(*in order*) H. Chaim Birnboim, John Helliker,
John Zimmerman & Bettina Hamelin

Lunch and Presentation

The TACCAT Network: Connecting companies to Canada's Technology Access Centres

Moderator: Bettina Hamelin, Vice-President, Research Partnerships, NSERC
H. Chaim Birnboim, Founder & Chief Scientific Officer, DNA Genotek; Founder, deltaDNA
John Helliker, Director, Strategic Partnerships, Legend 3D
John Zimmerman, General Manager, Ocean Rodeo

Hamelin set the goal of these presentations as introduction to TACCAT (Technology Access Centres/Centres d'accès à la Technologie), the research centres linked to college, polytechnics and cégeps designed to build collaborations between companies— particularly small- and medium-sized enterprises — and polytechnic, college and institutes. By providing these firms with access to expertise, technology, and equipment, they can improve their ability to innovate and become more productive.

"Colleges are evolving at a tremendous rate in Canada and they're an example to the world in terms of what they do and what they deliver," she said. With specific reference to TACCAT, she presented it as a means for smaller firms to quickly get ahead. There are currently 25 Technology Access Centres at publicly funded colleges across the country, with another five in the works to be added this year. The three presentations that followed were therefore emblematic of the program as a whole.

The first of these presentations was made by John Zimmerman, whose Saanich-based company Ocean Rodeo specializes in technical marine apparel and kiteboarding gear. The firm has been working with Camosun College in Victoria on products such as dry suits, which have found a market beyond water sports with customers such as BC Ferries, which are acquiring them for use by their personnel. More specifically, Zimmerman explained how the work with Camosun has enabled the company to design a new type of control bar for kiteboarding.

"It's allowed us to do a couple of things," he explained. "One, the cost of the bar has dropped from about US$18 to just two dollars. It's also made it much lighter, because it's a single moulding. But most significantly it's let us introduce to the market a whole new way of controlling the kite. We expect that this is not only going to result in an increase in sales for our small Canadian company, but it's going to lead to opportunities with other, much larger brands."

Zimmerman credited TAC with making it possible to determine if the redesigned control bar would hold up to the rigours of the sport, something that might otherwise have been impossible for the company to do. "We are delighted by the relationship we have with the college," he concluded. "It's led us to have great exposure to working with some really bright minds."

The second presentation, by Chaim Birnboim, started with a description of his personal journey from researcher to entrepreneur with a company employing upward of 100 people. "It was a simple idea, and sometimes that's what it takes to get something going well," he said, referring to DNA Genotek, which he founded and then sold to an American firm, OraSure. While still affiliated with that enterprise, he is now working on a spin off of the original technology, which allows fetal DNA to be collected from the blood of expectant mothers. There is a significant demand for this kind of service but current methods for collecting this important information have been very limited until now. There is a desire to know as soon as possible about the genetic state of a baby, but the most comprehensive method — extracting amniotic fluid from the womb — can be hazardous, which only adds to the appeal of this far less invasive approach of a simple blood test.

"The technological challenge is that the amount of DNA that is actually present is actually very tiny," said Birnboim, who predicted that the current work would make determining an unborn child's DNA as simple as drawing blood during a clinical visit. He credited the prospect of such progress to his new firm's collaboration with TAC, which has provided him with staff and facilities that have advanced the work on this technology.

The final presentation was made by John Helliker, Director Strategic Partnerships for Legend 3D and Director of the Screen Industries Research and Training (SIRT) Centre at Sheridan College in Toronto. He showed a video that demonstrated the company's flagship technology, which can convert a conventionally filmed movie into a 3D format during post-production. The images on display included feature films by major Hollywood studios, which are among the company's most prominent clients. "The history of Legend 3D in Toronto corresponds to the growth of SIRT as a Technology Access Centre," he said.

He added that Legend was founded in 2001 but did not have a presence in Canada until it became involved with SIRT, which was established in 2013. "It's a very competitive international business, film and television and gaming. Companies come and go and look for opportunities where they can really grow their business."

In Legend's case, that opportunity was driven by a search for talent. After identifying SIRT, Helliker recalls, the company realized that it could do much more for Legend than improve the calibre of its employees. By 2015 the company had decided to set up shop in Ontario and take advantage of SIRTNet, a broadband fibre-based technology platform that helped the firm grow from 60 employees to more than 300. "As a college, our mandate as a Technology Access Centre is to build a competitive advantage for companies, to build a competitive advantage for the province and for the country," he said. "We're part of an innovation ecosystem. We work with the University of Waterloo's Institute for Computer Research. We work with York University's Centre for Vision Research. We work with the town of Oakville and the City of Toronto. We see ourselves as an innovation and collaboration platform."

After the presentations Ron Freedman asked how these working relationships originated, whether firms sought out the colleges or vice versa. Zimmerman recalled how he found out about the TAC program at a conference after realizing that SREDs were no longer of any value to him. Birnboim added that his discovery of the program was even more fortuitous, when he was put onto it after looking for laboratory space. In Helliker's case the connections were a little more formal but not necessarily as the result of aggressive marketing by TAC. In light of these answers, Freedman then asked Hamelin how TAC was going to promote itself. She acknowledged that various colleges were "shy" in this regard and she was looking forward to bringing them together to share their best practices in reaching out to prospective clients.