



TECHNOLOGY: SERIES OF UPSTARTS FOLLOW SOFTWARE GIANTS' MERGER

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From its origin in the back bedroom of a neuroscientist's house on Del Mar Heights Road in 1986, HNC Software Inc. came to dominate the national market for detecting credit-card fraud.

HNC ceased to exist in August 2002, when it was acquired by its Marin County-based competitor, but its legacy has arguably grown larger than the company itself ever was. Loaded with advanced degrees in mathematics, economics and computer science, its talent pool of 500 former employees has spread.

More than a dozen of its brightest minds have become entrepreneurs themselves, carving out niches in the field of analytics, a class of business software that uses past data to predict future or unknown events. The new analytics firms are concentrated in Sorrento Valley but are spread throughout North County.

At least two of the entrepreneurs are already on their second start-up. Executives estimate that the field has grown to employ a total of 1,000 to 2,500 people in San Diego County, even as banks and Wall Street firms have siphoned away some of the HNC talent to form their own in-house analytics teams.

As a result, the area is developing into the nation's top cluster for analytics software, with specialized accounting, venture-capital and law firms to support it, said Russ Mann, a former HNC scientist whose analytics company, Covario Inc., employs 60 people in Scripps Ranch.

New York City, Boston and Austin, Texas, have also developed analytics clusters that focus on specific industries, but none have the wide reach that San Diego does, Mann and others said.

One local upstart gauges the likelihood that a small business will make its loan payments on time, based on factors including the business's credit history, the size of the loan, its cash-flow, and the industry it's in. Another company's software detects fraudulent credit-card purchases made with fictitious identities.

The largest group of HNC alumni struck out on their own around the time of the \$800 million merger with Fair Isaac Corp., developer of the ubiquitous FICO score that lenders use to judge creditworthiness and set interest rates. But several said in interviews last week that HNC's magic petered out over several years, even as it remained profitable.

As HNC and then the combined company grew larger, they became somewhat less receptive to fresh ideas, the employees said. "It was time to move on," several said in interviews.

Steve Biafore, who went to work for a fellow HNC alum at Global Analytics Inc., remembered the early 1990s when he worked on software 16 hours a day, wore jeans in the office, and occasionally let laundry pile up in the corner. The freewheeling culture was first buttoned down when HNC first went public in mid-1995, Biafore and several others said.

"That talent could only stay cooped up for so long," Biafore said. "It's really busted out and done some really big things."

Global Analytics was entirely self-funded, largely through co-founder Krishna Gopinathan's sale of HNC shares, Biafore and Gopinathan said. Most of the other start-ups benefited both from similar HNC wealth and from venture-capital money, the founders said.

'Arms race'

The new software businesses range in size from a half-dozen employees to a hundred. Some are small and independent, while one is a new arm within SAS Institute Inc., one of the world's largest privately held software firms. And Fair Isaac's San Diego division ---- largely a continuation of HNC ---- still employs 380 people.

Fair Isaac spokesman Craig Watts noted the variety of start-up companies founded by former HNC and Fair Isaac employees.

"You find some of your creative people wanting to be in a smaller organization," Watts said.

Like HNC, several of the companies focus on fraud prevention, but most have diversified. BasePoint Analytics Inc. in Carlsbad develops software for lenders that want to know whether homebuyers are lying on their mortgage applications. Global Analytics in Sorrento Valley has developed software for several industries, including human-resources programs that help companies identify, retain and promote their most productive employees, Biafore said.

Allen Jost, a top manager at HNC through most of the 1990s, said it has been natural for most of them to branch out from HNC's original strength in identifying attempts to use stolen credit cards. Software by Jost's company, ID Analytics in Carmel Mountain, screens credit-card applications based on fictitious identities. HNC's Falcon software cut credit-card companies' fraud losses in half within a few years, Jost said, but many of the perpetrators moved on to other types of identity fraud that required new detection techniques.

"The fraudsters didn't just get a job at a fast food restaurant," Jost said.

"There's still a fraud problem out there," Biafore said. "Falcon worked well, but whenever there's a money pipe out there, the bad guys are going to find a way to get the money. You've got to get better. It's like an arms race."

Degrees of freedom

Numerous HNC employees arrived at the company from a graduate-level class in neural networks, a branch of neuroscience that attempts to replicate the brain's own structure process for solving problems. The UC San Diego professor, Robert Hecht-Nielsen, stayed with the university while he was involved with HNC. He still researches there and teaches two evenings a week.

Hecht-Nielsen and Todd Gutschow, both researchers for Rancho Bernardo defense contractor TRW, founded HNC in late 1986. Their work at TRW had focused on military uses for neural networks. At HNC,

they incorporated neural networks into a variety of software, including Falcon, the company's largest enduring success.

Gutschow is on the board of directors of the Classroom of the Future Foundation, a nonprofit group that aims to bring private-sector technology into San Diego County schools. He was elected to the Poway Unified School District in 2006.

Even with the experience in the private sector, Hecht-Nielsen said he and Gutschow knew their first hire had to be someone to run the business. They chose Bob North, a former superior from TRW, who stayed with the software company through the 1990s.

Hecht-Nielsen said the business world presented new challenges for other mathematicians and computer scientists at the company, too, as new clients sought help in analyzing new and unique business problems.

"Many people gained enormous understanding of how business works by working at HNC," Hecht-Nielsen said. "That expertise has stood this community in good stead, with all the spinouts" that alumni have founded.

Mark Digman, marketing director for software at North Carolina-based SAS, said HNC alumni have enhanced the range of customized software that his company is able to offer its clients worldwide. SAS hired away four former HNC managers soon after it was acquired by Fair Isaac.

One of them, Revathi Subarmanian, said nearly half of her 22 colleagues in SAS's San Diego office had worked for either HNC or Fair Isaac.

Echoing former colleagues, Subarmanian credited HNC with melding business, technology and fun. The company lured young, energetic graduates with PhD and dual masters degrees in math, economics, geophysics and game theory, she said.

Meeting at the former campus on a cool, sunny afternoon last week, a dozen of them reminisced talked about software, long days and Rollerblading around a section of their office building that was empty in the early days. Several said they've tried to replicate some of that culture in their own companies.

"It was a pretty amazing place," Subarmanian said.