Friday, December 28, 2007

Switching roles - Research experience prompts Russian scientist to start product-development company

Vladimir Shvartsman, president and CEO of Electronic Design & Research Inc., has had his share of struggles. Labeled a dissident in his native Russia, Shvartsman fled from his homeland nearly three decades ago in search of freedom and a better life.

In Louisville, he found plenty of opportunity to put his education and aptitude for engineering to work. But marketing his inventions and managing a growing business have brought new challenges. The most difficult, Shvartsman said, is finding employees to handle day-to-day workloads, much less expand the business.

The first time he encountered that problem was in 1999. At that point, Electronic Design & Research handled the repair of circuit boards and other electronic components.

It had grown to about 20 employees and $3 million in annual revenue, and there was potential for continued expansion. But Shvartsman had difficulty finding enough technicians to stay ahead of repair orders.

Found niche in electrical switches, circuits

So Shvartsman shifted the company away from repair work and developed a product that he could manufacture and market: highly powerful, intelligent electrical switches and circuits. Soon, Bethesda, Md.-based technology giant Lockheed Martin discovered his

company via the Internet and contracted with him to develop a custom, solid-state switch system, which was incorporated into a "superserver" installed in U.S. Navy submarines.

The switch system remotely controls the superserver's power source. In 2000, Electronic Design & Research landed a four-year contract, at $1.2 million per year, to manufacture the switches for Lockheed.

Has work, needs employees

Thousands of switches later, Shvartsman has proved there is a market for these tiny electrical devices, which vary in power, speed and function. Among their uses are opening car doors and controlling the movement of seats in IMAX theaters and Universal Studios rides.

Orders come in from people across the globe who find Electronic Design online, Shvartsman said, although about 70 percent of his orders stem from companies that supply the U.S. Department of Defense.

The company recently shipped about 1,400 switches to Iraq, where soldiers field-test their ability to recharge batteries.

If a second field test goes well, Shvartsman expects to receive a mass-production order for 100,000 switches next year.

But the growth of the company has created difficulty, as Shvartsman finds himself once again in the market for more staff to supplement his seven-member work force.

Many applicants lack the ability to think through the technical problems the job requires.

"I'm really desperate" to find suitable workers, he said.

Meanwhile, Shvartsman said, he has bought a second "production robot," which automates the assembly of switches. Plus, he relies on contract labor to some extent.

"I have a bunch of work but not the people," Shvartsman said. |

Address: 7331 Intermodal Drive

History: Founded in 1983 by Vladimir Shvartsman,

Projected 2007 revenue: $700,000

Clients include: Massachusetts Institute of Technology, 3M, Shelby Supercars LLC, Universal Studios

Web site: www.vsholding.com

Medical research background

Vladimir Shvartsman, a scientist with degrees in industrial electronics, bio-medical cybernetics and biophysics, emigrated to Louisville in 1978.

He landed a job as a biomedical engineer and research associate at the University of Louisville's Department of Medicine. While there, he developed a device that could be used as an alternative to traditional electrocardiograms.

The invention showed commercial promise, and it eventually led to his decision to leave academia and move into the business sector. |

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