UCSC researchers meet tech leaders to talk storage

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SANTA CRUZ — Gutenberg changed the world with his printing press, making information readily available to generations. The same thing is happening again with the World Wide Web, but the big question is: How will we store this information? And once we’ve stored it, how will we find it again?

UC Santa Cruz researchers tackling those problems met Friday with about 20 Silicon Valley tech leaders to talk about what they’ve come up with so far and what direction to take in the future.

Rumi Zahir, principal engineer with Intel Labs in Santa Clara, said he wanted to hear what UCSC computer scientists Darrell Long, Scott Brandt and Ethan Miller had to say.

“They have built for themselves a reputation in storage research,” Zahir said.

“It’s exciting,” said Carlos Maltzahn, who works in performance analysis for Sunnyvale-based Network Appliance. “The creativity points you to new solutions.”

The gathering, attended by representatives from the U.S. Department of Energy, IBM and Seagate, was a first for UCSC’s 2-year-old Storage System Research Center, part of the Baskin School of Engineering. Long, who has 14 patents to his credit, is the director.

Eight UCSC professors are involved in the research center along with six affiliate researchers working at other universities or industries. Together, they are trying to develop seamless ways to add computer storage in a world that is switching from paper files to computer files.

“Everybody’s interested in that, from home users to supercomputers,” Brandt said.

One problem is that storage systems are slow, taking time to retrieve information, while computers themselves have gotten speedier.

“We need to catch up,” Zahir said.

Among the new ideas to build capacity is the “Ice Cube,” a series of 8-by-8-by-8 inch bricks (with disk drives storing gigabytes of data) that could be stacked on top of a base system like LEGO — no cables needed.

UCSC alumnus Richard Goldberg, who is working on the project at IBM’s Almaden Research Center, said he couldn’t predict when it would come on the market.

Traditionally, researchers publish papers, and now there is e-mail, but UCSC professors decided it was time to take advantage of their proximity to Silicon Valley and invite high-tech companies for face-to-face discussions.

The effort to build relationships may pay off down the road.

“I’ll be more willing to pick up the phone or e-mail,” said Anthony Weathers, a senior research scientist at Overland Data in San Diego.

About 20 UCSC graduate students work at the research center funded by corporate or government sponsorship. Sponsorships start at $10,000 with $40,000 funding a full year.

According to Brandt, UCSC is one of the top two academic research groups in storage. The other is Carnegie Mellon University.

“We brought in $800,000 this year,” said Brandt.

For information about Research Center sponsorships, call Serena Yang at 459-1399 or e-mail serena@soe.ucsc.edu

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