



From left to right, Congressman Mike Thompson, President of Sonoma Design Group Che Voigt with a Sonoma 454™ EO/IR stabilized imaging system.

AIRPORT COMPANY ON THE LEADING EDGE OF AERIAL RECONNAISSANCE TECHNOLOGY

by Bert Williams, News Editor, August 2004

The U.S. military has a roadside bomb problem in Iraq. Engineers at a technology company near the Sonoma County Airport say they've got the technology to find those bombs from an altitude of 20,000 feet. Last week U.S. Congressman Mike Thompson paid a visit to the hard-charging group of mechanical engineers to find out what their company is up to, and to explain how he can work in the halls of congress on their behalf.

It's not just bombs in Iraq that make the U.S. military interested in the work going on at Sonoma Design Group (SDG). There are also individuals along the border between Afghanistan and Pakistan in whom the U.S. has considerable interest. SDG officials say they can help with that search too.

The potential uses for highly advanced stabilized-image systems are expanding rapidly. The stakes are high, and the competition in the industry is intense.

"As the world gets more and more unsure of itself surveillance becomes a key tool," said SDG Director of Programs Dominic Houlemard in an interview a few days after Thompson's visit. "If you can participate in the battlefield with long range optics, then you can stay on top of the situation, but not put yourself or your equipment at risk."

"It's not the same as it was," said Al Voigt, Sonoma Design Group's chairman of the board, chief product designer and one of its founders, as he was speaking with Thompson on Thursday. "We're not looking for columns of tanks like we were during the cold war. We're looking for individual people - the right ones."

"Had this technology been available in the '90s when they were tracking Osama bin Ladin, they could have said, 'That's him,'" said Che Voigt, Al's son, another SDG founder and its president.

Al Voigt and John Speicher, the other SDG founder, first met in the 1970s, when Che Voigt was still a little boy. The two men worked at General Dynamics Corporation in Pomona.

In their early years together Speicher and Voigt started the Versatron Company, and their first project was to build the Vector, a low-slung, cigar-shaped, pedal-powered vehicle with three wheels, a fiberglass shell and a Lexan canopy. The Vector set the land speed record for human-powered vehicles on its first time near a track, traveling 57.07 mph. The feat did not amuse the founders of the International Human-Powered Vehicle Association, who had been working on the challenge in tiny increments for 10 years.

Voigt and Speicher designed the vehicle using computer simulations - this was in the 1970s - and came up with a design based on systems engineering rather than the concepts prevalent at the time in the bicycle world, Voigt explained.

"They were all trying to cut weight," said Voigt, "but computer simulations indicated the weight of the thing wasn't really important. It was the aerodynamics."

So they built the Vector, with 9-year-old Che standing on a wooden box to run the drill press. They took it to the Ontario Motor Speedway, "and damned if it didn't work," said Al's wife Judy, describing that first run. A subsequent model of the Vector achieved 62.9 mph.

Sonoma Design Group moved into its facility near the airport in 2002, but its Sonoma County roots stretch back to the Vector era.

In 1982, Voigt and Speicher moved Versatron north to Healdsburg. According to Judy Voigt, SDG Director of Administration, Versatron had 75 employees by 1985, and was a leader in the design of electro-mechanical control actuators for small tactical missiles and for "gimbal systems," which stabilize the gaze of very long optical lenses while the aircrafts, ships or land vehicles on which the optics are mounted are on the move.

In 1995 the gimbal portion of Versatron was sold to Wescam, a company which continues in operation in Healdsburg. In 1999, the actuator portion of Versatron was sold to Primex - retaining the Versatron name. One year later General Dynamics, Voigt's and Speicher's old employer, bought Primex.

Meanwhile, in 1997, the Voigts and Speicher started Sonoma Design Group in a 1,500 square foot garage on Al and Judy Voigt's Geyserville ranch.

"I've never really been inclined toward retirement," Al explained in an interview last Monday.

The company appeared to grow slowly for the first five years. Then SDG moved to the Airport Business Center.

According to Staffing Specialist Amber O'Brien, SDG had 17 employees in January 2003 and 58 in January 2004. There are now more than 75 employees, and O'Brien expects there will be well over 100 in 2005. Eleven current employees live in Windsor, including O'Brien herself.

The company has outgrown its current 20,000 square foot facility and has leased 37,000 square feet of additional space across the parking lot.

"The next couple of months will be very significant for the addition of staff," O'Brien said.

Asked why the company is growing so rapidly, Che Voigt explained, "It's huge demand for very high-end surveillance equipment that allows the military to make better decisions. We feel that we're emerging as the technology leader."

Al Voigt had an additional answer: "When you start a new company, what really counts is that you hire the best people you can. We now have the best know-how on the face of the earth."

Dom Houlemard, who originally joined Versatron in 1991, had a decade-old connection with the company that he hadn't even known about.

As he was originally considering a job at Versatron, his wife, who had been doing some research on her own, came to him and said, "You know those are the guys that did the Vector."

"And I'm like, No way!" Houlemard said as he recounted the experience recently. "This vehicle inspired me to build my own recumbent bicycle in 1982! It's still hanging in my garage, inspired by the Vector."

Houlemard worked at Versatron from 1991 to 1995; and a year and a half ago he joined SDG as director of programs.

SDG Director of Engineering Russ Carlson had known the Voigts and Speicher for 14 years when he got a call in 2001. "We want you to come check out what we've got going," he heard from the Geyserville garage.

Carlson was designing rocket engines for Aerojet in Rancho Cordova at the time. He decided to move to SDG.

"We worked out of Al's garage for a couple of years," said Carlson. "I remember the day we got the air conditioner. But it finally just got to where we had to get out." SDG was already grossing \$1 million a year, with 12 guys in a garage.

So they moved to the airport. "It's just been blinding ever since," Carlson said. "This is a high velocity company."

"We were able to extract the embryonic core of other high-tech companies (during the economic downturn). It's the people who are attracted by original creativity - by something that's the hardest thing they've ever done."

Last week Thompson sat with some of the engineers in an SDG conference room. "Is that guy's moustache gray or black?" SDG Executive Program Manager John Dennison posed a typical aerial reconnaissance problem as Thompson listened. According to Dennison, equipment designed by SDG can answer the question from farther away than can the equipment of any competitor.



From left to right, Executive Program Manager Dennis Chang, Congressman Mike Thompson, and President of Sonoma Design Group Che Voigt

"An extra 15 seconds (on an approach) can give you the ability to make a decision when you're still out of range of small arms fire," explained Che Voigt.

Voigt said the company's keenest competition comes from the Massachusetts-based Raytheon Company, but the U.S. government has clearly taken note of developments at the upstart Sonoma Design Group.

During President Bush's 2004 State of the Union Message to Congress, SDG equipment was providing high-tech surveillance of the skies around the capitol.

Gross revenues for SDG in 2003 were \$6 million. That is 6.6 times higher than revenues for the previous year. Che Voigt said he expects gross revenues to be "in the low teens" for 2004, all from government contracts.

"The technology is a game of leap frog," said Dennison. "If we move fast enough, nobody will be able to leap over us."

During his visit last week, Thompson offered assistance in navigating the competitive environment of government contracts.

"Anytime that you're in competition for a program, we can be helpful," Thompson told the Voigts and Dennis Chang, another SDG executive program manager, as the group visited in a company conference room.

Thompson explained that he first became acquainted with the chairman of the House Armed Services Committee when the two men served in the same unit in Vietnam. It is an important connection.

"I can give you an opportunity to make your case before those people," Thompson said. "It's up to you to have the equipment."

Employee loyalty at Sonoma Design Group runs high. O'Brien first recruited new hires while working for an outside employment agency. She said last week that, after placing 30 or 40 people with the company, she asked if SDG would hire her.

Chang, having come on board eight months ago, explained to Thompson that in his former position with a Southern California firm the entire focus was on making money. "I'm glad to make money," Chang told Thompson, "but here there is a higher reason that you can believe in and get behind."

Carlson put a finer focus on Chang's point: "It's all about protecting our country," he said. "It doesn't work out here for people who don't have a patriotic bent. There's an added responsibility when you work here. Our products are needed now. That's an added dimension to the work. It's motivation. But it's also a privilege to be able to apply your skills to protecting the country."

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