



Palastine Herald-Press

Company turns ideas into marketable products

By BETH FOLEY

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FRANKSTON — What links a purple cow to a project developing automated fasteners for the U.S. Navy?

The ingenuity of Mike and Donna Rainone and their concept development team.

Based in the wooded hills just outside of Frankston, near Brushy Creek, is the couple's company and home, PCDworks. The letters "PCD" used to stand for Purple Cow Design but now represent Product Concept Development, which is, in a nutshell, what the small firm does for commercial clients from around the world with pockets deep enough to cover the expenses encountered in trying to bring a project from an idea into a marketable product.

Serving as president of PCDworks, Donna Rainone holds a Masters degree in Architecture from the University of Texas at Austin and has worked as an architect on multi-million dollar healthcare facilities.

Mike Rainone, PCDworks' vice president, holds a Masters in Architecture from UT Austin and a Masters in Psychology from the University of North Texas. He brings experience to the table in emerging technologies, having developed products for companies such as Sunbeam, Kimberly Clark, Avery Denison and 3M, and also having taught architecture, industrial design and business.

Starting out first in physics, Mike Rainone switched to psychology and nearly finished his doctorate in the field before switching again, this time to architecture at UT Austin where Donna was also a student in the architecture school.

"I was teaching person-environment relations, how the physical environment influences behavior, while trying to finish a Ph.D as well," he said.

Getting to this point has been a winding journey.

The Rainones had been living in Arlington, with Mike working as an architect for his Purple Cow Design firm, and helping develop "fuzzy" ideas into potential products.

"I knew there was a market for what I wanted to do, which was not the fuzzy front end but the technology development part of the front end development," Mike said recently during an interview at the company compound. "When a company has a product they want to come out, they come to us and we help them figure out how to make — create — that product."

The types of products PCDworks helps develop usually aren't consumer products, but often are industrial, medical or military-



Bert Sackett, left, lends a hand as Mike Rainone, seated, works in a lab at PCDworks near Brushy Creek. Also pictured are Talbot Presley, second from right, and Donna Rainone. BETH FOLEY / The Palestine Herald

based and involve technology -- motors, drives, gears, electronics.

Projects have been varied — an automated tie-down system to help military personnel rapidly secure and release cargo aboard naval vessels; a digital torque wrench combining precision with affordability; a cardiopulmonary bypass machine that better organized pumps and tubing into a compact structure; and a portable wastewater bio-digestion system that can be used in military operations and disaster relief, are among the company's products.

While much of product development is done in industrial design, Rainone said he wanted to take a technology-based route with PCDworks.

"From the very beginning, how we define ourselves is as scientists and engineers, not industrial designers," he said. "I taught industrial design, I love it as a profession. That's not the niche we wanted to do."

Industrial design tends to stay on the cutting edge, anticipating the next trends in design, he said.

Instead, the Rainones chose to go a different direction.

"My real love is science and engineering," Rainone said. "I worked at an industrial design firm but finally migrated to architecture after I started teaching ID."

With that in mind, the Rainones emphasized experience as they brought together their team.

Rounding out the PCDworks team are Director of Electrical Engineering Bert Sackett, a seasoned engineer with experience

in designing and developing embedded systems and a Masters in Electrical Engineering; Director of Projects Talbot Presley, a graduate of Palestine High School and Davidson College with a background in research and mathematical modeling and a Bachelor's in Mathematics; Thomas Crippen, a professor at UT Tyler and a specialist in medical products and medical engineering with a doctorate from Texas A&M in mechanical engineering; Kenneth Wilson, who specializes in nanoscale and metallurgical engineering, composite design and analytical modeling with a doctorate from Rice; Phillip Grisham, a mechanical engineer and project manager in new product development, research, testing and manufacturing and a Masters in Mechanical Engineering; and Dee German, a scientist/engineer and instructor at the Air Force Academy with a strong background in laser, electro-optical and electronic system design and a Masters in Engineering Physics; and Master Prototyper Brook Grisham, who plays an integral role in building the prototypes.

Together the team provides a wealth of knowledge and hands-on experience to clients from around the world. The campus they've put together in Brushy Creek lends itself to problem solving, not only through the serene setting but also by offering a brainstorming center, on-site guest housing, a variety of labs and a workout room.

Tapping those resources has allowed the team to think outside the box to find solutions to why an idea can't work, Rainone said.

"When an engineer says this can't happen, then it's immediately, 'What's he really saying?'" So we take on the next layer and the next layer and we keep on digging," Rainone explained. "We're trained in that persistence. I never give up and we still don't give up."

The products showcased on the company website are testimony to that mindset, he said.

"We solve problems other people can't," he said. "And that's basically because we never give up. You just drive through. If you can't do it this way, you find another way."

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