



PHOTOS BY CHUCK SAUS

(Left) Rhonda Baro holds Roxxie during a meeting of the owners of Wheeling’s Polyhedron Learning Media. Jeanne Finstein (center) and Baro’s husband, John, launched the high-tech venture in 2004.

Entrepreneurs’ leap of faith pays off with Polyhedron

By LINDA HARRIS

It reads more like the teaser for a novel than the start of a successful business venture: three talented, highly educated professionals whose career paths overlapped for more than a decade suddenly find themselves out of work.

Rather than scour the want ads for jobs they really don’t want in communities where they don’t want to live and be paid less than they are worth, they take a leap of faith – opting to pool their time, talent and resources to open their own business.

“We wanted to stay in Wheeling,” says Jeanne Finstein, Ed.D., president and director of development at Polyhedron Learning Media. “We wanted to continue doing the kind of work we’d been doing. It made perfect sense for us to form our own company – there’s no other company

like us in the Wheeling area.”

Polyhedron is small: So far, it’s just the three founding partners – Jeanne, Rhonda Baro, a graphics specialist and Polyhedron’s creative director, and her husband, John Baro, Ph.D., Polyhedron’s director of software development.

Assisting them is Rhonda’s brother, Russ Sellers, a retired Air Force test pilot with a bachelor’s degree in physics and math to go with a master’s in aerospace engineering. Sellers is Polyhedron’s science content specialist.

Getting started didn’t require a huge cash outlay on their part. It did, however, take a major lifestyle commitment since the partners would be living off their savings until the business took off. That led to more than a few anxious moments, although the Baros insist they knew from the start “something good would happen” if they stuck to their game plan.

“Our business is atypical,” Rhonda concedes. “We’re trying to work with non-profits and federal agencies to get grant money. We’re not knocking on doors trying to get clients.”

Commercial jobs aren’t out of the question, but Polyhedron’s forte is educational material and most of the funding for those kinds of projects is through non-profits and the government.

“It’s our experience, it’s what we’ve been doing for the last 10 or 25 years,” her husband says. “If we wanted to continue doing what we had been doing, there was no other place in Wheeling where we could do it. No other business. So we created these jobs by creating our company.”

It was, he says with a wry smile, “a leap of faith.”

Leap or not, the fledgling company



(From left) Rhonda Baro, Jeanne Finstein, and John Baro work in their home office at the Baro's home in Wheeling.

already is making a name for itself in the educational arena.

Incorporated in 2004, Polyhedron has already managed to land two major government-funding awards – the first, a two-year grant from the National Aeronautics and Space Administration, to partner with the West Liberty State College SMART Center to develop multi-media materials for the NASA Explorer Schools program. That grant totaled nearly \$500,000.

The second, a Small Business

Innovation Research (SBIR) program Phase I grant from the U.S. Department of Education, is a six-month grant for just under \$100,000 to develop a prototype for an online lab that can be used by college students taking introductory physics classes.

The SBIR program requires federally funded agencies like NASA and the Department of Education to set aside a percentage of their research and development funding for designated projects involving small businesses.

That money, in the form of Phase I funding, is awarded to select companies to explore the technical merit or feasibility of an idea or technology.

If it looks promising, they'll be able to seek up to \$750,000 in Phase II funding to do the research and development work and evaluate its commercialization potential over a two-year period.

Products move from the laboratory into the marketplace in Phase III, but that part of the process must be funded entirely through the private sector.

The online lab prototype being developed by Polyhedron will include graphic simulations of actual experiments from the lab manual, published by Thomson Learning. Students using the program would be able to conduct their trials entirely online.

"They'll be able to experience the entire act of conducting the lab, including setting up the experiment, conducting the experiment, do multiple samples and gather data," Sellers says.

With roughly a half million students across the country taking introductory physics each year, the savings to individual colleges in terms of staff, equipment and maintenance would be considerable. The

possibilities for Polyhedron would be equally impressive.

"The expectation is you'll end up with a product that is marketable," Baro says, adding the online lab prototype is "a wide open market because there really isn't anything like this in existence right now."

That could be key in getting SBIR funding for Phase II. It's a competitive process, but only in the sense that any project receiving SBIR Phase I funding could conceivably vie for a Phase II grant. But, since no one else can submit a Phase II proposal for a project another company already has in the Phase I pipeline, the four are confident their project will prove its worth to the Department of Education.

It is, Sellers says, a question of making sure the virtual lab "behaves like a real lab" in every sense of the word. While it won't be easy to produce the simulations, he says they are well defined – so much so that, given their experience and skill set, he's already thinking ahead to SBIR Phase II, which he insists also "has a high probability of success."

And that's a good feeling to have after all the nail biting they did in the company's early days.

Though they snared their first NASA grant in their first year of operation, three unsuccessful grant proposals followed.

While they never expected Polyhedron to get every grant they applied for, "we were beginning to get a little worried," Finstein admits.

"But you can't take it personally. You might think your (idea) is the best thing since sliced bread but it may not be what they want. You just don't know – that's the reality of how it works."



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