

## Following Venture Capital for Signs of Tech to Come

by Claire Cain Miller

After hibernating for the last year, Silicon Valley's venture capitalists are beginning to stir.



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Technology financiers raised about \$14 billion to finance new companies in 2009, a sharp drop from \$36 billion in 2007. But as the economic freeze begins to thaw, investors are once again writing checks to entrepreneurs.

Some of the ideas will become the big public companies of the future, following in the footsteps of one-time start-ups like Google, Cisco Systems and Amazon.com. Many more will fail because they are too early, late or unoriginal.

Yet whether individual companies make it or not, the new ideas that are intriguing top venture capitalists

offer an early look at which technologies may transform the way we live in coming years.

**COMPUTERS IN OUR POCKETS** Tech pundits have long predicted that one day we would carry tiny computers in our pockets, and last year that began to happen with application phones like the iPhone.

Computing will become even more mobile this year, especially if Apple releases a rumored tablet computer, said Todd Chaffee, a general partner at Institutional Venture Partners in Mill Valley, Calif.

As the line between our phones and computers blurs, the way we use them will change. In 20 years, a keyboard and mouse will be archaic, like punch cards are today, said Brad Feld, a managing director of the Foundry Group in Boulder, Colo.

"With gesture-based, multitouch, spatially controlled, voice-activated and wearable computing, there is an unbelievable amount of innovation going on here," he said.

For all the interest in mobile, venture investors are losing interest in start-ups that build iPhone applications. "That was a very exciting place to look at; the growth numbers were off the charts, but I think we all understand now that it's very hard to build big businesses here," said David Pakman, a partner at Venrock in New York.

This year, investors are most excited about Android, Google's mobile operating system. In 2010, people are expected to buy two to three times as many Android-based phones as iPhones, "ripping apart the hegemony of the Apple ecosystem," said Peter Fenton, a general partner at Benchmark Capital in Menlo Park, Calif.

**GREEN TECH FIZZLES** After years of breathless excitement about green technology, many venture capitalists have grown skeptical. "That one has been overhyped," Mr. Chaffee said.

Venture capitalists invested just \$1.6 billion in clean tech companies in the first nine months of 2009, compared with \$3.1 billion in the same period in 2008, according to the National Venture Capital Association.

Many still think that saving the earth could be profitable, but on a smaller scale. Foundation Capital is interested in applications that use the smart electric grid to monitor, distribute and conserve energy. Battery Ventures is looking at companies that make devices like computers more energy efficient.

**DATA OVERLOAD** Among Tweets, Foursquare check-ins and text messages, we are all producing a lot more data than we were a year ago. However, "the way we've built Web sites for the last 15 years hasn't really been designed to deal with the amount of data we're now seeing because of the real-time Web," Mr. Pakman said.

New technology companies will figure out how to tweak the architecture of the Web to accommodate the data deluge, he said.

Start-ups will figure out how to restore the balance between how much information we receive and our ability to process it, Mr. Feld said. For example, Foundry is investing in companies that manage and extract data from e-mail inboxes, as well as start-ups that give people access to personal data, like music and photos, from any computer, at any time.

**A MORE EFFICIENT OFFICE** Start-ups that make software and hardware for businesses will take a cue from consumer devices like the iPod and build products that are simpler to use, said Sunil Dhaliwal, a general partner at Battery Ventures in Boston.

"The guy buying software and hardware for your average company probably looks a whole lot more like a guy raised on an iPod and an iPhone than a guy in his 60s raised on Unix terminals and big old I.B.M. mainframes," he said. "That's going to ripple through technology sold to companies in a really dramatic way."

Paul G. Koontz, a general partner at Foundation Capital in Menlo Park, said entrepreneurs were coming up with promising ideas for virtualization software and Web-based cloud computing, both of which give companies lower-cost options for maintaining their technologies.

“There’s no doubt in my mind that 10 years from now, our notion of the corporate data center is going to be gone, and the way that large companies use technology like software is going to be completely redefined,” he said.

Security companies that help Web sites and computer owners protect themselves are ripe for investment as well, said Ray Rothrock, a partner at Venrock in Palo Alto. Today, 80 percent to 97 percent of business e-mail messages are spam, he said, and malware, software that infects computers, has grown exponentially.

**RETURN OF THE I.P.O.?** Venture capitalists make most of their money on initial public offerings of the tech companies they invested in. But in each of the last two years, fewer than 10 companies have gone public, compared with 86 in 2007.

The new year could finally break the logjam, bringing more than 50 tech offerings, investment bankers say. That could include prominent companies like Facebook.

“There’s a big backup and there’s a lot of companies that have \$100 million or more in revenue and are profitable or will be profitable next year, and there will be some huge I.P.O.’s,” said Mike Kwatinetz, a general partner at Azure Capital Partners in San Francisco. “What that will also do is heat up the M&A market.”

That is welcome news after a dark year, Mr. Dhaliwal said. “The mood is pretty optimistic, in that way that if you’re nearly killed in a car accident you’ve got a renewed positive outlook on life.”