



PHILIP WALKER, RECORD STAFF

Northern Digital Inc. chief executive officer Jamie Fraser says the firm's technology, including measuring and tracking devices, give it lots of growth potential.

Northern Digital: Measuring success

By John Schofield, Special to The Record

For Jamie Fraser, it was love at first sight — of the corporate kind.

The president and chief executive officer of Waterloo-based Northern Digital Inc. discovered the company early last year when he was searching for new opportunities.

For 11 years, he had climbed the corporate ladder at Amphenol Corp., a leading, U.S.-based manufacturer of connectors and cables. During a distinguished career there, he rose to senior vice-president and helped boost sales for his business unit from \$50 million to \$300 million a year. But by late 2007, the Montreal-born Fraser was ready for a new challenge and ready to return to Canada with his family.

In the course of his inquiries, he came across Northern Digital, a manufacturer of advanced measuring equipment for medical and industrial applications.

Last winter, he made the trek from

his home in Endicott, N.Y., to Waterloo to meet with his predecessor, David Crouch, and other senior executives. He was immediately impressed with the company's products and its people. "I was amazed," he remembers. "It has a fantastic opportunity for growth."

Since April of last year, when Fraser was picked to take the helm, he's worked hard to make that growth a reality. The 47-year-old CEO is leading the company, commonly known as NDI, through a period of significant change.

Founded in 1981 by University of Waterloo computer science professor Jerry Krist, NDI was sold to a group of company executives in 1998. In late 2007, the remaining executive owners — Crouch, chief operating officer Jim Kearns, chief technology architect Terry Fisher and vice-president Paul Clausen — sold a majority stake to the Audax Group, a Boston-based private equity firm. (Clausen and Fisher remain with the company.)

At the time, Crouch stated that

Audax's deeper pockets would help NDI reach "the next level." Last November, the company trimmed its workforce from about 130 employees to its current 108, blaming the global credit crunch and its impact on capital spending by U.S. hospitals.

Despite the tough economy, Fraser says NDI has made significant sales gains this year, and the company will continue to focus on growth by enhancing current products and adding new ones. Employees seem ready for the challenge. More than 50 have invested their own money, says Fraser, who is the second largest shareholder after Audax. "They've responded very well to the change," he observes. "These are not always easy things — to go from almost a family structure to a financial, more formal structure."

NDI's medical division is by far its biggest money maker, accounting for about 70 per cent of the company's sales. Its Polaris line of optical tracking systems is now the standard of care in neurosurgery when line-of-

sight measurements are possible, says Fraser.

When operations involve soft tissue and surgeons can't make measurements by sight, NDI offers its Aurora electromagnetic measuring technology. Both devices allow surgeons to precisely chart their procedures.

NDI's Polaris and Aurora medical devices are typically sold to other manufacturers for integration into computer-assisted surgery systems or other medical systems, which are sold directly to hospitals.

In neurosurgery specifically, says Fraser, NDI has 70 per cent of the market for computer-assisted neurosurgical systems. As the surgeon views live images of the procedure on a computer screen, Polaris emits infrared light to track the precise position of the wired surgical instruments, which are designed with small spheres to reflect the infrared light back to the position sensor.

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NDI's fastest growth this year has been from its industrial division

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Aurora's electromagnetic technology is used to track instruments when surgeons are required to delve deeply into tissue for procedures such as biopsies.

While sales of the medical devices have been slower this year, Fraser says they've been bolstered over the long term by a growing trend toward minimally invasive surgery. He's particularly excited by the prospects for Aurora.

"This soft tissue area is very new to us — about two to three per cent of revenues right now," he says. "But it's a very explosive growth opportunity. It has the true potential to double our medical business."

Surprisingly, NDI's fastest growth this year has come from its industrial division. It's an unexpected performance considering the sad state of Canada's manufacturing sector, and the fact that NDI has directed most of its marketing efforts to the auto sector.

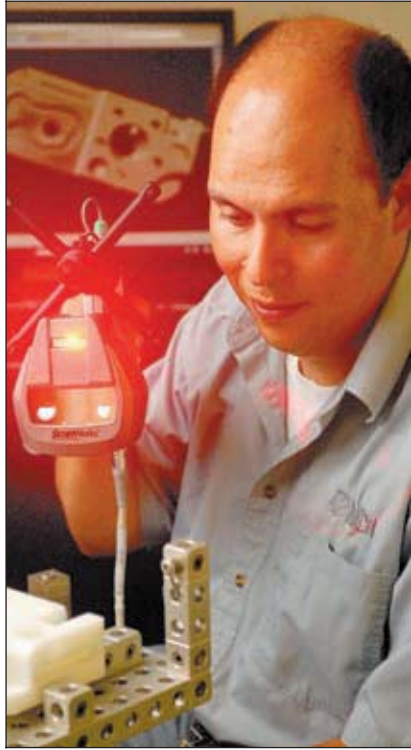
The company's industrial products still account for about 15 per cent of revenues, says Fraser. But the popularity of products like its Optotrak Portable Coordinate Measuring Machine has helped drive double-digit sales growth in the division.

Product engineers at any manufacturing firm can bring the device onto the shop floor to obtain razor-sharp measurements of parts or components accurate to 50 microns — about half the width of a human hair. The device is better priced and has more applications than its competitors, says Fraser.

"Its prospects are very exciting in the sense that companies continue to make more complex structures, whether its ships or airplanes or cars," he says. "Additionally, there's been more focus on making sure those parts are of the highest quality."

NDI originally built its business on measuring devices for the life sciences research sector, with a special emphasis on kinesiology, the study of human movement. With its enormous success in the medical field, life sciences became an increasingly smaller part of the company, today accounting for about 15 per cent of sales.

Under his watch, Fraser says, no division will be allowed to wither. He believes new products like Wave, launched toward the end of 2008, will help NDI's life sciences division flourish again. Designed for speech research, the non-line-of-sight, motion-capture system can track mouth, tongue and facial movements, and is quickly being adopted by top researchers in the field. "Life



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Christian Monterroso uses a high-precision measuring device developed by Northern Digital Inc.

sciences before was seen as a flat part of the company," he says. "We've put together a strategy to make it grow, and it is growing."

The seasoned CEO says he'll use the lessons he's learned over a long career in industry to drive NDI's success. Raised in London, Ont., Fraser started working right after high school, selling electronic components to factories. He later joined Atlantis Systems International, a Brampton-based aerospace manufacturer, where he served as an operations manager.

Eager to graduate into general management, he enrolled in the executive MBA program at the University of Western Ontario's Richard Ivey School of Business, graduating in 1995. Soon after, he joined Amphenol's Canadian subsidiary, Toronto-based Amphenol Canada Corp.

At NDI, Fraser is leading a company with a strong track record. Over the years, it has appeared numerous times on Profit magazine's Next 100 Fastest Growing Canadian Companies list, and has received Canada's 50 Best Managed Companies award eight times.

With his experience and Audax's strong financial backing, Fraser says the company can go even further.

"It's a little unusual that a guy who ran a \$300-million business comes to manage a company that's a tenth that size," he says.

"But it's such a great Canadian story of technology. I'm very proud to lead it."

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