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# **BRIGHT IDEAS**

## **For Billings inventors, patents are key to making ideas pay**

The inspiration came to Allan Overcast when he heard about the 2010 shooting death of a young Montana State Patrol trooper in a remote spot near Three Forks.

The trooper, 23-year-old David DeLaittre, was found dead by another law enforcement officer following a shootout during a traffic stop with a man who later killed himself.

The murder sent shockwaves through Montana's law-enforcement community and caused Overcast, an engineer and radio system consultant for police, to wonder if he could design a better alert system and make a difference.

Was there a way to alert authorities the instant a gunshot is fired, saving precious time if an officer or citizen has been injured? If so, could Overcast get a patent on it?

"I had been wanting to do something to protect law-enforcement officers, but that was the proverbial kick in the britches," the 50-year-old Billings man said last week.

Three years ago, Tracer Technology Systems was born on Billings South Side. And, in August 2014, the company got a major shot in the arm when Overcast obtained an international patent for his invention, which can detect gunshots and immediately send a message through a cellular network to emergency personnel. It's also patent pending in the United States.

One device is designed for police to carry. Other versions can be plugged into walls or hung like a smoke detector and serve a broader purpose: detecting gunshots in public places like schools, churches or shopping malls, shortening response times and possibly saving lives.

"The cause of death of gun shooting is usually not the initial shot. It's the consequences from the loss of blood," Overcast said.



Overcast is part of the growing class of Montana entrepreneurs who have obtained patents, which help build their brand. Obtaining a patent can be a lengthy and costly process, but the value that patents bring to a business are worth the investment, local experts say.

Toni Tease, a Billings-based patent attorney, said she's seen a rising number of Montanans seeking to patent their inventions. They range from a new type of cloth training diaper, to dishware for camping and active users, to systems to manage traffic.

"It really is a reflection of our community, and what people are doing. ... Behind every patent, there is a story," Tease said.

Nationwide, patent filings saw a surge last year, according to Lex Machina, a California-based company studying legal trends.

In the second quarter of 2015 (April to June), patent filings totaled 1,656 in the United States, the highest quarterly amount since Lex Machina began compiling these statistics in 2011.

Tease works primarily with inventors at small firms. Her clients are nationwide, but the majority work in Montana and Wyoming. The slump in oil prices has curbed patent proposals related to drilling and development, but Tease said other sectors remain steady.

Obtaining a patent costs at least \$10,000, and Tease's clients report spending up to \$18,000.

Patents provide value in three big ways, Tease said. One, they deter competitors and protect the inventor's work and idea. Two, they increase the value of the company for potential investors or buyers. And, they create an avenue to license a product, allowing the inventor to focus on creating while someone else sells the product.

About 90 percent of her clients are issued patents if they're eligible, and Tease estimates that about one in four discover their invention was already patented by someone else.

Patent law has traditionally been recession-proof, and Tease said she's pleased and surprised with the innovation she sees from local entrepreneurs.

"It is absolutely an extremely wide range of technology. That, to me, is the beauty of Montana," she said.

For Kevin Scharfe of Billings, the patent on his dinnerware product added value to a simple idea he developed in a cluttered Wyoming apartment.

Scharfe invented the design for the Ripple, a detachable plate-and-bowl combination that allows users to carry a bowl of soup on a plate without spilling and making a mess.



Scharfe applied for a provisional patent in 2013 and raised \$20,000 through online crowd-sourcing with his business partner, Karl Schwartz.

His patent was granted about three months ago, said Scharfe, whose company is called Warum Studios.

“For us, the biggest value was if we ever sell the business. If you have no intellectual rights to the project, all you’re really selling is the market you’ve developed and the retailers you’ve developed,” Scharfe said last week.

Scharfe, a former teacher who now works full time at Elation Inc., manufactures the products in Bozeman and sells mainly to wholesalers, who distribute to independent retailers.

It works like this: dishes are attached with a bayonet connection, allowing the user to easily hold the plate and bowl together. Scharfe came up with the idea when he was living in Wyoming doing pottery, and he experimented throwing bowl and plate together to easily move the pots around.

Now that the invention is real and selling, Scharfe said he appreciates the intrinsic value of the patent.

“It’s confirmation that you have created something that doesn’t exist anywhere in the world,” Scharfe said.

To Overcast of Tracer Technology, the patent is also about more than money, though he still wants to recoup his investment.

He estimated he’s invested about \$250,000 of his own money so far (thank goodness my wife works, he joked), and he’s seeking to raise another \$500,000 through crowd-funding.

Overcast also founded another Billings-based company, Link Communications.

The first products, called the Falcon for law enforcement, should be ready to sell within a month, he said. He added that he still needs to test the other devices for outlets and overhead, called the Raptor and the Eagle, respectively.

The system would likely cost about \$12,000 to install in a school, then about \$1,200 annually to maintain, Overcast said. While cash-strapped school districts may struggle to justify the costs, Overcast said it’s cheaper than other security models that would require a call center to respond to alerts.

Tracer Technology faces other hurdles, primarily raising money. But Overcast said he didn’t invent the system to get rich, and he hopes it will do some good.



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“I don’t want technology to take lives. I want technology to save lives.”

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