CMC MICROSYSTEMS IMPACT

Mission Critical: Retention of Canadian Talent

Canadian start-up enterprise thrives in a challenging global economy

The dynamic team at Snowbush is focused on developing smaller, faster and more efficient microelectronics-based products that are cost-effective for the end consumer. Dr. David Johns and Dr. Ken Martin of the University of Toronto founded Snowbush to help retain top Canadian talent with microelectronics expertise.

The retention of Canadian top talent... the rejuvenation of microelectronics in Canada... and Canadian industry leadership in international markets: this was the vision of Dr. David Johns and Dr. Ken Martin in 1998. This vision has evolved into a Toronto-based start-up called Snowbush, and in only four years, the company is charting a path to success. While the global telecommunications industry faces economic downturn, this Canadian start-up is distinguished by profitability, growth, innovation, and highly qualified people. Just ask one of their many customers—they are the leaders in the semiconductor industry.

Dr. David Johns and Dr. Ken Martin of the University of Toronto founded Snowbush to help retain top Canadian talent with microelectronics expertise. With no source of external funding or venture capital, Dr. Johns and Dr. Martin built a self-sustaining Canadian allstar team comprised of former graduate students from universities across Canada, many with CMC experience. The company specializes in mixed signal integrated circuit design for communications and digital video applications.

According to Dr. Martin, Snowbush has capitalized on the unique skills and experience of 'CMC graduates': "CMC's national program provides Canadian industry with a competitive edge and the ability to leverage highly qualified people with specialized training and industry calibre experience for aggressive product development. These graduate students and researchers have acquired hands-on experience in the entire product development cycle, from design to fabrication and testing. This drives increased innovation and faster time to market, which is essential for a start-up like Snowbush."

The team has more than doubled in size over the past year and now consists of 18 full-time employees. With a growing customer base in the U.S. which includes Fairchild, Agere Systems and Intel, the team has just opened a California-based office to improve client interaction and draw more business to Canada.

It is a lucrative business with a unique operational model. Snowbush acquires contracts with companies that manufacture integrated circuits, working with a shared intellectual property (IP) model that differentiates the company from its competitors. The shared IP model provides an open agreement, whereby both Snowbush and the client reserve the right to maintain and re-use IP blocks in future designs. The team is currently developing several new integrated circuits to allow signals to be transferred from computers to new flat panel displays.

Dr. Ken Martin explains one of the projects that utilizes the shared IP model: "Inside the computer, there is a motherboard and a ribbon cable. We are working to replace that cable with a single wire that would connect storage devices such as hard disk drives to the motherboard. In future, this innovation could help automate the process of computer assembly, perhaps allowing robots to put machines together. The objective is smaller, faster and more efficient products that are cost-effective for the end consumer."

Innovative people, products, and process—this is the foundation of one Canadian start-up who is defying the odds of an economic downturn, and boosting Canada's economy and microelectronics industry. *cmc*

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