

## Profiles in Leadership #12

# Ray Rothrock: Tech Investor Who Runs on Optimism

Ray A. Rothrock, Sc.D., P.E., Texas Delta '77, Venture Capitalist Extraordinaire

by Alan S. Brown

**R**AY ROTHROCK, the general manager at the Rockefeller family's venture capital firm, Venrock, moves fast. When opportunity presents itself—and sometimes even when it does not—he plunges forward, certain that action will create its own luck.

So, when the Benedictine monks from Woodside Priory, a small secondary school located in the foothills of Silicon Valley, called for help, Rothrock's wife, Meredith, knew her husband would take the lead.

Priory had a fine reputation but an aging infrastructure. Within months, Rothrock was chairing the board and mapping which facilities to refurbish or build. With the building fund running out of money while the \$25 million expansion languished in municipal committees, Rothrock acted. He excavated a large hole for a building foundation in the middle of the parking lot.

The gaping hole added urgency to his final presentation to the town, which okayed the permits. He then called 10 of the school's wealthiest parents, pointed to the permit and the hole, and raised \$5 million in one night. He helped make Priory one of California's top schools.

It was vintage Rothrock, a can-do attitude, salesmanship backed by mastery of details, and enough optimism

What does it mean to be a leader? In this series "Profiles in Leadership," Tau Beta Pi is exploring that essential question through the lives of member engineers who attained leadership positions in their fields.

to embrace risks that make most people flinch.

That optimism, fueled by a booming economy, was infectious when Rothrock was born in 1954. His parents, who met at a dance hall, never attended college. Yet his father, a machinist, could buy a two-story brick home in Ft. Worth, TX, where young Ray helped him fix appliances and

tear down transmissions, and motorcycles.

Rothrock was intensely curious, devouring *National Geographics* and the entire *World Book Encyclopedia*. His passion for music prompted his parents to sell their horse to buy a piano.

As a teen, he was a straight-A student, an Eagle Scout, and the school band's drum major. "My scout friends were very different from my music or academic friends, but I learned to get along with all of them on their terms," he recalled.

### Excelled in Class

The summer after graduating as valedictorian, Rothrock worked in an asphalt roofing plant while debating whether to pursue nuclear engineering or music. When he visited Texas A&M University, an associate engineering dean offered to enroll him on the spot. "I remember thinking, 'This smart guy thinks I should be in college and the alternative is hard labor in 110 degree heat,' so I enrolled," he added.

Rothrock excelled in class, became a Tau Beta Pi officer, and helped plan TBP's annual Convention at Texas A&M. He learned to work with many engineers at a time when "interdisciplinary" was not part of academia's vocabulary. His ability to reach across technology barriers would define his career.

He became a student leader, opening Texas A&M's music program to all students and growing the ham radio club to 500 members, from 50.

After Texas A&M, he opted for an MIT Ph.D. in nuclear engineering. It proved a cul-



Breaking the ground for Woodside Priory's new Rothrock Performance Hall in 2006. Rothrock, third from left, helped the small school raise \$25 million to upgrade its facilities.



ture shock. Many classes were highly theoretical, while Rothrock saw himself as “a mechanic who still carried my dad’s toolbox.”

Rothrock opted for practice over theory. After completing a master’s project to measure how well liquids cooled runaway nuclear reactors, he left the program for Yankee Atomic Electric. It was not what he had imagined. As a safety engineer in western Massachusetts, he spent his days filling out forms. “There was no research, no science.”

Bored, Rothrock began writing code. Safety engineers spent hours combing through printouts for data. Rothrock’s software captured it automatically.

Rothrock was reinventing his career when the Three Mile Island partial reactor meltdown occurred in 1979. “Our leadership was saying a meltdown could never happen and I was watching it happen on television,” he said.

Frustrated, he left for a job with Exxon in Houston, where he wrote computer code to simulate solution mining of uranium with hot pressurized liquids. Yet, Three Mile Island had soured the nation on nuclear power and demand for uranium declined. “Exxon gathered all 200 of us,” he recalled. “A vice president from New York walked to the front of the room, introduced himself, and said that Exxon was shutting down the division. They called us into a room one by one and gave us either a pink slip or our next assignment.”

Rothrock declined the assignment and joined a startup where he wrote code and designed plant retrofits. When the business failed, he joined a large consulting firm, but left when it was acquired.

### Classic Success Story

In 1984, he joined a small startup called Sun Microsystems. It became a classic Silicon Valley success story, pioneering high-performance PC’s for engineering and scientific computing. Rothrock’s job was to convince CAD/CAM developers like Autodesk and Intergraph to adapt their software to run on Sun workstations.

Rothrock was good at it. He wrote and used CAD software and he had grit. When one CEO failed to respond, he found a picture of him and then ambushed him in his company’s parking lot to get an appointment.

Rothrock was living the startup dream, yet he was increasingly drawn to the work his roommate, Steve Krausz, was doing in venture capital. Rothrock tagged along with Krausz to VC events and parties. When Sun went public, he wrote a regulatory document describing the company’s technology.

“I got touched by the business,” he said. “I mean, why not? I was curious, I could sell, and I was interested in new technology. All I needed was my union card, which was an MBA.”

Rothrock’s future wife, Meredith, was living in Boston and offered to support him while he went to Harvard Business School.

Rothrock graduated during the recession of 1988. Sun, Apple, and Steve Jobs’ new company, NeXT Computer, all offered him jobs. VC work was harder to come by.



### This Leader In Brief

**Full professional name:** Ray Rothrock.

**Most recent position:** chairman and CEO, RedSeal Inc.

**Birthplace:** Ft. Worth, TX, 1954.

**Highest degree:** S.M., in nuclear engineering, Massachusetts Institute of Technology (MIT), 1979.

**Major career highlights:** Director, CAD marketing, Sun Microsystems, 1984-88; partner (1988-95) and general partner (1995-2013), Venrock; chairman, National Venture Capital Association, 2012-13; and chairman/CEO, RedSeal, 2014-current. At Venrock, he invested in more than 50 companies, including Spyglass, Check Point, Double-Click, Lycos, PGP, Shape Security, CTERA Networks, Tri Alpha Energy, and Vontu, as well as RedSeal.

**Board memberships:** Continues to serve on the boards of some of his investments, including Tri Alpha, Check Point, Roku, and Shape Point. He is currently chairman of RedSeal and on the board of the MIT Corporation, the \$40 billion University of Texas Investment Management Co. (UTIMCO), and a trustee of TheatreWorks, a local theater company.

**Honors:** Rothrock was named a distinguished alumnus by MIT for nuclear engineering in 2013; Tau Beta Pi in 2015; and Texas A&M in 2016. He appeared on the Forbes Midas list of best VC dealmakers in 2012 and 2013.

**Greatest accomplishment:** My son. I’ve raised a good citizen, a great friend, and a talented musician.

**Family:** Married Meredith in 1987. Their son, Nathaniel, 27, is a professional actor and musician.

**Leaders most admired:** Robert Gates, Jim Lovell, Earl Rudder (a D-Day hero and the architect of modern Texas A&M), Winston Churchill, Steven Jobs, and Lawrence and David Rockefeller.

**Hobbies:** Music, ham radio emergency communication, skiing, bicycling, hiking, and pro bono work for education.

**Favorite books:** Biographies, most notably *Duty* by Robert Gates; *Titan, The Life of John D. Rockefeller* by Ron Chernow; *Last Moon: The Perilous Voyage of Apollo 13* by Jim Lovell and Jeffrey Kluger; and *The Smartest Guys in the Room: The Amazing Rise and Scandalous Fall of Enron* by Bethany McLean and Peter Elkind. He also binge watches such streaming television shows as “Billions.”

**Personal motto:** : I would have fought harder to invest in Yahoo. I would not have let business get in the way of some friendships. I would have married Meredith and learned to play bass in a rock band sooner.

*Ray A Rothrock*





**Above:** Ray, two years old, with his parents and older brother Gary in Ft. Worth, TX. **Center:** Rothrock, 18, as drum major of his high school marching band. **Bottom:** Armed with his MIT master's, Rothrock begins his career as a nuclear engineer in 1980.



Only three Harvard grads got VC positions, compared with 35 in 1987. Rothrock was one of them.

"What set me apart was that I was older," he said. "I worked at startups that failed and at one big success. I had a strong track record, I could sell and had advanced degrees in engineering, and business."

Venrock, the Rockefeller's family fund, invited him in for an interview. "When I came in for the last interview, the lead partner had my resume on his desk. So, I picked it up and said, 'Why won't you hire this guy?'"

"He smiled and started to list his objections. Salesmen love that, because it gives us an opportunity to knock them down. He said, 'You don't have an electrical engineering degree.' So, I said, 'If I had one, it would have been in analog because digital processors hadn't been invented yet.' And he said, 'Good answer.' We kept going back and forth, but I think those aggressive tactics are the reason I got the job. VC's have to compete for companies and I had to show that I could do that," he said.

His first big success came in 1992, when he bought into Spyglass, a company developing an internet browser. Rothrock had used ARPANET, the internet's text-based precursor while at Sun, and understood the value of a point-and-click interface. He ponied up \$1.25 million for one-quarter of the company. When the internet exploded several years later, Microsoft licensed the technology for Internet Explorer—at \$1 per copy. Venrock made millions and Rothrock became a partner.

He redoubled his internet efforts, investing in Lycos, an early search engine, and Double-Click, which managed website ads. He was one of only a handful of VC's to attend the first internet software conference, where he met Check Point Software, an Israeli security company.

### The Good and the Bad

Rothrock wanted that deal. He realized that the internet posed security threats and he had heard good things about Check Point's network firewall from friends at Sun.

"Word got out and it turned into a feeding frenzy," Rothrock said. "Everyone wanted that deal. But before I met with them, I installed their firewall at Venrock. When I told that to Check Point's CEO, he didn't believe me and made me convince him. My understanding of his technology made the deal."

It was also the beginning of a relationship with Check Point founders Shlomo Kramer and Gil Shwed, a veteran of Israel Defense Force's secretive Unit 8200 signal intelligence corps. Rothrock went on to do several other IT security deals with them and other Unit 8200 veterans.

He had a great track record of picking companies with complex technologies. During his 25 years at Venrock, seven investments went public, 34 were bought or merged, three still involve him, and seven went under.

The failure that hurt most was Autonomics Networks which made software to control access to sensitive data.

"It had a great CEO, the technology worked, and we had Beta customers on Wall Street who loved it," he said. "It could have been a billion dollar deal, but the 2008 recession hit. The bankers kept promising to buy software



and I kept convincing my partners it would bounce back.”

Autonomics expanded to meet those orders. When they never came, Rothrock had to shut it down.

The deepening recession tested Rothrock, now Venrock’s general manager, in other ways. Many of Venrock’s limited partners needed cash and wanted to liquidate their investments. Rothrock used facts and threats to talk them out of it. He argued that they would receive only pennies on the dollar and that he would not allow them to invest in Venrock’s next round of investments.

They stayed, yet by 2013, Rothrock was ready to leave. He thought VC’s were overpaying for businesses that had no way to spend such enormous cash infusions.

Rothrock never quite retired. He taught, chaired several startups, and helped manage Texas’ \$40 billion university endowment trust. He volunteered with MIT, professional organizations, charities, and government.

Then, in 2014, he became CEO of RedSeal, a security business that helped networks handle cyberattacks. Rothrock and his partners had cobbled the business together in 2004 and found an executive to run it. “It was the only investment I ever made that did not have a founder in the CEO role,” he said. “I started a company without a leader and it was the worst thing you could do.”

When RedSeal started hemorrhaging money, Rothrock and fellow investor Pete Sinclair decided to step in. As CEO, Rothrock had to fire half the company. Yet, he had learned something from his time at Exxon. “You don’t just give them an envelope in a back room,” he said. “You can deliver a tough business message with optimism—we’re going to be okay, we’ll all get through this.”

Rothrock changed the culture. His reputation helped him recruit a strong management team. RedSeal began reaching decisions faster. Sales and profitability rose.

Rothrock was enjoying it too much to leave, though it was a sharp departure from his past: “When I was on the board, I was the CEO’s greatest fan and harshest critic. As CEO, I’m like a kindergarten teacher. I have a plan, maybe it’s optimistic, and if we get knocked down, I have to pick up everything, dust it off, and get going again.”

That optimism explains why Rothrock raised \$600 million to fund Tri-Alpha, which plans to commercialize fusion based on particle accelerator technology. He expects it will take another \$2.5 billion to reach market.

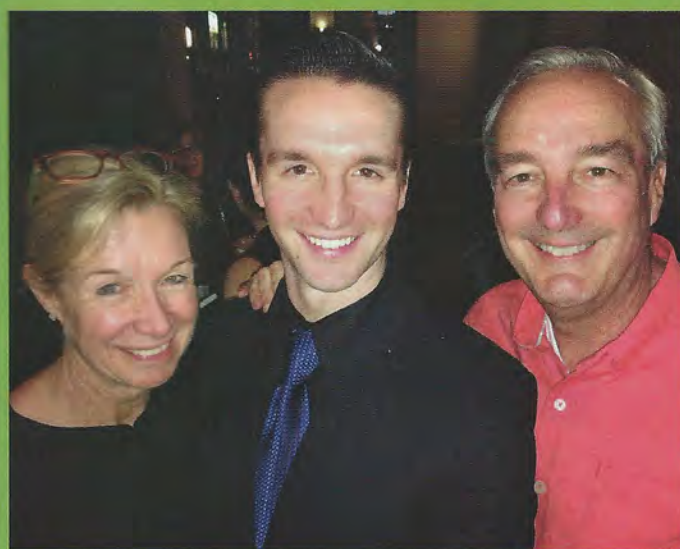
“If successful, it changes the world,” Rothrock said.

He raised the money by pitching family investment funds with a social mission and large funds able to spend a fraction of a percent of assets to balance portfolios.

Rothrock calls Tri-Alpha a glimmer of greatness. “People are hungry for optimism,” he said.

It is the type of deal this optimist has been chasing since he was a boy.

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**Above:** Meredith, Nathaniel, and Ray Rothrock. **Center:** Board member Rothrock celebrates the IPO of streaming service Roku with founder Anthony Wood. **Below:** Ray learned to play bass so he could form a band with his son Nathaniel. They play locally in Silicon Valley.

