

Living outside the box helps ex-mechanic reach new heights

Barry Sinex's unique vision has helped build Sinex Aviation Technologies into a potential leader in aircraft maintenance software.

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When it comes to aircraft maintenance, Barry Sinex has seen and done it all during 20-plus years in an industry where error-free performance and technical skills are at least as important as the fuel that powers its machinery. But the founder, chairman and chief development officer of Sinex Aviation Technologies Inc. is also no stranger to flying by the seat of his pants.

"Barry doesn't just think outside the box, he lives outside the box," says John Miller, CEO of the 3-year-old firm. "He's a very creative thinker."

Indeed, when Sinex sat down to write the first version of his aircraft maintenance tracking software, the mechanic turned-entrepreneur had to perform some extra-slick mental stick-and-rudder work for one simple reason: He didn't know the first thing about computer programming.

Sinex was taking some classes at the University of Arkansas in late-1993 or early-1994, trying to figure out how to use a computer to track aircraft maintenance—and help launch his consulting career—when someone told him about Visual Basic, which was a new computer programming language at the time. So Sinex got a copy and loaded it onto his home computer. But the "eureka" moment would have to wait.

"For the next half-hour, I sat there trying to figure what I was supposed to do," chuckles Sinex, 42.

Like any good mechanic, Sinex worked his way through the problem. Over the next 30 days, he taught himself Visual Basic and wrote an early version of what would evolve into the FleetCycle software family now being sold by his company.

The program Sinex hammered out in that month has evolved into a sophisticated suite of applications that use database programming, digital signatures, wireless communications and Internet technology to let mechanics and their supervisors

plan, track and update the complex web of tasks that keeps their sleek birds in the air.

At the time Sinex sat down to develop his prototype program, computer applications for tracking aircraft maintenance were little more than glorified databases, usually linked to cumbersome mainframe computers and unable to keep anything close to real-time in the frenetic world of aviation support services.

Sinex's experiences in that world had prepared him well for the task of improving on existing technology. After receiving an associate degree in aircraft maintenance from Winona State University in 1979, he'd worked several years as a mechanic for regional airlines Scheduled Skyways and Mesaba Aviation. He'd also run his own aviation services firm for 12 years before selling his interest in the company and going to work for Mesa Aviation, where he managed the airline's quality assurance program and established new maintenance programs for the company's fleet.

It was after leaving Mesa in 1993 that Sinex decided to strike out on his own again as a consultant, which is when he began thinking about writing a computer program to plan and track aircraft maintenance. "I wanted to have something I could use that would give me a leg up on the competition," he recalls. "I figured I have one more chance to actually do something to guarantee me a job in the future."

Sinex envisioned something that would track complicated aircraft maintenance routines through a simplified interface that



The insights gained during two decades in aviation maintenance led Barry Sinex to develop his FleetCycle software, which helps airlines and other operators plan, track, document and execute the complicated web of tasks that keep airplanes flightworthy. (Photo courtesy of Jeff Frey & Associates)

would allow mechanics to focus on their work, while managers could track their progress for more efficient planning and better decision-making within the airline.

After writing his prototype, Sinex spent the next year doing consulting work and selling the program to Mesa Aviation and a couple of other regional airlines, but found no investment backing for his product at the time.

Sinex took a job with Eagan-based Northwest Airlines, developing maintenance protocols for the Airbus A320 at Northwest's heavy maintenance base in Duluth, where he currently lives with his wife, LuAnne, and their three children, Dawn, 17, Heather, 14, and Holly, 11.

Sinex stayed at Northwest for two years, continuing to sell his computer program on the side. He approached the airline about incorporating the program into its maintenance operations, but was turned down. Eventually, he left the airline to

devote all of his time to the maintenance tracking software.

Sinex was checking into regional and financial resources that might help him take the software to the next level when he ended up pitching his ideas to Northeast Ventures Corp., a venture capital fund in Duluth primarily catering to early-to-mid-stage companies in northern Minnesota. Several months of talks followed.

"We thought he was a very bright individual with a unique vision," says Greg Sandbulte, president of Northeast Ventures. "He was contemplating a bold move [and] some big decisions."

Sinex Aviation Technologies was incorporated in June 1999. The still-youthful company has matured fast, even in a souring technology market.

With just \$3 million and change in venture capital, plus plenty of help from the support crew that characterizes any good aviation shop, Sinex has launched his company onto a steep growth path that is expected to reach profitability by the time it enters its fifth year in July 2003.

Northeast Ventures pumped \$225,000 in seed capital into the company in its first 12 months, followed by \$520,000 in late 2001. The funding allowed Sinex to focus on further development of his program, but perhaps equally as important was the confidence shown by the firm.

"It was like they gave me the money and said, 'Here, go do something [with your program].'"

The venture firm also put Sinex in touch with a veteran executive to mind the business side of the firm, John Miller, who became CEO of Sinex Aviation in 1999. The move allowed Sinex to focus on developing the software, rather than day-to-day operations.

"I didn't want to run a company," says Sinex. "That's not what I do well."

By late-2001, Northeast Ventures had invested \$1.3 million in Sinex Aviation, according to the Duluth News-Tribune.

Northeast also led a \$2 million round during the second quarter of this year, which the company has used to expand its development and marketing efforts, including a consulting division that was launched this summer.

Sinex has tapped other regional resources as well. He's received help from the Arrowhead Regional Development Commission, seed capital from the Northland Foundation's Arrowhead Technology Fund and the Northeast Ventures-affiliated Iron Range Ventures, and a low-interest loan from the

Minnesota Power Economic Development Program. The city of Duluth and the Duluth Economic Development Authority also kicked in \$250,000 to help the company move into the Duluth Technology Center in February 2002.

Other investors include Twin Cities venture capital funds MinCorp and Whitecliff Capital Partners.

A growing list of customers and revenues has fueled an expanding payroll.

Non-disclosure agreements prevent Sinex Aviation officials from discussing some of its customers, but CEO John Miller says FleetCycle software is installed at three major airlines, including US Airways – which uses the system at a maintenance base in Charlotte, N.C. – and Air Canada, which is deploying the system at its four heavy-maintenance bases. Four regional airlines also use the software, including Seattle-based Alaska Airlines and Discover Air in Orlando, Fla.

While declining to discuss specifics, CEO Miller says he expects seven times the revenue in the fiscal year that ends in June 2003 than in the preceding 12 months. The company currently has 54 employees, more than double the number it had at the beginning of this year, and Miller expects to add about 50 by next July, when the company anticipates becoming profitable.

For now, Miller says, Sinex Aviation is done seeking outside capital.

"We've been very frugal, very wise in how we've spent our money," says Miller. "The focus now is on building products and our customer base."

To that end, the company unveiled an updated version of its software in April, incorporating the latest wireless and networking technology, and it is currently pitching its products to 23 potential clients. The improved FleetCycle line comprises five products tailored to meet a wide range of requirements of regional and major airlines, cargo carriers and third-party maintenance-repair-overhaul facilities, or MROs, a growing segment of the aviation industry.

While aircraft maintenance tracking software may appear to be a relatively narrow market segment, it is not a small one, and the Sinex program may eventually find a home in other logistics-driven markets, particularly those related to transportation, company officials say. Miller says he's identified a \$3.9 billion global market for the aviation maintenance software market, including major airlines, regional and cargo carriers,

corporate fleets and charter operations, the military and MROs.

While the potential market is large, there is also growing competition. Steven Casley, a principal at consulting firm BACK Aviation estimates there are five smaller firms like Sinex focused on the niche. In addition, IBM, Sabre, Unisys and European heavyweight Lufthansa have products that address at least some of the same needs as the FleetCycle line, he says.

"It's certainly not impossible" for a smaller firm like Sinex to carve out a sizable niche for itself, but "they kind of have to grow into the big leagues," Casley says.

Sinex says ease of use is what separates his software from the rest of the pack. Other programs force users, from mechanics to company executives, to wade through everyone else's data to find what they are looking for, he says. "It's way too confusing," he says. "Way too complicated."

But FleetCycle shows each user only what he or she needs to do the job, while tight integration among the five programs, and with a customer's other enterprise planning software, allows the system to automate many of the back office tasks that can eat up valuable time when various departments are out of sync with each other.

"People don't have to adapt to the computer," he says. "They just do what they already know and the program does everything else in the background."

As the company works to improve its software and add new products, Sinex now has a whole development team around him to help upgrade a package that is considerably more complex than his early attempts. But his description of how he creates new software shows that one thing hasn't changed.

He says that he sits down and thinks about what a mechanic, line supervisor, or maintenance manager needs to see onscreen in order to do their jobs. "I say, 'This is what I want to do.' And, poof, I make it do that." ■