Today's focus:

INNOVATORS

Three Rivers Holdings hits it big with ... wheelchairs

By Jane Larson
The Arizona Republic

Wheelchairs aren't the first thing that pops to mind as a hot spot of innovative technology, but a Mesa company is beginning to make things easier for the estimated 54 million Americans who have disabilities.

Three Rivers Holdings LLC is taking the work of two researchers at the University of Pittsburgh and commercializing their inventions for a market many have overlooked.

"It's a great market, because people are open to new products," Three Rivers President Ron Boninger said. "When we do user shows, it's a natural 'wow!' "

Three Rivers was named Innovator of the Year in the start-up company category at the recent Governor's Celebration of Innovation.

The company's first product was the SmartWheel, which consists of gauges, an on-board computer, an antenna and software to measure the forces a person uses in propelling a wheelchair. There is a version for researchers, which debuted in mid-2002 and is in use in more than a dozen institutions such as the University of Washington. A version for use in clinics came out in April.

Three Rivers' second product, the Natural-Fit handrim, debuted in June and is aimed at the 2 million Americans who use manual wheelchairs. The new rim for wheelchairs seals the gap between the handrim and the tire, allowing the user's hand to hold it more ergonomically and give more power with each push.

Dan Bonaroti, a physical therapist who is director of the wheelchair seating clinic at Tempe-based Neuro Institute, said both products are improvements over the old way of doing things.

The SmartWheel allows the clinic to prescribe the right wheelchair for patients, and quantify rather than guess about how the person is pushing it, he said.

The Natural-Fit handrim creates a better position for the user's hands, reducing the potential for future injuries, he said.

"People are excited there are companies interested in making wheelchairs better and easier to use," Bonaroti said.

The company started when Ron Boninger, former president of a printed-circuit-board company, and brother David Boninger, a professor of psychology, were looking for something to build a business around. At the same time, their brother Mike was looking for ways to bring products from his lab into the marketplace.

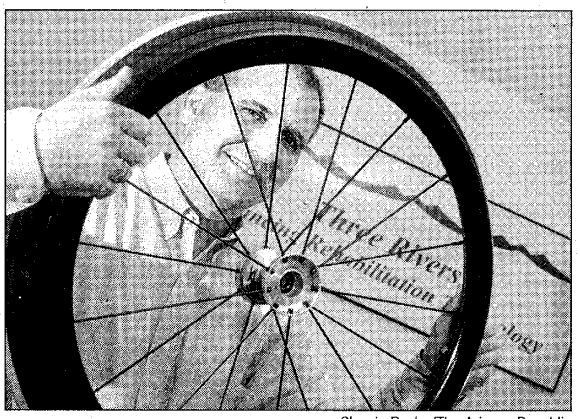
Mike Boninger works at the University of Pittsburgh's Human Engineering Research Lab with the lab founder, Rory Cooper. Together the two researchers had been developing products for people with disabilities.

Chris Willems, who worked with Ron Boninger at his previous firm, joined Ron and Dave Boninger as the company's third co-founder. Three Rivers signed licensing agreements with the university and began the marketing, engineering and manufacturing work.

The company drew much of its early financing from Small Business Innovation Research and Small Business Technology Transfer Program grants from the National Institutes of Health and other agencies. It has won nine grants totaling more than $2 million in the past three years.

Within the next year, Three Rivers plans to introduce two more products designed by the Pittsburgh team. The GameCycle will be a video-equipped chair that promotes exercise, and the Endeavor will be a wheelchair designed for use in airplanes and other narrow spaces.

The company also is working with Arizona State University's bioengineering department on a low-cost prosthesis.



Sherrie Buzby/The Arizona Republic

Ron Boninger, Three Rivers president, works with brothers David and Mike, and others to develop the SmartWheel and the Natural-Fit handrim.

Three Rivers Holdings LLC

Business: Develops products that help people with disabilities.
Headquarters: Mesa.
Founded: 2000.
Employees: Five.
2003 revenue: Almost $1 million, triple its 2002 revenue.
Web site: www.3rivers.com.

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