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Tiny devices turn into big profits for Edmonton high-tech firm

U of A spinoff Micralyne generating earnings of $1.5 million annually

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In a province where oil and gas producers are churning out billions of dollars in profits and investing massive sums on oilsands projects that employ thousands of workers, it's easy to overlook a company like Micralyne Inc.

Although the Edmonton-based tech firm's revenues are expected to hit $15 million this fiscal year -- up about 50 per cent -- and it recently went on a hiring binge that boosted its payroll to nearly 150 people, that's small potatoes compared to the exploits of energy giants like EnCana or Imperial Oil.

But don't be misled by Micralyne's modest scale. By virtually any other measure, this is a budding world-class company that's sure to be a cornerstone of the province's fledgling high-tech sector for years to come.

In just eight years, the U of A spinoff has carved out a growing reputation as a global leader in the design and fabrication of MEMS -- or Micro Electro Mechanical Systems -- for such diverse sectors as telecommunications, auto manufacturing and biotechnology.

In an industry that's generating annual revenues of roughly $5 billion, Micralyne is one of the few standalone MEMs suppliers that is profitable. Net earnings this year are expected to hit $1.5 million, or 10 per cent of revenues, and virtually all of the company's sales are generated in the U.S. and Asia.

Micralyne's tiny devices, which are manufactured in rigidly controlled clean rooms at the company's busy 45,000-square-foot head office complex in the Edmonton Research Park, are so small they're measured in microns, with 1,000 microns to a single millimetre.

The company's so-called lab-on-a-chip devices, specialized sensors and optical switch systems are then used by such multinational giants as Ford and Kodak to manufacture products for dozens of diverse market applications.

"Pretty much every Ford car in North America will have one of our parts in it," says Chris Lumb, Micralyne's 46-year-old CEO, who graduated from the University of Waterloo with a degree in chemical engineering.

"We also make parts that get used in chemical analysis systems, radar system components and parts that get used in printing equipment. For pretty much any of the high quality, glossy magazines that are printed today, the pre-print portion of that work is done using parts we make."

Biotechnology is another key target market for Micralyne.

"The use of micro systems in bioanalysis or drug discovery and delivery is an area where there's a lot of opportunity, although it takes longer for these types of products to get to market," he says.

"One of the things we're doing is working with a company in Boston to develop embedded sensors and embedded drug delivery devices," he adds.

“The idea is you can put one of these little chips inside (a patient) to control the release of drugs remotely for up to six months or longer, so they don’t have to be taking pills every day. It’s undergoing trials right now.”

Still, the top growth market for Micralyne right now is telecom. “For many years optical telecommunications was almost dead, and even today a lot of people think there’s not much opportunity for growth,” says Lumb.

“But it’s back. I wouldn’t say it’s as exuberant as it was in the late 1990s, but the major telcos and cable providers in the U.S. and overseas are spending again on things like dynamic reconfigurability, which allows network providers to maximize the use of their installed base by routing traffic to where it’s needed.”

Lumb expects Micralyne’s revenues to top $20 million for fiscal 2007 -- which begins April 1 -- implying a growth rate of 35 per cent or more. That’s roughly two times the MEMS industry’s overall growth rate.

“There are unlimited growth opportunities in these small- to mid-size application areas of MEMS, so we’re quite confident we should be able to beat the average market growth rates on an ongoing basis,” he says.

So what are Micralyne’s longer term goals? Lumb says the company has no plans to go public yet. He’d like to see revenues approach the $50 million level first.

“An IPO makes sense at some point, but not in the short term,” says Lumb, who notes that Micralyne’s profitability makes it feasible to finance growth by other means, including bank debt.

“We have no controlling shareholder, but there are several large shareholders, including Mancal (controlled by Calgary’s wealthy Mannix family), the U of A, which retained an ownership position when we were spun off, and JDS Uniphase, which is one of our customers. Beyond that, we’re largely owned by employees.”

Meanwhile, Lumb sees the formation of the National Institute for Nanotechnology at the U of A as another key driver of future growth, not only for Micralyne but for Edmonton’s entire high-tech sector.

“There are few other places that have a nanotech research institute, related strengths at a major university and the existence of significant development and manufacturing companies like Micralyne,” he says. “We have all the building blocks to create a very substantial industry here over the next 10 years.”

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