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By Eric J. Savitz, 1/25/2010

**IN THE SUMMER OF 2004**, two red-hot Silicon Valley start-ups were preparing initial public offerings. One was Google. The other was Nanosys, then the flagship of the emerging stream of companies focused on nanotechnology -- the science of the very small.

I gave thumbs-down to the proposed \$115 million Nanosys IPO in a July 5, 2004, feature called "[Sweating the Small Stuff](#)." I noted that Nanosys was little more than a collection of early-stage research projects. It had a pile of patents and a stable of Ph.Ds, but scant revenue, no products and no idea when it might generate either. The proposed IPO was a cynical attempt to tap into what was then a certain level of mania about nanotechnology. But investors figured it out: The IPO was pulled.

Fast-forward to last week. It turns out Nanosys is still alive, and showing distinct signs of life. Still based in Palo Alto (a few blocks from Tech Trader headquarters), the company in 2008 booted out the original management team and installed former Hewlett-Packard executive Jason Hartlove as CEO. At one point at HP, Hartlove recalled in an interview, he was charged with taking technologies developed in the company's labs and figuring out how to turn them into revenue generators. One was an \$800 hand-held scanner that was a "disaster for HP," selling fewer than 1,000 units. The product made no sense when flat-bed scanners were selling for \$39, but it had useful optical technology. Hartlove led an effort to redirect the technology -- and the result was the optical mouse, a device that has since sold billions of units.

At Nanosys, Hartlove is again seeking to monetize an impressive portfolio of patents and science. "When I came to Nanosys, I could see we had a wide variety of nascent technologies, some of them well-developed as technologies, but with no real focus on end-market applications so you could go out and sell them," he says.

Hartlove cleaned house, cutting about half of the 65 employees, then hiring a bunch more. When he finished, head count was actually up a bit, with fewer scientists and more engineers and marketers.

Last week, the company unveiled the first fruits of Hartlove's labors: a deal with display manufacturer **LG Innotek** (011070.Korea) to use "quantum-dot phosphor technology" to provide "ultra-high-color gamut displays." In short, the company has figured out how to produce much-improved color quality in handset and notebook screens. He says current display backlighting produces "washed-out reds" and yellow-looking greens -- and that Nanosys can do far better for little additional cost.

The company also is working with the U.S. military on a new approach to treating "noncompressible wounds" in the field, to keep soldiers alive while being transported to a hospital. And it's also working on a way to improve the efficiency of lithium-ion batteries. Working with partners -- whom Hartlove won't name just yet -- it's trying to boost cellphone- battery performance by 25% to 35%.

In short, Nanosys, after years of trying to be a nanotech company, finally decided to be an actual company with products and revenues, and soon, profits.

Hartlove says Nanosys can hit cash-flow break-even this year. The company isn't quite ready to refile the IPO. But, with its new thinking, Nanosys might eventually get that deal done, after all.