes gadgets easier to use, software easier to install, information easier to access, health care more personal and small-scale and electronics more energy-efficient, according to a roundtable discussion at La Jolla's Salk Institute this week.

"I think you need a remote for your life," said Kevin Carroll, executive director of the AeA San Diego Council, a high-tech trade group. "It's just integrating."

Carroll was speaking primarily about technological hardware. He said science should move toward getting as many tools, from phones to car keys, onto one single device.

But the idea of making science more powerful yet compact stretched to other specialties as well. When it comes to software, the trend is leaning toward "software as a service," where software is installed via the Internet and paid for on a monthly basis, rather than installed off a data CD, according to Bob Slapin, executive director of the San Diego Software Industry Council.

When it comes to health care, Duane Roth, chief executive officer of the trade group Connect, said over the next few years and decades, advancements will allow people to design health care more around prevention than reaction. He also noted more needs to be done to get patients' care in their homes, since there won't be room in hospitals with the aging baby boomer generation.

To make things smaller, Paul Laikind, chairman of the trade group BIOCOM and chairman, president and CEO of the biotech company **Metabasis** (Nasdaq: MBRX), said more companies with different technological or scientific specialties would need to work together.

"Nanotechnology and biotechnology obviously are heavily linked ... so there is convergence there," Laikind said. "There's also convergence in terms of ...using all the information we're generating. We have to have something with the other industries to put that information into useful forms."

In Laikind's industry, which is making new drugs, development can take years. From the moment a scientist has an idea until the time a pill is on the market may take at least 10 years and nearly \$1 billion, Laikind said. So predicting "the next big thing" is close to impossible. But Roth had some ideas on where health care in general is headed.

The Human Genome Project will eventually permit examining the genetic makeup of infants so they can prepare for which diseases and disorders they're prone to and work to prevent them. New studies -- some being conducted in San Diego -- are beginning to show great anti-aging powers in red wine that could be converted to drug form. Some scientists say people could one day live to be 150 years old, Roth said.

"If that happened and each generation were 22 years and everybody lived, a child born with those statistics would have 64 great, great, great, great, great, great grandparents," Roth said.

This would put new strains on the world's resources. Still, alternative fuel energy appears to be a long way off, according to those gathered at the forum this week. The fastest advances seem to be coming on the technology side.

The forum, called the Next Big Thing and sponsored by the MIT Enterprise Forum, united scientific leaders every few months to discuss different topics. Those speaking included Roth, Slapin, Carroll, Laikind and Rory Moore, director and CEO of CommNexus. As part of the program, past audience members and others in the local science and technology fields were polled and asked what they thought were some of the "next big things." Most agreed with software as a service, user-friendly interfaces and advancements in biotech. When considering the future, panelists at the forum said it's important to think of consequences. Privacy as we know it will be tested, Carroll said, as more information goes online. People may have to change their ideas of what privacy means. Also, the government may choose to crack down on certain advancements for various reasons, and scientists need to be ready for that, the panelists agreed.

Security needs could pull defense contractors into the equation, some panelists suggested, but overall they were looking toward advances that will affect average people.

Roth spoke about how life sciences and technology could all come together, with a message sent electronically to doctors if a patient did not fill a prescription.

"There are many working between wireless and the monitoring databases," Roth said. It's "IT and health care and the convergence."

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