



Darcy Detlor, president and founder of MicroSurvey Software shared stories about the company's early years during our lunch at the scenic Quail's Gate Winery in Westbank.

## A VISIT TO **MicroSurvey**

**I**n my forty-some years in the survey industry I've crossed paths with lots of interesting people, each with a story to tell. The roads that led many to successful careers were a 'straight shot' for some, with a specific goal in mind and clear-cut steps to get there. But for many others the stories include tales of unexpected side trips and detours that resulted in some colorful history and plenty of hard-earned wisdom along the way.

In March of 2008, a scenic six-hour drive through the northern Rockies from Seattle landed us in Westbank, British

Columbia, home to a familiar name in surveying, MicroSurvey Software. The owner of MicroSurvey, Darcy Detlor, while not a surveyor himself, took a couple of fascinating detours before settling down to write world-class surveying software.

Detlor grew up in Ontario, Canada, northwest of Toronto. The son of an electrical engineer, he got his first motorcycle at the age of 14, which ignited a passion that would play out in later years. In the mid-1970s he enrolled at the University of Toronto, where he was an honor student in the physics department. But when it appeared that his opportunities after graduation would

>> By Marc Cheves, LS



Detlor in his new office

be either in teaching or in the military, he decided on another direction.

At age 19 he left school and traveled about 2,000 miles west to Calgary in the province of Alberta. Jobs were available on an oil pipeline and he got a job as a laborer. Not long after that he heard about yet another opportunity to make good money, and returned to Toronto to enroll in school for a year to learn to be a heavy equipment operator. After finishing, he returned to Alberta, and sure enough, found a job within an hour of his arrival there.

Detlor spent the next four years operating heavy equipment. It was during this time that he renewed his passion for riding motorcycles. From 1979 to 1982 he raced flat track superbike and motocross. The once-honors physics student rose to the top of that class, too, gaining the title of Canadian national champion and regional champion several times.

His winnings helped to bring about another major change in direction. In 1981 he began an electrical engineering degree program at the University

of Alberta, where the rewards of motorcycle racing paid for a year of schooling. There he excelled in programming, learning assembly language, FORTRAN, and Pascal.

By 1985, Detlor began building and selling computers. He recognized an opportunity to develop software for surveyors, at which time he began MicroSurvey. At the time, there were five companies developing surveying software in Canada. Today, all but MicroSurvey are gone. Because the software business really took off, he stopped his studies just short of obtaining his EE degree, but with no regrets. His experience thus far had proven that changing course was no problem as long as he was willing to work hard on the opportunities ahead.

As sales of MicroSurvey software multiplied across Alberta, interest in the product spread outside the province. Detlor saw that most outside inquiries were coming from Ontario. In 1986, after realizing that he was onto something big, Detlor obtained

investment money and created VHS and Beta videos and a 20-page brochure. In December of that year a road show through the Ontario area received overwhelming response. As the saying goes, it takes money to make money, and with the profits came new expenses. Detlor recalled spending \$4,500 on a cell phone in 1987, but smiled and said that the next day he made a large sale (using the phone) that more than paid for the phone itself.

By 1987 the company had achieved cross-country presence with offices in Toronto, Edmonton and Vancouver, but decided to consolidate operations in Kelowna, British Columbia in the scenic Okanagan Valley, alongside the 70-mile-long Okanagan Lake. Okanagan Valley is home to 200,000 people, and because there are no heavy industries, is relatively pollution-free. An outdoorsman's paradise, the valley contains a 35,000 square hectare area for dirt bikes and off-road vehicles. In 1990 they moved their operations to the present location of Westbank, across the lake from Kelowna.



**MicroSurvey**

### Julie and Darcy Detlor and The Bell.

At first, Detlor worked from home—something he would continue up until 1998—and did all of the coding himself. A generous R&D tax credit of 43 cents on the dollar, which the Canadian government offered in order to encourage investment, allowed Detlor to pay off all the investors and in 1992, form MicroSurvey Software Inc. It also helped to fuel the company's rapid growth.

Like many other users at the time, Detlor was frustrated by the amount of time it took to draw a 10k file. It was at a trade show in 1996 that a new

That same year MicroSurvey exhibited at the annual surveyors show in the state of Washington with fantastic response. Detlor claims surveyors were throwing their VISA cards down in the exhibit booth, wanting to purchase the software. Within 18 months the number of employees grew to 14. To this day, MicroSurvey pretty much “owns” all of Canada when it comes to surveying software. One Alberta company that does oil and gas surveying has more than 400 seats of software to support nearly 200 field crews. He also

In 2004 the company started rewriting its software to take full advantage of the latest non-proprietary, open-standards entry, IntelliCAD. Detlor is on the board and an officer of the 50-member IntelliCAD Consortium, and says the move to IntelliCAD was the best decision the company has ever made because it provides the user with a choice and avoids building walls around its products.

***The roads to success are not always straight, but no experience is wasted.***

German program called FelixCAD caught his attention, and he was impressed by its speed. Back in his booth, he immediately began coding, using the new software. The flame of success began to strengthen, and by 1997 the company had grown to eight employees. In 1998 they began working out of a small house in Westbank.

mentioned that before NAFTA, there seemed to be a barrier at the border. In 2000, the company moved to the large office where we visited them. A charming aspect of the office is a ship's bell hanging in the sales area: every time a thousand dollars in sales is made, the bell is rung. We heard it go off several times while we were there.

### **Global Expansion**

Today, MicroSurvey's software is in use in more than 60 countries. A large sale was recently made in Mexico, and a partnership has been forged with Leica Geosystems to distribute MicroSurvey in the U.K. Because of the difficulty in finding good coders, MicroSurvey has had a small team of coders working in India since 2006. The Indian group is working more on the database and language aspects than the survey aspects. As part of a global expansion program, MicroSurvey's software is now available in English, Chinese, and Spanish with many more coming. Detlor smiled as he related the difficulties in dealing with foreign keyboards. “No longer can we



build for simple English characters. We need to consider that other languages might have 10,000 characters. Our products are designed so distributors can translate without touching a line of source code. It is very unique and we are finding new distributors weekly.”

In order to increase the revenue stream needed to continue the development of new products and upgrade existing products, the company has moved from the upgrade model to the maintenance model: \$395 per year for unlimited tech support and all upgrades. The first revision to take advantage of IntelliCAD’s faster feature upgrades and bug fixes was MicroSurvey 2005. Today, MicroSurvey 2008 is on its third revision.

The company has settled on Juniper Systems’ Archer and Allegro platforms. Detlor claims that MicroSurvey’s FieldGenius data collection solution is second to none, and is the best for topographic or construction layout. Of particular note is FieldGenius’ robust database and sophisticated LandXML capabilities. I found the company’s philosophy of taking the software that users learn in the office and porting it directly to the data collector interesting. Another of MicroSurvey’s novel approaches is to provide a free data collector with the purchase of the software.

In cooperation with Leica, MicroSurvey has developed a software developer’s kit for point clouds. We watched as a

500Mb file opened in a little more than a second. Detlor says the MicroSurvey approach is less complicated than Leica’s Cyclone, but still has plenty of power for capturing and quickly visualizing. Finally, after Leica’s invitation, MicroSurvey’s FieldGenius now runs directly on the Leica RX1250 controller.

### “Continuous Improvement”

Today, the company has 25 employees, including Detlor’s wife and two of their three children. Three employees are full-time support specialists. Just after we visited, the company moved into a beautiful new custom-fitted space in Westbank with stunning views of Lake Okanagan. As Detlor put it, “The space is not too big, not too small.” The office has its own dedicated fiber optic connection and plenty of room for in-house training. Detlor noted that they have recently held four large training seminars in three Canadian provinces as well as South Carolina.

MicroSurvey was listed among *Profit* magazine’s Top 100 Fastest Growing Companies for two years running. It was also listed in Deloitte & Touche’s Top 500 in North America. “Continuous improvement” is their motto.

Could the young honor student at the University of Toronto physics department, while constructing equations and testing energy transmissions, have imagined the day he’d be programming software that

**LEFT: Detlor wins the 1980 500GP Alberta Championship on the #7 Yamaha TZ250.**

**RIGHT: As Alberta Expert Superbike Champion in 1981, Detlor rode the #7 Kawasaki 1025cc Superbike. In his words, “It was a beast.”**

would affect the lives of millions? Did he see the pieces falling into place while working long hours on an oil pipeline or spending years in the field operating heavy equipment? Did the motorcycle championships and his winnings give him a taste for the kinds of rewards that come from hard practice and dedication to a task? The roads to success are not always straight, but no experience is wasted.

While many software companies and programs have come and gone since the 1970s, Detlor’s success at running this growing company for the past 23 years is a testament to teamwork and the quality and popularity of their products. And MicroSurvey’s philosophy of continuous improvement offers an equation for success no matter what road you’re on. *A*

*Note: An extensive review of MicroSurvey 2008 by Shawn Billings in our July 2008 issue can be accessed by clicking on the archives link at [www.AmeriSurv.com](http://www.AmeriSurv.com).*

**Marc Cheves** is Editor of the magazine.