

The Seventh Annual
RESEARCH Money Conference
in collaboration with the
**Information Technology
Association of Canada**

*From Entrepreneur to Titan:
Can Canadian Entrepreneurs Grow Technology
Start-ups into Domestic Multinationals?*

Conference Proceedings prepared by Robert Fripp

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Welcome, and Opening Remarks: Jeffrey Crelinsten, Co-publisher, RESEARCH MONEY

Jeffrey Crelinsten welcomed delegates to the seventh annual RESEARCH MONEY conference, dedicated to the topic “Canada’s entrepreneurship culture, and whether we have the wherewithal to grow profitable companies in knowledge-based sectors of the economy.”

He described a study that his firm, The Impact Group, had conducted in collaboration with Doug Barber (See biog. in Appendix 1). The study looked at 10,000 companies which had filed for R&D tax credits, finding that only a few hundred had sufficient revenue to spend 10% of it on R&D at a spending level of more than \$3 million. More than 6,000 companies in the study either had no revenues or less than \$10 million.

A follow-on study found that a lack of enterprise skills among CEOs and Canadian hires was a major obstacle to success.

“In Canada, it is possible to succeed in high-tech business, but there is a tremendous headwind compared to south of the border.”

Crelinsten described a third, current study, supported by ITAC and several government departments. This is now studying technology firms that no longer exist. Interviewing former CEOs and former investors reveals that: Canadian firms are operating in a culture intolerant of risk; too many are smitten by the wonders of technology at the expense of business considerations; managers and expectations are naïve, and lack of experience extends to senior management levels, investors, lawyers, accountants, regulatory, tax and business support organizations and agencies—in short, lack of experience extends to the whole spectrum of fields concerned with establishing and running technology-based businesses. “That’s our culture.” Crelinsten told delegates that one informant had suggested: “In Canada, it is possible to succeed in high-tech business, but there is a tremendous headwind compared to south of the border.”

Meanwhile, RESEARCH MONEY discovered that ITAC was also worried about trends in Canada. ITAC Chairman David MacDonald was concerned about Canada’s situation vis-à-vis high-tech. companies, that Canada might not have the domestic ability or the culture to succeed in building technology-intensive firms. MacDonald had noticed the plethora of small Canadian technology companies and the absence of large ones. ITAC was troubled by what it was finding. Where

were the roadblocks? In government policies? In financial practices? In the venture capital community? In regulations? In law offices? In manager experience or lack of it?

Thus the theme of RESEARCH MONEY's seventh annual conference. Crelinsten told delegates, "We have recruited some of the most successful and outspoken entrepreneurs to answer these questions."

He concluded: "Now it's my distinct pleasure to introduce our Master of Ceremonies for today's event: David MacDonald, a proud Canadian, President and CEO of SoftChoice Corporation and Chairman of ITAC. (See biog. in Appendix 1).

* * *

David MacDonald
President and CEO of SoftChoice Corporation and Chairman of ITAC
Master of Ceremonies for the conference

David MacDonald stated that his role was to "provide the glue for our conference," describing himself as an optimist and stressing that the theme was not *can* Canada build and sustain a high-tech. industry, but *how* to do so. He described coming back from working in the U.S. to "culture shock" on returning to Canada. He posed the challenge: "With all the experience in this room, and from Canadians working in the sector around the globe, let's figure out how we can build large Canadian technology firms."

He pointed out that most entrepreneurs come out of bigger companies after getting several years of experience as employees in the industry. Large companies are incubators for managerial experience, so it is difficult to breed entrepreneurs in an environment which lacks large firms. Large firms "show the way."

The recent trend in Canada, however, has been one of mergers and acquisitions and the problem—the absence of large industry leaders—has been getting worse, not better. MacDonald reinforced Crelinsten's contention that the present ICT climate in Canada finds a "plethora of small Canadian technology companies and an absence of large ones."

One of ITAC's major tasks, said MacDonald, is attempting to recognize the handicaps, raise the level of knowledge about those handicaps, and overcome them.

During the time this conference was being organized, MacDonald was discussing the training and development of managers. A

"We are looking at alarming shortages of skilled workers in all stages of our business. Nowhere is that shortage so acute as in the C-suite."

concern is that the talent pool may not be deep enough to train sufficient managers in Canada. In the current climate, the situation is poised to get worse, not better. "Hollowing out" is an issue. "We are looking at alarming shortages of skilled workers in all stages of our business. Nowhere is that shortage so acute as in the C-suite." Many companies have found their growth stalled because they can't find the right people. The sort of people who can lead a company breakthrough to become a billion dollar venture are "too rare" in Canada. "We need more than a handful." Canada as a whole should be more strategic in approaching and solving severe HR problems in our ICT sector. "We have to carefully listen to the lessons of the few serial entrepreneurs that we do have, and emulate them. We have to draw from their experiences and the general lessons that we can learn from Silicon Valley, and Austin, Texas."

MacDonald put forward the example of the company he leads, SoftChoice, which has grown in twenty years to a billion dollar corporation. SoftChoice has a "commitment to developing people," he told delegates, and that is essential to grow the industry and company size. The lesson he draws is that Canadian companies can grow, thrive, and hit their targets for success. But there's that stiff Canadian headwind against them.

Finally, MacDonald remarked that companies grow because their people grow, and the Canadian ICT environment does not favor growth at this time.

He then introduced the "premiere among the builders of tech. ventures, 'serial entrepreneur' Terry Matthews, Chairman of Mitel.

* * *

Terry Matthews
Chairman of Mitel
“Making It Happen”

Terry Matthews (See biog. in Appendix 1) has started some eighty companies. He stated that he was not able to bring a good message to the conference regarding the current state of the Canadian ICT sector. “I don’t feel good about it, and I plan to tell you about it.” Mr. Matthews outlined his own origins, starting with working on “millimetre radio stuff” at the age of 15.

“I come here to tell you that things are not so good in our industry, particularly in Ottawa in the telecom sector, and in Canada generally. Not good. I’ve not seen it quite as bad.”

Of the eighty companies which Matthews has started, he has lost only two. “Timing, passion, drive and so on” are key components, Matthews told delegates. He borrowed four thousand dollars to start his first company in Canada. Additional investment included this formula: for every dollar invested, an investor would get a one dollar share. Ten years later, each one dollar share was worth \$2.5 million. “So I’ve seen some astounding growth.”

An engineer, and an entrepreneur, Matthews puts people under pressure, “it’s all part and parcel of creating an industry.”

“I come here to tell you that things are not so good in our industry, particularly in Ottawa in the telecom sector, and in Canada generally. Not good. I’ve not seen it quite as bad.”

Matthews expressed concern about the state of the industry in Canada, and expressed his concerns to newly-appointed Minister of Industry Jim Prentice. “We have an industry falling below critical mass,” he told delegates, adding that many factors conspire to push the industry towards failure.

In its early days, Matthews introduced stock options at Mitel; employees invested, buying stock options. In a period of five years Mitel went from zero to “twenty percent of the market on the planet” in ninety countries. Employees worked around the clock, and invested in their own product.

At this time, there is a massive regurgitation of applications and solutions. The present situation resembles what Matthews went through with Mitel in 1976, but Canada is not a major player. Operating from Canada works for Matthews

because he has over the years created his own “little ecosystem,” creating teams, driving them, focusing on the market. “Above all, become global!”

In a thriving industry, Matthews told Minister Jim Prentice, a rising industry creates ripples of success across the industry and among supportive professions such as lawyers and accountants. “But they are all disappearing.” The host of negative facts includes the loss of a program of matching dollars, the difficulty in getting IRAP funds. “Tough to get it.”

Canada needs at least a handful of companies that do at least a billion a year to be global, but the country lacks that critical mass.

The biggest opportunity Matthews has seen in his career is a change to broadband networks. “The irony is that many Canadian companies and Canadian inventors concocted this

stuff.” Canada needs at least a handful of companies that do at least a billion a year to be global, but the country lacks that critical mass. So Canada cannot be global. Instead, Matthew sees the sector as becoming a large number of “corner stores.” Nor does Canada have the flagship to take the output from the corner stores and sell it around the planet as a global brand. Having global brands is important, and we lack them.

Matthews listed several adverse factors, the first being the high dollar which has had many impacts. That includes venture capitalists insisting that much R&D is done offshore, so R&D jobs are leaving the country.

The tariff barriers are gone; communications to offshore countries cost next to nothing. The developing world is competing in many ways.

The second factor is a lack of R&D money from the government: TPC gone; IRAP not well funded; difficult to claim from the tax credits. Canada has funds for university research, but the transition from university research into making a company is a long, difficult haul. Then, in the matter of graduating students, graduates “get picked off by U.S. companies” where they work in a better industrial climate.

Furthermore, Matthews said, the federal government buys very little from the Canadian ITC sector.

The bulk of procurement, then, is not from Canadian producers but from systems integrators, who are almost entirely American, who sell to the much bigger U.S.

government market. “Global systems integrators are taking more and more of the revenue pie. If you can’t sell to your own government, where are you?” Matthews asked. “How do you expect to sell it somewhere else?” The result: local companies can’t get enough revenues to pay for R&D, and can’t get leverage with the federal

“Global systems integrators are taking more and more of the revenue pie. If you can’t sell to your own government, where are you?”

government. This trend in Canada has happened in the past decade. It has nothing to do with the dotcom bubble. Matthews finds very little understanding in the government or among the population. “Unfortunately the sector is going down. I’ve watched ICT companies leave the city of Ottawa. It was once growing. It is now going down.” Even domestic deep-rooted flagship companies calculate that they can’t do R&D in Canada; the same goes for foreign companies. “Not good!”

Minister Prentice has set up the Science and Technology Innovation Council (STIC) and it is being listened to. “We meet regularly and we talk absolutely about what’s going on.” “It begins with the dollar and goes through government funding, and involves procurement.”

Matthews referred to Canada’s prevailing ethics as a disadvantage. “We’ll have in this country incredibly clean accounting. Bankrupt, but clean. Clean, but bankrupt!”

“Go for a global market,” Matthews concluded, “and be bloody aggressive about it!”

Question from Mark Romoff, who raised the government procurement issue, stating that the government generally replies, “Sorry, NAFTA doesn’t provide for that.”

Matthews responded, indicating that Canadians tend to have more rigid, more limiting standards of “honesty.” He provided examples, citing Germany, France, Japan, China... “We can go down a long list.” The U.S. has a “buy American” policy. Canadian resource extraction drives the dollar up, which disadvantages the technology sector. “It affects the balance of everything we do.”

* * *

David MacDonald thanked Terry Matthews and introduced the first panel.

* * *

Panel 1: “Challenges for entrepreneurs in Canada”

Lisa Crossley, President & CEO, Nysa Membrane Technologies

Jen Evans, President, Sequentia

Wayne Karpoff, Co-founder & CTO, YottaYotta Inc.

MODERATOR: **Robert Courteau**, President & Managing Director, SAP Canada

(For complete profiles, see Appendix 1.)

Robert Courteau spoke of dealing with entrepreneurs every day, watching and supporting companies as they grew, and being involved in the venture capital community. He asked the panelists to describe the growth and present state of their companies, and the challenge of funding a Canadian company.

Lisa Crossley described the big differences between Canada and the U.S. in starting a young, entrepreneurial company. The U.S. is “no question” the better place to start a company with lots of models, role models, successes—and failures. In Canada it appears to be more difficult. In the first place, many companies are acquired by American companies, so they are not Canadian role models. “It is very difficult to see the path and follow it if you have been in Canada your whole career.”

The U.S. is “no question” the better place to start a company with lots of models, role models, successes—and failures.

Wayne Karpoff described YottaYotta Inc. as a company that “cheats on the speed of light,” allowing large widely-separated data warehouses to behave as if they were in one room. He stated that he had raised \$70 U.S., but none of that had come from his home province, Alberta, adding that it was hard to raise money without investment “from closer to home.” There is a lack of investment capital in Canada, which “hurts all the way through” the cycle. Karpoff has compensated for the lack of Canadian executive hires by importing them from the U.S.

Jen Evans stated that it was important to find customers outside Canada. Raising capital is not difficult in her company’s field, the social networking space. However, she found that Canadian customers are more averse than their U.S. counterparts to invest in new approaches. Companies in Silicon Valley were much faster to understand her company’s value proposition.

Karpoff pointed out that, in New Zealand, the public healthcare sector is required by law and measured on its commercialization of domestic product, its participation in early phases and trials. Canada should make it possible for recent graduates to work with “real live” customers, and could use that domestic customer base as a credible source to get into export markets. That would make it easier to bring in international investment because customers would be here. That would make it easier to import CEOs and managers who understood how to take companies “through those curves.”

Evans and Crossley pointed out that the lack of maternity leave is a factor in preventing women growing their companies.

In addition, the U.S. practice of investing in apparent winners is preferable to the “more socialist” practice in Canada of giving everyone a little piece of the pie. A more effective practice, Crossley said, would be to fund the leaders, not everyone. There is also a culture of stewardship, rather than entrepreneurship. Canadian business schools teach people how to *run* businesses, but not to *start* them effectively. She also spoke about the need for a young entrepreneur to have a mentor, using her own career as an example.

Courteau: “Picking up on that,” asked Karpoff to enlarge on mentorship.

Karpoff: “I think it is a fundamental flaw in Canadian companies in how we structure our boards and how we build our boards from the perspective of providing that mentorship.” Canadian venture capitalists can be very helpful in giving advice here. On the other hand: “We also tend to overrate the importance of VC-appointed and -run boards. But we must have on our boards CEO’s that have the Rolodex and have been through a lot of experiences. We don’t do that. We allow boards do be built by the guys who put the money in.”

Crossley: Agreed that it was essential to bring in people with successful “company building” management rather than financial skills. What you really need on a board is someone who is going to “drive” the company and force it to “focus; to drive towards revenue and get products” as quickly as possible. “That’s the big difference I see on Canadian boards versus U.S. boards.” Crossley finds that Canadian directors are “Really hands-off.” “That’s incredibly frustrating.” An active board tends to “Make the investment sooner,” and the whole cycle to market speeds up. A business needs to reach “value” in the first few years. “We really need people driving us *quickly* towards high valuation.”

Courteau asked Evans what makes a great managerial entrepreneur.

Evans: "I'm a visionary," but not necessarily the person who will put the vision into practice. Evans hired a general manager who was able to drive the company ahead. "Be candid in knowing where your own strengths lie."

Karpoff: "A good CEO is not the ideas guy." A CEO is all about execution, saying No a lot, and not running out of money. An entrepreneur is all about the vision.

Crossley: Being a CEO is a lot like being a parent; stopping the in-fighting, getting everyone to play nicely. Hire someone with management skills, but that person has to have the passion. "If you hire for passion, you'll never have to wrangle everyone back into line."

Evans: "Entrepreneurship is really hard...but the reality is that if you want to be global, do it at the outset or be forever a secondary player."

Crossley agreed. "Canada isn't a large enough player to get you global respect on its own."

"Entrepreneurship is really hard...but the reality is that if you want to be global, do it at the outset or be forever a secondary player."

Karpoff stated that the Internet has made many markets global: "Global is where you're competing."

David MacDonald thanked the panelists and introduced Cathy Anterasian.

* * *

Cathy Anterasian
Senior Director, Spencer Stuart
Executive search specialist in ICT (See biog. in Appendix 1)
"Lessons from Silicon Valley"

Cathy Anterasian addressed delegates on the subject of living, working, and the "day to day" in Silicon Valley. Essentially the Valley is a 30 mile by 10 mile area crammed by specialists and entrepreneurs working in ICT. "It emanates out from Stanford University, cradling everyone in the Valley." A young, vibrant culture with one of the highest incomes per head in the U.S.

"Silicon Valley: A great conga-line of intertwined ventures, joint ventures: an open-office cubicle winding its way from San Jose to Palo Alto."

An inventive town, cradled by Stanford and Berkeley. Twenty percent of residents have advanced degrees. Up to forty percent of investment in the ICT sector goes into Silicon Valley, and much of that comes from the Valley, too.

The venture capitalists *do* spawn major industries, with current attention focused in biotech. And Cleantech. “Silicon Valley: A great conga-line of intertwined ventures, joint ventures: an open-office cubicle winding its way from San Jose to Palo Alto.”

Anterasian told delegates that three factors combined to make Silicon Valley what it is: its history (several major early pioneers, innovative financing), major catalysts (universities) and the attitude and way of life (tolerance, including tolerance of failure, a relaxed atmosphere).

Stanford students like to remain in the area, further building critical mass. The growth in the number of companies, and the highly educated population, has grown significantly.

“Companies stay in the area and spawn such a critical mass. What makes Silicon Valley so unique is that these big companies spawn other companies and they stay in such critical mass that wonderful things happen when you put them all in the incubator together... That still exists.”

Related professionals are always to hand: marketing, head hunters, lawyers, accountants...

Access to capital: It is readily available at multiple stages of company growth. Venture capitalists also become a magnet for talent, and they vet upcoming opportunities, so that they are ready “when the right opportunity comes along.” It’s the venture capitalists and tech. titans who are the celebrities around town.

Related professionals are always to hand: marketing, head hunters, lawyers, accountants...

Attitude to risk taking: “It’s OK to fail, and there is not much risk in failure, because people are so socially networked that they know their peers will help them move on if a venture fails.” “It’s a safe place to fail as long as you learn.” “It’s a safe place to take risk, because the environment promotes that.”

Serial entrepreneurs: The major entrepreneurs tend to build success more than once. “Their contribution of energy and spirit is intense.”

Great ideas, openness to new ideas, the meritocracy of ideas – meaning that there are no norms as to who can be successful. The glass is half full!

How does all that translate for Canada? Typical of successful regions is the serial entrepreneur. Does Canada have the same mentality and culture? Does Canada have the right technology clusters to build global titans? Does the culture reward risk-taking? Do you think big enough? Do you dream? Do you have, or can you create the network effect of social and technological groupings? Can you create a world-leading university to attract and retain the brightest minds in the world? Does Canada’s immigration policy allow recent graduates to immigrate? If you educate them, can they stay? Do start-ups have sufficient access to capital, especially in bridge-financing rounds? Does your tax structure create incentives to invest? Does Canada need a large domestic market, or will the Internet level the situation, allowing producers to get to the world?

* * *

David MacDonald commented that the audience was starting to see some of the success factors emerging from the talks and the panels. “Clearly Silicon Valley is a role model,” he said. Following a break, he introduced Kevin Francis.

* * *

A. Kevin Francis
President & CEO, CenterBeam (See biog. in Appendix 1)
“Canada: Scale or Surrender?”

It was a pleasure, Francis began, to share his battle scars on “this very important topic for Canadians.” He chose the title to be provocative, because there is a choice, he told delegates. Canada has to scale up, or throw up the white flag and surrender to larger countries with advanced ICT sectors. “For the most part, our ICT history has been one of American or European multinationals based in Canada—largely in sales roles.”

“Do we simply go backwards and allow ourselves to be the bedroom community of American multinationals, or do we redefine the ecosystem that builds the kind of ecostructure that will allow us to develop an international footprint?”

Canada's experience was one of many small businesses, some of which grew, but very few. Many of those were then acquired.

The question Francis posed: "Do we simply go backwards and allow ourselves to be the bedroom community of American multinationals, or do we redefine the ecosystem that builds the kind of ecostructure that will allow us to develop an international footprint?" Francis stated that Canada could deliver such a new model—based on his experience running several different companies.

"The framework from which I speak is based on these experiences; and I'm going to talk to you about four aspects which I think are significant around this observation around whether we scale up or surrender.

"We have four primary issues: We have access to capital, we have Canadian brainpower, we have no shortage of good Canadian educational institutions. What we may have is a lack of will, a lack of boldness and a lack of starting from the premise that we are going to be global."

Francis reiterated the comment that the Canadian market is too small and diverse to scale to levels necessary to go at a global level. There are three interlocking pieces in the present dilemma, he said. First, "Canadians do not generally have global experience in their DNA." Most Canadians have worked at home. Fear, uncertainty and doubt comprise Factor One. "Typically Canadian."

Point Two: Canadians are known for honesty, but are "underwhelmers, choosing the middle of the road." Canada's reputation is a huge asset. "Canada brings with it respect." However, given the absence of international experience it is essential to provide advisors who can advise young Canadian entrepreneurs. Such people might not be working in Canada. However, "there are enough Canadian advisors *globally* with experience." ITAC could play an innovative role in reaching out to create a network of Canadians with global experience who would be willing to donate time and energy to create the kind of Canadian infrastructure that Canada is capable of building. That was Point Two: advice is there but that experience "is not necessarily in the country."

Point Three. Regulatory (external): "Regulations in the European Union, versus the regulatory environment of Asia, could never be known in downtown Ottawa. They could only be known with the gunpowder of the battlefield, being on the ground in foreign countries, understanding regulatory issues." Francis pointed out

that CenterBeam was required to approach data backups very differently in the E.U., the U.S., and Asian countries. Global experience was essential in order to impart the different approaches to different markets.

Regulatory (in Canada): “Why are most high-tech companies—like CentreBeam—registered in Delaware?”

Francis asked. “Because the courts are business-friendly. They are not adverse to shareholders, but they are pro-business.” In

Canada has regulations unfriendly to business. By contrast, the United States has business-friendly regulations

Canada, Francis got caught in a hostile takeover which failed, “But Canada lost, because the company was absorbed by Adobe Systems” with the loss of 200 high-tech. jobs in Ottawa, and another name taken off the template of what it takes to be an experienced Canadian high-tech. company.”

That happened because Canada has regulations unfriendly to business. By contrast, the United States has business-friendly regulations :

- 1/. You must declare ownership in another firm once a holding reaches 5%. The figure in Canada is 10%;
- 2/. A board of directors in Canada (particularly re. the OSC) cannot reject a hostile takeover bid.

Francis stated: “If we are to build businesses, we have to protect those businesses,” the better to nurture growing companies so they would not be picked off. The world needs that sort of protective regulatory interaction essential to build this platform.

The final point: Risk capital. Centerbeam would never have been funded in Canada, Francis told delegates. It was an idea before its time; it raised \$175 million on a pipedream. It had “burned through “ \$110 million before Francis took over in 2002. He established the company’s office in St. John. But, he said, “Canada is unconstrained in the world of the Internet. It can be anywhere, anytime, with outstanding economics.” He installed the talent (150 engineers) in New Brunswick. Francis has demonstrated that if a company “can combine the right quality of job with the right business plans, the result is a magnet to draw Canadians home.”

Re. the shortage of talent, Francis said that it is necessary to open the borders to immigrants with appropriate skills. Visas to the U.S. are snapped up right away, so Canada may have an advantage: those engineers who wished to come to North America could be coming to Canada. But that requires reformed immigration policies—and to finally resolve the confusion over documentation for professional qualifications.

The final point re. risk capital. “It is the DNA that lets businesses grow.” Referring to Anterasian’s reference to failure as a badge of honour in Silicon Valley, Francis called for a different approach to capital lending in Canada. “I think that’s possible.” In summary, Francis called for:

- 1/. Experiential support for young, talented entrepreneurs;
- 2/. Build an international ecosystem of Canadian executives willing to mentor others;
- 3/. Regulatory change to allow company-protective development;
- 4/. Immigration flexibility, to staff the jobs;
- 5/. More flexible access to risk capital.

Question: Neil Wolfe from the University of Toronto asked about capital markets.

Francis: In an interesting development, many U.S. firms are going public on the TSX (Toronto) market first: “Lower threshold, lower cost. A year or two on TSX, then NASDAQ, then the New York Stock Exchange. Both the TSX and TSX-Venture are attracting a lot of American companies that are coming up: they are not fully out of the reach of Sarbanes-Oxley, but are in a lower cost framework.”

Wolfe: “About those (Canadian) companies that are taken out (bought out): what’s wrong with mobilizing capital to keep them in Canada?”

Francis: “I’m not sure there’s anything we can do in a friendly takeover. In a hostile takeover—specifically my own case—we might have been assisted had we had a more Delaware-like structure in Canada.”

Remark by Doug Barber: After several years, CEOs (who are by then very tired) do not have a clear view of succession. They consider selling it.

Francis: This is often a governance issue, decided by the board.

Question: How does one tap into those “global Canadians” out there?

Francis mentioned the “Digital Moose” Society in Silicon Valley, with 3,000 Canadian executives based in Silicon Valley firms. He suggested reaching out to the Digital Moose Society and LinkedIn, “to spread a viral message, and I bet we could build a digital database pretty darn quick. We could get an enormous response and it wouldn’t be all that hard.”

* * *

David MacDonald thanked Kevin Francis and introduced the second panel, “Training and Mentoring Entrepreneurs and Executives.” MacDonald noted that when Doug Barber and Jeff Crelinsten had interviewed entrepreneurs, the one thing many entrepreneurs wished they had had was a mentor. Hence, this panel...

* * *

Panel 2: “Training and Mentoring of Canadian Entrepreneurs and Executives”

H. Douglas Barber, *Co-founder & former CEO, Gennum Corporation*

Peter Charbonneau, *General Partner, Skypoint Capital*

Jeff Hauswirth, *Managing Director Canada, Spencer Stuart*

MODERATOR: **Neil Wolff**, *Chair of Management, Entrepreneurship and Strategy, School of Business Management, Ryerson University*

(For complete profiles, see Appendix 1.)

Neil Wolfe opened by mentioning that Ryerson now offers a major and a minor course in entrepreneurship. “We have students focusing on taking an entrepreneurship Bachelor of Commerce. What does that mean: They’re taking an incredible risk.” Wolfe told the audience he wanted to plant the seed that they should hire his students “to start a new division for you!”

Further, Wolfe intended to start a three-year course, a Bachelor of Science in Commercialization and Innovation, but was having a “hard time” selling the concept within Ryerson, and invited delegates to apply pressure from outside.

Doug Barber introduced himself as having grown up on the Prairies, “in a farming community where education didn’t happen. Learning did.” Several grades of his primary school years were “without a teacher,” reminding him of a quote from Oscar Wilde: “ ‘I have the greatest respect for education, but from time to time I

have to remind myself that all the important things that I have learned cannot be taught.’ That’s true in the entrepreneurial world, too.” After his more formal university education—leading to a Ph.D. in semiconductor devices—Barber experienced the early days of Silicon Valley, knowing several of the pioneers. He was among the founders of Linear Technology. Globally-minded right from the beginning, he modeled his company—which would become Gennum Corporation—on Hewlett Packard. More than thirty years later he is a Distinguished Professor of Engineering at McMaster. Since retiring in 2000 he “has time to think about what we did right in those years. That has got me into the question: what is Canada not doing right, and how could we pull up our socks?”

Barber noted that he and Crelinsten are working on that question. “We are now talking to CEOs and funders of R&D intensive enterprises that have disappeared in Canada.” That had also been a great learning experience and partly a reflection on “What did we do right?” He recalled that his company had spun out of Westinghouse, one of the great learning companies, realizing only recently how much influence Westinghouse had had on his career and the careers of several of his peers. In sum, Barber reflected that his comments had been “partly about training, and partly about mentoring, too.”

Now retired, Barber said that he was working harder than ever, trying to figure out how to get onto the “Scale it and succeed” theme mentioned by Kevin Francis.

Jeff Hauswirth, Managing Director Canada, Spencer Stuart: “A lot of my work involves recruiting executives from around the world either to Canadian companies or companies based outside Canada.” Hauswirth observed that he had been cheered by Kevin Francis’ comments, which amounted to: “the only obstacle in turning this thing around is us, and we do have [a small number of] fantastic leaders who can play in a global arena. More so than a lot of other cultures produce. In many ways, our time is now.”

Peter Charbonneau, General Partner, Skypoint Capital: “I had the good fortune to meet Terry Matthews in 1986.” Matthews hired Charbonneau away from Deloitte to become CFO at Newbridge Networks. He then served as Executive Vice President, President and Chief Operating Officer and Vice Chairman over the next 13 years. Charbonneau had great mentors at Newbridge. Newbridge had a corporate mentoring activity—the Newbridge Affiliate Program. “I am pleased to speak about mentorship, because I have had two very good ones in my career. I

believe mentoring plays a very significant role within all stages of our function as venture capitalists.”

Neil Wolff asked Doug Barber, “What is a mentor?”

Barber expressed dislike for a word “often used in a hierarchical fashion, and it doesn’t work that way.” He conceded that there is generally a difference in experience. “It is a personal, respectful, complementary relationship between two people, generally one that is young and starting something, and someone who has been a bit through the mill but never the same mill that the younger person is going through. Hopefully, that relationship is constructive and alleviates some of the aloneness for the person who is starting.”

Hauswirth: “What it isn’t is monetary. It is not necessarily for career advancement. What it is is a confidential relationship, a safe haven. It can be structured or unstructured.” Hauswirth had heard of relationships drawn up by contract, pointing out that there are many different ways at looking at a mentoring relationship.

Charbonneau: Mentoring transcends a formal relationship; it is informal, an application of the mentor’s knowledge, trying to transfer it to a person whose position the mentor once [approximately] held. It reminded Charbonneau of the Wilde phrase cited by Barber—things that couldn’t be taught. It is a matter of a shared, confidential experience, so that people could “feel” their way through. It comes down to the “soft” skills, the interpersonal relationships, young CEOs dealing with their boards, dealing with prospective customers, competitors, etc. It is a matter of instructing how to position relationships. A sharing of experience.

Wolff asked panelists: “Did you have a mentor? What was your experience using a mentor, and what value do you believe the mentoring gave you?”

Hauswirth: described his mentor as an “incredibly safe harbour, so there was nothing that you couldn’t talk about.” Mentoring is perhaps “the most under-utilized secret weapon out there.” Regarding scaling—Kevin Francis’s point—a problem is that young executives didn’t know what scaling looks like. “I think it would be the biggest piece of low-hanging fruit available to the sector, because it doesn’t happen for many people, unfortunately. It was certainly good for me.”

Barber: Spoke of having three “notable experiences” with mentors; the final one being the manager of building services at Westinghouse, who was generous in

teaching him “how to detail” the plant that he needed as a wafer fabrication and testing plant. “I hadn’t learned how all the things I had learned were important to a much broader spectrum of tasks. It really opened my eyes in a lot of ways, working with him.”

Charbonneau: It came down to getting the right quadrant, and heading in the right direction. Often, he recalled a 15 minute phone call was the right direction to head. It was valuable to have that kind of discussion. Such calls often dealt with soft skills, dealing with people.

Wolff asked panelists if they had ever mentored anybody?

Barber continued to relate to people starting up. They often met, Barber knowing that he had never been in the other person’s situation. It was, and continues to be, “all very personal and very private.”

Charbonneau “has informal ones which have been the most rewarding.” He spoke of relating to the CEOs of companies which Skypoint Capital was financing. He mentioned that, as companies got bigger, his role with their CEOs evolved. If it went too far, he felt, it could evolve to conflict, when a CEO needed another stage of financing. There came a time when one could not provide advice. At that point, “We actively advise CEOs to go out and seek advisors so that they can continue on with those relationships.”

Hauswirth: Continued in one mentoring relationship, and found it to be “one of the more rewarding things I do,” when he watched the person grow.

“We have lots of spunky people who go at these things and they feel very isolated and very alone, and they don’t feel very valued. I think [mentoring] is in short supply.”

Wolff: “Do you think a young entrepreneur could find one mentor to assist them throughout their career?”

Barber: Thought that to be unlikely. Circumstances change. He reminded the delegates that he and Jeff Crelinsten were interviewing CEOs in Canada—about 100 to date—and that these people seemed to value their interviews because they felt “so alone.” “My sense is that we have lots of spunky people who go at these things and they feel very isolated and very alone, and they don’t feel very valued. I think [mentoring] is in short supply.”

Hauswirth: Agreed with Barber that an individual requires different counsel at different stages of evolution. Hauswirth has heard good comments about setting up an advisory board, reaching out to lawyers, accountants, advisors to build a personal board of directors. “That could even work better, especially early on.”

Charbonneau: A successful young CEO should have multiple sources of advice, whether called mentors or not. Both parties generally recognize that “their time has come and gone. If a person is to be successful, they have to transition [sources of advice], they are going to evolve. They are going to reach stages when their needs are going to change dramatically, and [no single] mentor will be able to provide the most valuable counsel at the many stages.”

Wolff agreed that people move through different stages, acquiring different support mechanisms, and looking for mentors with different skill sets. Also, “learning when to let go and how to let go is strategically important to get the full benefits of this.”

He then asked how entrepreneurs found mentors, and how to maximize their benefits.

The human side of enterprise is consistently downplayed, [perhaps even atrophied in the quest for technical excellence]. “I don’t think we have a big supply of mentors that can cover the spectrum we need.”

Barber responded that that is difficult. “We don’t have a Digital Moose Society in Canada.” He continued by saying that people often don’t know each other and don’t feel free to develop a relationship. Barber felt that the knowledge-based sector faces more difficulty in this regard than the resource sector—“Oil is oil and coal is coal”—because the knowledge-based sectors such as ICT are “more human-oriented.” Human skills, he felt, we gain intuitively, unconsciously; and the human side of enterprise is consistently downplayed, [perhaps even atrophied in the quest for technical excellence]. “I don’t think we have a big supply of mentors that can cover the spectrum we need in Canada. We do have to re-import some of them!”

Hauswirth agreed that this is a difficult challenge, because there has to be a certain amount of intimacy in a relationship that must be confidential. He encouraged the establishment of a “large database” of Canadians outside Canada to counsel early-stage entrepreneurs (q.v. Francis). “That may have a significant impact [in the future] at least on acceleration.” But the state of play “today” would make reaching out difficult.

Charbonneau believed that the onus seems to lie with the person seeking mentoring, but was encouraged because the quest by a young CEO for board members and advisors might “foster and promote the networking required to find” suitable mentors. “Then it became the onus of the person to seize the moment.” Part of that “is a matter of participating with integrity and honesty in a board of advisors, or individuals you would interact with on a daily basis.”

Wolff: Can educational institutions provide a head-start for students who end up running a company?

Charbonneau: There is probably a model where an institution has done that so that we don't have to reinvent the wheel. That sort of function may evolve, coming out of courses. Receptiveness will evolve out of courses.

Barber: Pointed out that the greatest cultural changes in a life take place between 18 and 25, when people establish a new peer group. There is a new sense of freedom. Universities and community colleges are the big influencers at that stage. Barber felt that there is little sense of cultural responsibility in Canadian secondary institutions. “While they may do a great deal in the technical aspects of the course they don't do a great deal about value-consciousness. There are a lot of things that aren't open in our secondary systems: we don't have the Fred Termans here” (Stanford and Silicon Valley pioneer). “Sales” and “profit” are not positive words in the academic environment. Nor is “manager.” “I know several profs. who have 40 or 50 people working on their research who don't consider themselves managers. They would be quite offended if you implied that they were.”

“These things that require human skills, human interaction and human

“Clearly there is a benefit in mentoring. What hasn't been talked about is that it's a time commitment and young people really benefit from having a mentor. So I look out here and ask that [the delegates] consider giving that time.”

interdependence are not plentiful in the sphere of our academic institutions. So graduates may go out there somewhat disadvantaged compared to the learning experiences in other countries.”

Wolff summarized: “Clearly there is a benefit in mentoring. What hasn't been talked about is that it's a time commitment and young people really benefit from having a mentor. So I look out here and ask that [the delegates] consider giving that time. I take on two students a year, and I ask them in turn to become mentors later in their life and to keep that process going. So I ask you guys to reach

out;...students are hungry for experience, and perhaps they can learn the soft stuff by actually experiencing what industry is like. But they need a segue, they need a mechanism for that to happen. I've got tons of students..." Wolff suggested that [some of] his students might work six months for free in exchange for the mentoring experience.

Question: A delegate picked up on a point made by Barber. The University of Alberta's Technology Edmonton program offers many components. "The Number One" program is Entrepreneur in Residence, "where we put entrepreneurs right in the university environment not only to look for good spin-outs from the university but to provide that interaction, not only with graduate students, but professors and young professors, to provide that exposure at that level." Feedback indicated that if the board dropped all the other programs, they should keep that one.

Barber: Made one more comment about mentoring. Occasionally he meets about six to ten CEOs of relatively young enterprises, and "Probably the most positive thing that I do is listen to them. They talk themselves into a much better situation just by talking about it. Listening is a very important part of mentoring."

* * *

David MacDonald adjourned the conference for lunch. First, he suggested that, to mentor, "you have to believe in the theory of abundance. The theory of abundance says that by sharing and supporting, good will return to the people who provided the mentoring. That is an important thought process that we have to build into the output of this conference: That by working together we can provide a greater return, not only for Canadians but for the world."

* * *

After lunch, MacDonald introduced Phil Sorgen, stressing that Sorgen, an American, "had as much knowledge about Canadian conditions as anyone."

Phil Sorgen, President, Microsoft Canada
(See biog. in Appendix 1)

“Innovation & Productivity: Competing in the 21st Century Marketplace”

“Thank you for inviting me to talk to you about Canadian innovation and productivity, the lifeblood of the Canadian economy. That is something that is near and dear to our heart at Microsoft.” Sorgen said that his message would be about Canadian entrepreneurs and competitiveness. He acknowledged that there has been much discussion about productivity in Canada, and that it is a “tough subject” for the general public, as a “do more with less” notion. One aspect of productivity, he said, is enabling people to be more productive and effective. That is an important message to give employees of Canadian companies, large and small.

There has been much discussion about productivity in Canada, and that it is a “tough subject” for the general public, as a “do more with less” notion. One aspect of productivity is enabling people to be more productive and effective.

The other notion of productivity: it is a “key driver” especially with regard to standards of living. Sorgen cited a report by the Canadian Chamber of Commerce, which stated that productivity was responsible for eighty percent of the rise in standards of living since 1960, during which time the standard of living had more than tripled. Other good news was that Canada continues to be a highly prosperous country, with some of the highest GDP growth and some of the lowest business costs.

On the other hand, a recent Conference Board of Canada report stated Canada had moved from third to twelfth in a whole series of macro- and micro-economic indicators. Returning to the Canadian Chamber of Commerce study, Sorgen mentioned that it stated that “Canada lags the U.S. by twenty percent.”

The problem is that Canada is not just competing with developed countries, but with emerging economies, too, which will continue to produce goods and services at costs lower than Canada’s for some time to come.

The second factor, Sorgen said, is the skilled work force shortage, or the perception that Canada would have a gap in skilled workers over the years to come. “When you factor that in with lagging productivity it presents a daunting challenge to us to compete.”

The Conference Board of Canada produced another report, making a bold statement that “within a decade, the skill gaps in our workforce risk undermining our economic performance.” Further, by 2025, Canada would have a workforce shortage of about 1.2 million people even when factoring in high levels of immigration.

“Some of that is hitting home today. I travel to Alberta and see the difficulties in getting the talent they need. And in the ICT industry, today, there is an expectation that there will be about 35,000 more jobs created over the next year to 18 months. And yet, in that time, all the colleges and universities in Canada will produce about 7,000 people who will graduate in the fields of computer science, computer engineering or computer systems.”

Regarding the broader issue of competitiveness, many experts had spent time studying that, Sorgen said. He shared with delegates “the feedback from a conference we [Microsoft Canada] had hosted.” That was CanWin, whose theme was competing to win in the global economy. Each year the general theme of CanWin is the same, but each year the topics changes, reflecting the delegates’ interests. The most recent conference produced a “general consensus on what we need to focus on to maintain our high level of competitiveness on a global scale.”

The first topic that delegates to CanWin stressed was the skills gap.

The second factor “is that we have to create an intense culture of innovation in Canada, in companies large, and in seed companies emerging through entrepreneurial efforts.

The third factor was the transformative power of technology in driving innovation and productivity.

The fourth factor: Regulatory or policy issues were identified by delegates to CanWin (delegates being from government, business and academic sectors). Sorgen gave examples: the Canadian tax regime focusing on just successful efforts in advancing R&D credits to making sure that the pipeline between university research and the commercialization of intellectual property (IP) will be stronger in the future. Sorgen named a number of efforts to commercialize IP: by ITAC and others, for example Concept Share in Sudbury. Those, Sorgen said, were examples of successful start-ups that had emerged out of the university system.

Closing the skills gap: “The national debate has centred here pretty squarely. This is the Number One concern for many people.” Sorgen reminded delegates that several factors touch this issue: education, immigration, taxation and workplace training.

On education, Canada has the highest digital literacy rate in the world among teenagers; it is a great place to find the next generation of entrepreneurs, scientists and researchers; the country is among the most connected societies, with PCs and broadband access. Globally Canada ranks second for educational attainment, expenditures, and—more importantly—achieves top ranking for educational outcomes. Sorgen described these factors as giving excellent competitive advantages for Canada at the primary and secondary levels.

Where Canada falls short is in post-secondary education. “We trail many countries including the U.S. We’re simply not graduating enough people in the right disciplines to fill the skills gap.” Sorgen related statistics he had heard from University of Waterloo President Dr. David Johnston: on a per capita basis, Canada graduated only half as many MAs as the U.S., and only a quarter as many PhDs. Success does not necessarily demand advanced degrees, but looking at the figures it was clear to Sorgen that much of the success had emerged from MA and PhD programs in many universities. “This is an area of opportunity and encouragement that we can all play a role in.”

Sorgen recalled comments by a speaker at his CanWin conference. Colm Butler, advisor to the Prime Minister of Ireland—(Director, Information Society Policy for the Department of the Taoiseach)—spoke about the drivers that transformed the Irish economy to success. Butler indicated three drivers: radically improving access to post-secondary education; understanding that a transformation was occurring (meaning that investment was boosted to create more and larger institutes); and the government got involved in the curriculum at the primary education level. Here, Butler explained, the Irish government recognized that if it failed to introduce enough of the science and math, and lateral thinking, at a primary level, it would miss the opportunities for young children to take advanced degrees later.

Microsoft Canada, one company, believed that it could make a difference here, said Sorgen. A recent company program, Dream Spark, provides the tools, regardless of socio-economic background, to provide mission-critical work, start-up work, or tools in

Demographics dictate that Canada cannot solve its skills gap problem through the education system. Lifelong learning must play a part, too.

the area of gaming, to all students in colleges and universities around the country. (This is a worldwide program, too.) Another Microsoft program, Partners in Learning, cooperates with school districts, getting aspects of technology into the curriculum. It is not Microsoft's role to teach, Sorgen stressed, but rather to help teachers do what they do best.

Demographics dictate that Canada cannot solve its skills gap problem through the education system. Lifelong learning must play a part, too. That includes leveraging "underused populations," be they mature workers, aboriginals or people with disabilities. Microsoft, Sorgen said, believes that "people are the centre of our success. We think that training, skills development, and enhancing the skills of our people is an 'attract, retain and develop' priority of how we focus on our people at Microsoft." For any company, focusing on that approach would be critically important in bringing the next generation of employees into an organization—and would also bear on attracting and retaining the employee base.

Creating a culture of innovation: This is where entrepreneurs play an important role in Canada's competitiveness. Building a culture of innovation has been a "special imperative" for Microsoft. Microsoft does that on two levels: organizational, and individual.

"Organizationally, we invest, and we invest publicly and visibly," to the tune of \$6.9 billion of R&D annually. "We'll cut a lot of things before we'll ever touch the investment we'll make in innovation. That's our pipeline to future growth; that's our pipeline to long term success."

That investment has to link to the business model, which is very partner-driven," said Sorgen, "with over 25,000 innovation partners in Canada." Worldwide, Microsoft also spent \$2 billion dollars on partners who created their own intellectual property on top of the Microsoft platform.

Microsoft offers a number of other funds "for investing": a start-up business accelerator, and funds including the BlackBerry Mobile Development Fund, Sorgen said.

He added that Microsoft takes a lot of pride in the Infusion Angels Centre in Waterloo, located at the Waterloo Accelerator Centre, a partnership between Microsoft and a venture capital firm, Infusion Angels—"a first in the world for us," added Sorgen. Dell and Intel also partners with Microsoft and Infusion Angels here. The purpose of this is to give entrepreneurs the tools and

technologies to turn their ideas into prototypes. Having the relationship with an investment firm allows entrepreneurs to get the coaching very early on, and to get additional funding and allow the start-up to blossom. After just a year in operation, two start-ups have come out of the Infusion Angels Centre.

The Microsoft Canada Development Centre: Microsoft opened its fifth development centre worldwide in Richmond, B.C. Traditionally Microsoft did all development in Redmond, but has realized that an international approach offers international talent skills—a distributed development strategy. These centres “are assets that allow us to continue to recruit and compete for the best development talent in the world.” Vancouver was chosen because Microsoft believed it to be a place offering competitive advantage.

That is the organizational side, said Sorgen. On the individual level, “it’s all about incenting risk.” Steve Ballmer gave a keynote address in Canada on the topic of creating a culture of innovation. He told a baseball analogy. The best batters, he told his audience, hit about three times out of ten—“batting three hundred is the very best.”

“We know we’re not going to hit a home run with every investment. But if you don’t encourage your employees to swing for the fences, you will never hit a home run.”

“We know we’re not going to hit a home run with every investment. But if you don’t encourage your employees to swing for the fences, you will never hit a home run. You can’t create a fear and paralysis that you

don’t even step up to the plate. That is the culture that, at every level of the organization, he’s trying to drive into the people. As big as we get, we never lose that drive to be innovative.”

One last point: How to produce innovation at a community level? In Canada in 1950, 5% of the economy was services-based or knowledge-based. The rest was manufacturing and resources. Today, better than 55% of the economy is services-based or knowledge-based. That sector has moved from being at the periphery to being the driver.

The essential factor here is that work has to be able to go where it can be done best. Work can be done best where educational facilities and companies are close at hand. “That requires the right collaboration and partnerships and cities to support that,” said Sorgen. “We need people to want to come to our cities, to be successful, to drive innovation, to be partners to innovation and to build that

market place. That's why those '3P' partnerships—public, private partnerships—are so important in nurturing an entity.

Sorgen closed by saying that, when Microsoft opened that fifth development centre, the company had the option to put it anywhere in the world. Why Vancouver? Because economists ranked Vancouver as the most livable city for five years running. It was excellent for a pan-Pacific gateway, and when Microsoft looked at recruiting, "you have to know where the majority of computer science is coming from. Vancouver also had the arts, an eco-friendly environment; all the assets that Microsoft wanted. "As a result, we have gone from zero to 150 employees in Vancouver in just eight months." Some of those, Sorgen went on, would become entrepreneurs in Vancouver, some would establish networks with universities there, and that was already beginning to happen.

To close: There are not too many organizations where technology doesn't play an important role. Bill Gates, visiting Waterloo, stated that the innovations between 1995 to 2005 would pale beside the innovations between 2005 and 2015. Thinking about that, said Sorgen, "We are a new world of work, while facing an unprecedented demographic shift in Canada." CEOs have to consider where they source skilled new employees. "The next generation of employees—Gen Y—guess what, they're different from us." Gen Y grew up with technology. New employees from that generation will have to have better I.T. tools to allow people to collaborate, and employers will have to compete to provide those. All of those things are what employers, including Microsoft, will have to invest in to have that profound impact on a changing demographic in many of the mature markets around the world.

Finally, Microsoft strives to be a great Canadian company, not just a branch of an American corporation. That was the desire of employees, said Sorgen. "That's how we try to live for our employees; that's how we create opportunities; that's how we try to live in the community by being more than someone who just sells into different communities, but tries to be part of the fabric in the communities we serve. And we are confident of Canada's capability to be a very prosperous country, including being a partner to many of the entrepreneurs that are developing innovation today, and are going to scale up domestically and globally into the future."

Question: Betty Baskin from "the biotech sector" asked about sources of risk capital for funding innovation in biotech.

Sorgen: Replied that government has an important role, but did not believe that government should take the lead in the commercial sector. The sector should be open to funding wherever it originated. Example: Talking to venture capitalists, Sorgen had heard that buying IP in Canada and capitalizing it in other entities was often less expensive than investing in the commercialization of IP in Canada. Canadian cross-border tax policy might have played a part in such a situation. “We shouldn’t care where the venture capital comes from. We want to make sure the companies grow, here in Canada, and have access to scale in a global marketplace.” He added that Canadians have to do a better job “pipelining university research into the commercial sector.” The U.S. model is “quite good” and Canada has an opportunity to emulate that profitably.

Jeffrey Dale, with OCRI, in Ottawa, asked: “We’re seeing a proliferation of start-ups. The SME space has doubled in the past ten years. Are we missing out on productivity or is it the measurement systems, because we are seeing small companies going global right away: they may just be five people in four countries. Is our economy changing? How do we measure that?”

Sorgen: “Yes, our economy is changing, so have the economics of investing in Canada. Organizations have to determine their investment profile. We don’t have to go far back to where the cost of labour was relatively less expensive and the cost of capital was more expensive. The equation didn’t incent companies to invest heavily in productivity. Now go fast forward to today. We have high human capital costs, one of the highest dollars in 60 years, and the equation—the ROI economics—so the costs of investing in productivity are lower. So, I think we’re seeing some of that curve.” Sorgen then agreed that the Internet and available tools are helping companies to become larger, faster. Indeed, Canada as a small to midsize market itself tended to provoke manufacturers to grow quickly to become global. “That is a great opportunity to create competitive engines for us.”

Lance Greggain, of Fresco Microchip made an “observation.” Productivity is not related to absolute cost saving, but to the difference between cost and value-added of the final product. He pointed out that his company has offices in some of the most expensive real estate on earth, and highly-paid employees, but that his company makes a good profit. He added, regarding productivity, “It is strange what we measure.”

Sorgen agreed, stating that Job Number One at Microsoft is recruiting the best development talent, and building the environment to get them and to keep them happy there.

* * *

David MacDonald: “The thing that excites me about working with Microsoft is that every day one sees the competitive spirit and the innovation that lives within that company, and it’s driving things that might effect our economy. I want to thank you, Phil. Microsoft gives us a great opportunity to learn from an entrepreneurial perspective. Thank you.”

MacDonald continued, mentioning that many people in the room had gone or were considering going south to find more entrepreneurial pastures. He then introduced the third panel.

* * *

Panel 3: “Canadian Entrepreneurs Abroad”

Kevin Francis, *President and CEO, CenterBeam*

Mary K. Marsden, *Sales Leader, Relevance-X Product Line, Acxiom*

Paul Russo, *President & CEO, Silicon Optix, Inc.*

MODERATOR: **Mark Romoff**, *President and CEO, Ontario Centres of Excellence*

(For complete profiles, see Appendix 1.)

Mark Romoff told delegates that much that the panel had to say had no doubt already been said. That in turn indicated that talking about entrepreneurship and innovation was “non-linear, and very much an ecosystem, and we’ve heard that over and over.” That, he said, would no doubt be reflected again in the upcoming discussion.

Romoff described the role of the Ontario Centres of Excellence as a research to commercialization entity funded by the Government of Ontario. OCE funds the connection between companies and academic researchers, “to enable the development and commercialization which first and foremost must respond to market need.” Or, “great ideas being developed by researchers in hospitals, colleges and universities around Ontario that have obvious commercial potential. OCE is investing in those to get them successfully to the market.”

The three panelists, Romoff told delegates, were all born in Canada, but left “to earn fame and fortune.” Romoff reminded delegates that Ontario’s Minister for Research and Innovation, John Wilkinson, had spoken the previous evening about Ontario’s Innovation Agenda, meaning: developing and commercializing technology in Ontario; training and developing talent in Ontario, and keeping it in Ontario; and, trying to attract the best and the brightest from all around the world. “Every country in the world has this same agenda.”

Romoff asked the panelists to talk about themselves, and “what triggered their move to the United States.”

Mary K. Marsden: She sold her company Message Effect, an “electronic bill stuffer” that did cross-sell, and trans-sell in transactional emails, so that when an Internet seller sent out an Order Confirm, “we put the other products around it that a customer might be interested in buying. Axiom is the largest consumer household data company in the world. It receives insights into every American consumer household. It resells those insights to many of the leading brands.” “My customers are Chase, Citibank, Walmart, Sam’s Club, all the retailers. It’s really about how we help them sell more stuff.”

“I started my career with Nabu Networks, so I was privileged to have a failure first! One of the things we should talk about is failing fast and furiously.”

“One of the things we should talk about is failing fast and furiously.”

Marsden described her batting record as being about 50% “so I’m on the upside, because Message Effect was somewhat of a success.” She had worked for Zante Information, as its third employee. Zante sold to Stirling Information Services. Marsden then described a considerable list of companies she had worked for and helped to start. She is now at Axiom.

Marsden believes that there was a recipe for success. “I’m calling it Canada Version 3.0. We’re on Web 2.0. Well, let’s get ahead on this. We need one part policy, two parts people. We have a gender opportunity here. In the U.S. I spent a lot of energy helping female entrepreneurs, and there’s an opportunity here to use the full workforce.” Marsden believes that “we should spend more energy” getting more women into sciences and engineering and leveraging the whole workforce. She pointed out that she and other Canadian women expats are available to mentor young entrepreneurs—per the expat. database mentioned earlier. “Just don’t expect us to move back in order to have access to us!”

The other thing was that, “I miss bravado here. We focus on the U.S. which may not be the best measure for us, and we forget about the things we’re doing great... There is a great opportunity now to take the Canadian brand into the rest of the world.”

Kevin Francis: Francis was planning to move his family to Connecticut to take up one appointment when he got a call asking him to run CenterBeam. “So we moved to the other coast! To Silicon Valley, and here we are six years later.”

“Thank God there are guys who understand risk in Canada, but it's not the venture capitalists.”

Paul Russo: Russo grew up in Montreal, moving to Silicon Valley in the late '60s. Eventually he took a job in the former David Sarnoff lab. in Princeton. He recalled having the first prototype computer on the bench in 1979—“We had Bill Gates there for a whole day”—because they were going to use DOS. “This was a year before the IBM PC. So, of course, the RCA management came through, decided that they would never be able to sell it in stores like TV sets, and they killed the project. That was when I left RCA. This is an example of lack of vision, which is a key aspect. RCA had invented liquid crystal displays; they had invented CMOS (Complementary metal–oxide–semiconductor) and the first video game in the world, but they made nothing out of all their inventions.” After that, Russo joined G.E. before coming to Toronto for a company that went bankrupt. Then he started Genesis Microchip. “Thank God there are guys who understand risk in Canada,” he said, “but it’s not the venture capitalists.” In Russo’s case, his investors were gold miners, the principals at Hemlo Gold. They had drilled 76 holes before they found gold, he reported, so they understood risk! “I’ll bet that, even today, your flat-screen TV or PC has a Genesis chip in it.”

Russo then spun off technology out of Genesis, founding Silicon Optics, capitalized at over \$100 million. Russo stressed that going to Silicon Valley gives opportunities to meet people in the business. “You don’t get that here; people are so spread out. The odds of meeting someone you can talk business with are almost non-existent... You can’t go anywhere in the Valley without meeting someone you can talk to about business.” His conclusion: “If you have an ICT company, you’d better have a presence in Silicon Valley if you’re in a high tech. business.”

He added that Canadian companies need to get Silicon Valley-based board members. “So figure out who is Canada-connected out there, and seek them out.”

Mark Romoff: Repatriation was clearly a priority in Canada, particularly in Ontario, he said. Every effort must be made to bring Canadians home. His question to panel members: “Is there anything that might happen in Canada that might bring any one of you back?”

Mary K. Marsden: “If I got really sick!” She mentioned that even having health insurance in the States was inadequate. She rephrased the question: “Is my value higher staying in the world and working with Canadians, or is my value higher coming to Canada?” That seemed like a false measure. A better measure, Marsden suggested, was to have Canadians active all around the world with Canadian technology companies. “Maybe we need a different measure.”

Kevin Francis: “I would agree with that. Frankly, in this world of technology we need a virtual presence everywhere. We don’t have to physically be here.” Apart from extreme family emergencies, nothing would bring Francis back to Canada.

Mark Romoff: Whether they were Canadian or not, the point was that the country needed skilled people. Here was the call for immigrants again. “What factors do we have to create or change in order to attract people to come?”

Paul Russo: The problem is, “You come back to what?” People would return or come to an environment that is not conducive to entrepreneurial enterprise. There are too many negatives. Russo pointed out that Stanford and Harvard universities, those with the highest number of spin-offs, are private. They could “do their own thing.” That is not true of Canadian universities.

Kevin Francis: Opened the question of control of professional certifications—the usual “engineers and doctors driving taxis” scenario. “Certifications are not easily transferable. They’re not even transferable province to province, here!” The government and professional associations could do a lot more to make Canada an “easy place” to come to in terms of professional certifications.

Mary K. Marsden: “I agree with that. I always cringe when we talk about attracting engineering talent. We’ve been doing that since I was born. We have no marketing talent in this country.” Marsden spoke of inventors, and patent holders and “smart people” that no one knows about. The small domestic market doesn’t help. “Bell Canada can’t be the only buyer for every software or tech. company in Canada. We’ve got to get marketing talent into Canada; we’ve got to get the Canadian brand into the world.”

“I always cringe when we talk about attracting engineering talent. We’ve been doing that since I was born. We have no marketing talent in this country.”

Marsden pointed out that Canada has a great brand. She had lived in India and spent two years in Japan, where her clients had “wanted me to explain the Americans to them.” She pointed out that there is a trust and a work ethic in the Canadian brand that the country does nothing to promote. The Canadian domestic scene tends to be centred around cities and regions—Ottawa, Toronto, Waterloo, Vancouver—that Americans have never heard of. Canada needs a national “Macro” brand that people can grasp and relate to: “Let’s participate in a solid brand.”

“People don’t work for money. They work to win!” “We should talk about some of that. There’s an opportunity here to come and play. There’s an opportunity here to come, and to win. We don’t talk about that.”

“People don’t work for money. They work to win! There’s an opportunity here to come, and to win. We don’t talk about that.”

“I’m at this table with some of the smartest guys in the world,” Marsden added, “and I don’t know their names!”

Mark Romoff: “Mark!” [Laughter]

Mary K. Marsden: mentioned that she had worked in Silicon Valley, but that it is not the place for everything. To be in marketing services or media, Manhattan is the place. “To relate to Wall Street, it makes no sense to be in California.”

Mark Romoff: Asked panelists if entrepreneurs are born, not made.

Kevin Francis: An employee for many years, he never thought of himself as an entrepreneur. But now he thinks he is: “It took a long time to discover that!”

Paul Russo: Considered the question in a cultural framework, as a combination of “risk orientation and the environment.” Russo pointed out that in Japan it was hard to be a person who wanted to break all the rules. [“A loose nail gets hammered back”: *Japanese saying*.] On the other hand, if one had cultural supports for being an entrepreneur, “then it’s going to happen, and that’s part of the issue of the Valley. It attracts the people who have that mindset.”

Mary K. Marsden: Considered that Canada’s social safety net did not incite Canadians to be “hungry.” “You don’t do it because you have to. There’s an energy that comes from it.”

Kevin Francis: Pointed out that building a company is not “for the faint-hearted.” There is nothing like the thrill of watching young people grow while building an organization.

Mark Romoff: Asked panelists how to stimulate the passion in young people.

Kevin Francis: Speaking from anecdotal experience, thought this was a “tough” problem.

Paul Russo: Saw no problem, pointing out that graduate numbers are going up outside Canada. In Canada, he considered that enthusiasm depends on the environment, and gave a personal example based on his company’s activities.

Mary K. Marsden: Agreed that there are sufficient “global” graduates, but “we are getting thin in the pipeline.” She thought that math and science should not be taught “with a slide-rule,” but at the application layer: through business cases, and then down to the fundamentals.

Question from Michael Mann: Does Canada do a good job of celebrating or rewarding success as a result of taking risk?

Kevin Francis: “Short answer, no.” But he considered that with a “slight change” in categories to professional awards, for example, that it would be possible to celebrate success.

Paul Russo: Explained the difference between Canadian risk and Silicon Valley risk. “Canadian risk is a 12% or 15% return. Silicon Valley risk is when 3 or 4 out of four shots you take fail.” Failing in Canada was a negative. Failing in Silicon Valley suggested to investors that an entrepreneur had learned something and might not fail again. “It’s a different beast. It’s very hard to take risk in Canada because if you fail you’re in trouble. In the Valley you just pick yourself up and do it again.”

Mary K. Marsden: “We lack acknowledgment for success and for learning from failure.” “Aversion to risk shows up funny in our behaviour.”

“Canadian risk is a 12% or 15% return. Silicon Valley risk is when 3 or 4 out of four shots you take fail.”

Comment from the floor, by Lance Greggain: “Do you know that we tell our children that the technology sector is going to be outsourced to India and China, and they shouldn’t go there?” He suggested that we have to go into schools to tell them to stop saying that!

He made a second point: that it really is not a problem to hire engineers, but hiring marketers is tough. “Man, could I use marketing people! There just aren’t any. It’s really pathetic.”

David MacDonald thanked Mark Romoff and the panelists before introducing Antoine Paquin, the final speaker.

Antoine Paquin
General Partner, Rho Canada (See biog. in Appendix 1)
“A Vision for Canada’s Future”

The question is: “How do you attract Canadians back? I had a unique opportunity to address one of the items in the Canadian ecosystem that we must solve if we are even to have a shot in succeeding in this.” Paquin knew that Canada had systemic challenges in funding people and ultimately accepting the underwriting and the risk.

“People wanted me to comment on that as the path forward for Canada.” Paquin told delegates that the best approach is to observe what has been most successful in other systems, and that he knew the California situation best. He concluded that two factors differentiated Canada, and aspects of those differences could not be changed. On the other hand, there were aspects of differences that Canadians could work to change.

Paquin proposed a two-pronged approach: to discuss the straightforward aspects, factors that Canada could do nothing about. Then he would tackle challenges where change seemed to be possible.

“We will never change the fact that it is easier to start a start-up in Silicon Valley. You will not change degrees of resistance, especially in that unique culture.” Culture is central to the path forward for Canada. Silicon Valley has more knowledge, infrastructure and a cultural sense of what might work and would not work—“A pool of knowledge that we do not have here.” Silicon Valley has

attained critical mass re. the number of people who have seen the recipe work and would make it work again.

The Silicon Valley approach to risk is to understand it as early as possible and then apportion it in one of two parts: risk that people could do something about; and, risk that needed to be watched, but about which nothing could be done.

A major part of risk is the market, a natural feedback cycle in any venture cycle. It is the way to turn risk—i.e. an unknown, a set of assumptions—into a validated fact and hence de-risk the way one goes about building a start-up. Having the market right there and being able to network with people to validate the story is an incredible de-risking tool. “We don’t have that in Canada.” The networks in Silicon Valley are absolutely invaluable, Paquin said. “The ability to bounce things off people who have already done it is valuable.”

That brought up the next question: what are the differences that Canadians could do something about? Although the quality of information is less in Canada, because the country is not in the centre of gravity, “we can still do something about improving the quality of the information. It’s called ‘going to market.’” That is an integral cultural aspect that needs to be instilled in Canadian start-ups.

As a venture capitalist, Paquin knows that he could add only two things. First, the typical venture capitalist in California would have been a serial entrepreneur. Two, a Silicon Valley venture capitalist would typically have an enormous network to leverage that would give his or her start-ups a much higher quality of global information and a faster feedback cycle in validating the assumptions that were being made. That is the essential part of the culture that has been missing in Canada.

What does Canada have? On the one hand, a technical obsession with innovation, and on the other the “inability to validate very risky assumptions that are being made in the market by not being networked into the environment of the market.” The current funding infrastructure and Canada’s economy are largely responsible for that.

In Canada, typically one person owns 90% of the equity and is surrounded by “yes-men” and therefore incapable of evaluating risk.

That being the case, Paquin saw his own opportunity: “Which is why I joined a \$3-billion private equity outfit based out of New York and Palo Alto. You leverage that network on a very wide scale to pick the right culture, the right entrepreneurial teams and see how far that gets them.”

Paquin found another interesting aspect in Canada. The typical California start-up is usually set up by a team of several “very hungry people” who share in the risk and complement each other’s skills in de-risking the venture. In Canada, typically one person owns 90% of the equity and is surrounded by “yes-men” and therefore incapable of evaluating risk. That speaks to another key difference that Canadians could improve: attitude towards risk. Taking risk does not mean “blindly jumping,” Paquin told delegates,

“knowing there’s a lot you don’t know.”

Canadians could make a more

conscientious effort to understand risks,

making reasonable assumptions and validating feedback loops, albeit, as

mentioned before, doing so is not possible to the same degree as in Silicon Valley.

Taking risk does not mean “blindly jumping, knowing there’s a lot you don’t know.”

“The culture of systemically understanding and seeking to understand and validate risk in order to de-risk the equation is usually a team property.”

“The ‘fail early, fail often’ dictum that people use in the Valley is very true.” It is essential to fail fast. That approach leads to very efficient capital models, in theory, establishing capital at a higher level of certainty.

Here is the equivalent opportunity in Canada. We do have an attitude problem relative to risk, and we also have an attitude problem relative to failure. It is

essential to go after people who have the

“right DNA, the right attitude to building a

company, who have had

painful lessons and really understand where they have gone wrong.” Among such people one finds a concomitant opportunity to learn from experience and thereby achieve success.

It is essential to go after people who have the “right DNA, the right attitude to building a company, who have had painful lessons and really understand where they have gone wrong.”

Last but not least, said Paquin, Canada lacks critical mass. Set against that the fact that success breeds success. Canadians have to instill the culture of success, and a large part of that turns on “how success stories created and validated people who ultimately understand how they can benefit from risk-taking *versus* failure.” That has to take place “one company at a time,” until the process produces enough multi-millionaires to show the benefits of risk-taking and the value individuals and society as a whole derive from it.

Question from the floor: Bob Huybrechts, Founder and President of Innovation Initiative Cooperative, the world's first inventors' co-op, made the point that he had heard it all before, asking: Is there going to be a follow-up meeting to these problems, or "do we all go home and cry?"

Paquin reiterated that he had just given a very concrete approach for improving the situation in Canada. David MacDonald assured the questioner that there would be follow-up from the conference.

A questioner asked about roles for government.

Paquin retorted that sometimes the role of The People's Republic of California felt like socialist Canada—but that there are roles for government. During a recession in the reign of Louis XVI the king had summoned members of the business class to seek solutions. One of the "bourgeois" responded, "*Monsieur le roi, c'est très simple: laissez-nous faire.*" "Hence the expression *laissez-faire.*"

Doug Barber referred to getting fast feed-back, quoting Peter Drucker, who said, "In all of my life, I have never seen a market place a Purchase Order." Barber emphasized that Canadian businesses have to get down to the customer. "It's a big move for us, but it's one we have to make in Canada. We have to get the word 'customer' into our language. It's not present in our educational institutions. We all have to work at talking about customers, and about how quickly a venture has to get to customers. You can't tread water for ever."

Paquin: "I would agree. My only definition of 'market' is people who would buy my product. And I'm glad to take your P.O., any time." [Laughter]

Question from the floor: Is it true that venture capitalists are restricted in where geographically they will invest?

Paquin agreed that that is the case. "Proximity and relationship are keys to success in a venture. As a venture capitalist, I want to know that the people are worrying about the right things and on top of the situation, and I want more than anything else to bounce ideas off me. That takes trust; that takes proximity; that takes relationship."

David MacDonald summarized the deliberations of the meeting. He challenged delegates to consider what would grow entrepreneurs into titans, given the title of the conference. Why titans? In order to generate long-term wealth generation in

Canada's economy. He had had the opportunity to see job-creation at work supported by and in support of high-tech. industries. Job-creation was significant, and high in its impact.

MacDonald reminded delegates that John Wilkinson, Ontario's Minister of Research and Innovation, had spoken of a "bilingual crowd," how delegates were able to move fluently back and forth from technology to business. "That transcends everything we said today."

He then summarized the day's events, touching on Terry Matthews parting shot that "He didn't think that he had been negative enough!" He mentioned Kathy Anterasian's analysis of Stanford University and its role in generating the conditions and climate for growth.

MacDonald pointed out that the TSX is at an all-time high, but that the price of his company's stock is not. That shows that Canada's economy is more dependant on natural resources than ever before. "The risk of a rising dollar, the environment and the risk of us becoming a petrol-based economy is high right now."

"If we had the same attitude to our technology industry as we have about hockey, we wouldn't be having this meeting today."

He spoke about rebuilding Canada's approach to its technology sector in the same way that the country rebuilt its hockey culture after beating the Russians in 1972. "That's the difference between our technology industry and a simple little sport like hockey. If we had the same attitude to our technology industry as we have about hockey, we wouldn't be having this meeting today."

As the Chairman of ITAC, "I will build forward on this. No question!" "It's in ourselves," he said, "and I personally believe there's nothing else but our personal decisions to change our culture and our brand and move forward."

* * *

MacDonald then committed to "further conversation" and invited others "to join our deliberations. I will be communicating with you."

He thanked all participants, and called upon Ron Freedman, Co-publisher of RESEARCH MONEY, to bring the conference to its close

* * *

Ron Freedman
Co-publisher of RESEARCH MONEY

Ron Freedman: “The theme of technology culture has worked its way through our theme today.” Freedman told the story of being in the office of Canadian astronaut Ken Money, and noticing a letter from a child, Lisa, on Money’s bulletin board. In summary, Freedman told delegates, he concluded that Lisa wanted to go into aerospace engineering, but because the child was intelligent and verbal, her parents were pushing her into law. “That is what we’re up against; that is what the culture of technology is up against.”

Lisa wanted to go into aerospace engineering, but because the child was intelligent and verbal, her parents were pushing her into law. “That is what we’re up against; that is what the culture of technology is up against.”

Freedman suggested that cloning the delegates would solve Canada’s technology problems. “You are the people doing it; and you are the ones who are mentoring other people. So thank you.”

Freedman thanked ITAC, Lynda Leonard of ITAC, David MacDonald, the Board of ITAC, and their colleagues. “I want to acknowledge our partners in this enterprise, including SoftChoice, SAP, the Ontario Centres of Excellence, for stalwart support—Thank you, Mark [Romoff] and your team, Intuit Canada, the Minister of Research and Innovation, the *National Post*, SpencerStuart, Research in Motion, NSERC (the National Science and Engineering Research Council), Microsoft Canada, York Biotech and OCRI.”

Freedman acknowledged Impact Group staffers Janet Sandor and Catharine Spence, and his partner and co-publisher Jeff Crelinsten “for pulling together an absolutely terrific panel of speakers,” aided by the ITAC network; and I want to acknowledge Mark Henderson, our editor, “who twenty times a year through rain and snow puts out a terrific newsletter that brings the country together in terms of science and technology policy.

Finally, Freedman thanked everybody for attending.

Appendix

Speaker Biographies

Jeffrey Crelinsten, Co-Publisher, Research Money

Dr. Jeffrey Crelinsten is publisher of RESEARCH Money and President of The Impact Group, a private consulting firm specializing in S&T policy, education and communications. He is also President of Research Infosource Inc., a business intelligence firm that publishes *Canada's Top 100 Corporate R&D Spenders* and *Canada's Top 50 Research Universities*. He recently completed a series of studies in collaboration with Doug Barber on R&D-intensive firms in Canada, and is currently undertaking a qualitative study of why firms disappear either through business failure or early acquisition. Jeffrey also specializes in S&T communications, outreach and education. He recently completed two studies on the private sector and the federal government roles in promoting a knowledge culture in Canada. He manages an educational outreach program (Engineer-in-Residence) aimed at stimulating interest in S&T studies and careers among youth in elementary and secondary schools. He is a member of ITAC's Talent Initiative, a founding Director of the Science and Technology Awareness Network (STAN), a past President of the Canadian Science Writers Association and was a member of the Board of the Youth Science Foundation of Canada for six years. Jeffrey has a B.Sc. in physics, a M.Sc. in astronomy and a Ph.D. in history of science and science policy.

David MacDonald, Chair, ITAC, President & CEO, Softchoice

As the President and CEO of Softchoice Corporation, Mr. David MacDonald is responsible for all corporate and operational initiatives, including the development and execution of the Company's strategic plan. Mr. MacDonald joined Softchoice Corporation in 2001 as Senior VP and Chief Operating Officer and has been instrumental in building the Softchoice Team, corporate brand and positioning the Company as an industry growth leader in the United States. Prior to joining Softchoice, Mr. MacDonald held progressively senior global roles in sales, marketing, engineering, world-wide product development and business strategy over an 18 year career at Xerox Corporation. His last assignment was Vice President of Xerox' North American Outsourcing Services in Rochester, NY. Mr. MacDonald sits on the HP US SMB Advisory Council and in 2007 Mr. MacDonald was appointed Chairman of the Board of the Information Technology Association of Canada (ITAC). Mr. MacDonald graduated from the University of Alberta with a degree in Commerce.

Ron Freedman, Co-Publisher, Research Money

Ron Freedman is co-founder of *THE IMPACT GROUP* a consulting firm which specializes in science and technology policy, education, marketing and communications. He is Publisher of RESEARCH MONEY, Canada's leading science policy newsletter, and Canada Research Horizons, the magazine of federal S&T. Born in Toronto, he has worked in the fields of science and technology policy and communications for over 25 years, in the public and private sectors.

Ron's graduate education was in the fields of environmental studies, adult education and science policy. He is also CEO of Research Infosource Inc., a business intelligence firm which publishes *Canada's Top 50 Research Universities List and Report* and *Canada's Top 100 R&D Companies List and Report*. He chaired the selection committee for the annual Federal Partners in Technology Transfer (FPTT) awards for three years. At the present time he is working with Statistics Canada to produce *The Innovation Atlas of Canada*, which is scheduled for release later this year.

Terry Matthews, Chairman, Mitel

Making it Happen

Dr. Terence Matthews is Chairman of Wesley Clover and also serves as Chairman of Mitel and March Networks, two companies active in developing Internet Protocol (IP) systems for enterprise applications. Prior to joining March Networks, he served as CEO and Chairman of Newbridge Networks Corporation, a company he founded in 1986. Providing leadership and vision for 14 years, Terry helped Newbridge become a leader in the worldwide data networking industry. When France-based Alcatel acquired Newbridge in May 2000, the company employed more than 6,500 employees and recorded FY 1999 revenue of \$1.8 billion. In 1972, before launching Newbridge, Terry co-founded Mitel Corporation. Under his leadership, Mitel grew quickly to become a world leader in the design and manufacture of enterprise voice systems and products. In 1985, British Telecom bought controlling interest in Mitel. In 2001, Terry purchased the worldwide Communications Systems division of Mitel, and the Mitel name, and is now owner and non-executive Chairman of Mitel Corporation, a company focused on providing next generation IP telephony solutions for broadband networks. Terry also serves on the board of directors for a number of high technology companies and is Chairman or serves on the Board of Directors of Bridgewater Systems, Solace Systems, DragonWave and CounterPath Solutions. In addition, Terry holds an honors degree in electronics from the University of Wales, Swansea and is a Fellow of the Institute of Electrical Engineers and of the Royal Academy of Engineering. He has been awarded honorary doctorates by several universities, including the University of Wales, Glamorgan and Swansea, and Carleton University in Ottawa. In 1994, he was appointed an Officer of the Order of the British Empire, and in the 2001 Queen's Birthday Honors, he was awarded a Knighthood.

Lisa Crossley, President & CEO, Nysa Membrane Technologies

Lisa Crossley has extensive experience in the field of biopharmaceutical manufacturing and a proven track record in new product development, start-up management and raising venture capital. Dr. Crossley's prior work experience includes extensive consulting for several of North America's largest Life Sciences Venture Capital companies; directing the global manufacturing efforts for two therapeutic lead candidates for a publicly-traded biopharmaceutical company (Dyax Corp, Cambridge, MA); and a brief stint as a faculty member in the Department of Chemical Engineering at McMaster University. She currently sits on the Board of Directors for

Viron Inc., a venture-backed biopharmaceutical company based in London, Ontario, and is the Co-chair and Co-founder of Women in Science & Technology Businesses, a Toronto-area not-for-profit organization dedicated to furthering the careers of women in the technology industry. Dr. Crossley holds a BSc in Anatomy & Cell Biology from McGill University and a BScE and PhD in Chemical Engineering from Queen's University. She is a licensed Professional Engineer in the province of Ontario.

Jen Evans, President, Sequentia

Jen Evans is a Toronto-based entrepreneur and writer and the president of Sequentia Communications, a customer communications agency ranked as Canada's 24th (2005) and 27th (2004) fastest growing emerging company by PROFIT magazine. She is the Co-chair of the White Ribbon Campaign, a board member of Computers for Schools Ontario and Freeform Solutions, and sits on RedFlagDeals and Radiant Core's advisory boards. Jen writes a column on business and technology for PCworld.ca and was a contributor to the Globe and Mail's online tech edition for seven years. Jen has been talking tech on Business News Network (formerly Report on Business Television) since 1999, and appears in the Technology in the Workplace segment on Workopolis.tv. Jen wrote her first email newsletter in 1998, is a member of the Internet Oldtimers and is @nejsnave on twitter.

Wayne Karpoff, Co-founder & CTO, YottaYotta Inc.

Wayne Karpoff is currently the co-founder and Chief Technology Officer at YottaYotta Inc., a leader in providing resilient, high-performance global data sharing and Fully Active Continuity of Operations (COOP). YottaYottas customers include some of the most demanding data users in the world. Prior to YottaYotta, Wayne was President of Myrias Computer Technologies Inc., a developer of parallel supercomputing technology. Prior to Myrias, Wayne worked and taught at the University of Alberta. Wayne has served on the board and chaired a number of ICT industry associations. Wayne holds a B.Sc. and M.Sc. in Computing Science from the University of Alberta and holds several pending and awarded patents.

MODERATOR: Robert Courteau, President & Managing Director, SAP Canada

Mr. Courteau is responsible for all of SAP's business activities in Canada. Prior to joining SAP Canada in January 2004, Mr. Courteau served as the Executive Vice President responsible for Canadian sales and consulting services for EDS Corporation. During more than 20 years in the technology industry in Canada, the U.S. and internationally, he has held many executive and senior management positions with a variety of multinational corporations and industry pioneers. This experience included his senior management role at Xerox Corporation, where he served as the North American Divisional Vice President and General Manager, based in Rochester, New York. Mr. Courteau currently sits on the Board of Governors for Junior Achievement (JA). He is Vice Chair of the Information Technology Association of Canada (ITAC) and sits on the Executive Committee and the ITAC Board of Directors. He is also a member of the Advisory

Board of the Directors College at McMaster University's DeGroote School of Business and a member of Volunteer Canada's Corporate Council on Volunteering. Raised in Montreal, Mr. Courteau lived in Calgary before graduating from Concordia University with a Bachelor of Commerce degree.

Keynote

Cathy Anterasian, Senior Director, Spencer Stuart

Lessons from Silicon Valley

Cathy Anterasian leads Executive Assessment Services for Spencer Stuart in North and South America. She is also a member of the firm's Technology, Communications & Media and Consumer Goods & Services practices. Cathy is active in the firm's work in software, mobile computing, media technology and Internet services. Her search work and prior experience counseling senior executives on strategy and leadership have gained her expertise across many functional areas, including chief executive officer/general management, marketing, sales, business development and finance. Her work spans senior-level executive search, board of director recruitments, executive assessment and other organizational advisory roles. Cathy also makes valued contributions in the training and development of Spencer Stuart consultants. She is a two-time winner of the firm's Lou Rieger Quality Award. Prior to launching her career in executive search, Cathy was a management consultant with McKinsey Company, where she specialized in serving consumer businesses in the areas of strategy development, marketing, organizational effectiveness and operational excellence. Previously, she was a professor of marketing at the University of Southern California and a systems engineer with IBM. Cathy holds a Ph.D. in marketing from the Stanford Graduate School of Business, and a B.A., Phi Beta Kappa, in economics from U.C.L.A.

Kevin Francis, President & CEO, CenterBeam

Canada-Scale or Surrender?

A. Kevin Francis joined CenterBeam as President and Chief Executive Officer in 2002. Francis implemented a total quality process throughout the company that has resulted in increasing customer satisfaction to 95%. He scaled CenterBeam's operations, opening a technology operations center in Saint John, New Brunswick, to serve CenterBeam's quickly growing roster of customers. Mr. Francis re-invented the industry-standard terms of the multi-year outsourcing contract to one simple, month-to-month agreement: Total Satisfaction Guarantee. Prior to CenterBeam, Mr. Francis was President, Chief Executive Officer and Director of Accelio Corporation. Before joining Accelio, Francis held a variety of positions with Xerox including chairman, president and CEO of Xerox Canada, a \$1.6B (Canadian) organization. He joined Xerox Canada in 1972 as a sales representative and held leadership positions in marketing, customer service, process re-engineering, strategic planning, administration, information systems, general management, customer satisfaction and quality. Mr. Francis has been involved in a number of organizations and demonstrates a long standing commitment to sharing his time

and talent. His current appointments include serving on the Board of Directors of SoftChoice Corporation in Toronto as well as a member of the CEO Council for the Entrepreneurs' Foundation in San Jose, California. Recently, Kevin Francis was named the Best Turnaround Executive by The 2006 International Business Awards. In 2005 Mr. Francis was named Industry Leader of the Year at New Brunswick, Canada's Knowledge Industry Recognition and Achievement (KIRA) gala. Kevin Francis was born in Sydney, Nova Scotia, Canada. He earned a B.Sc. from St. Francis Xavier University and a B.Ed from St. Mary's University. In 1999, Mr. Francis received an Honorary Doctorate in Commerce from St. Mary's University in Halifax. In 2008, he received an Honorary Doctor of Laws degree (LLD) from Saint Francis Xavier University.

H. Douglas Barber, Co-founder & former CEO, Genum Corporation.

H. Douglas Barber, born on a Saskatchewan farm, attended the University of Saskatchewan obtaining his B.Sc. with Great Distinction, winning the Governor General's Gold Medal, and earning a M.Sc. in Electrical Engineering. As an Athlone Fellow and NATO Scholar he received his Ph.D. from Imperial College, University of London in 1965. Dr. Barber began employment in 1965 in a new microelectronics initiative at Canadian Westinghouse, Hamilton, Ontario, Canada. In 1973 he was one of the founders of Linear Technology Inc., now known as Genum Corporation, which designs, manufactures and markets microcircuits. Genum has grown profitably at 20% per year and now employs about 650 people. Dr. Barber was President and CEO when he retired in 2000. He was a part-time Engineering Physics Professor at McMaster University from 1968 to 1994. In 2001 he was appointed Distinguished Professor-in-Residence. Dr. Barber authored 29 refereed papers and several patents. He speaks frequently on business, technology, learning, innovation and economic development. Dr. Barber's honors include the APEO Engineering Medal, the University of Saskatchewan C.J. Mackenzie Distinguished Graduate Award, the Professional Engineers of Ontario Gold Medal, and Engineer of the Year Award of the Hamilton Engineering Institute. In 2006 Dr. Barber was made an Officer of the Order of Canada

Peter Charbonneau, General Partner, Skypoint Capital

Peter Charbonneau is a Principal of Fund II and joined Skypoint in 2001. Mr. Charbonneau was previously a senior executive with Newbridge where he played a key role in one of the technology industry's extraordinary success stories. He joined Newbridge as the Chief Financial Officer in its early days as a start-up and was subsequently promoted to the positions of Executive Vice President, President and Chief Operating Officer and Vice Chairman over the next 13 years. He was a Member of the Newbridge Board of Directors from 1996 until 2000. As the CFO of Newbridge, he led the company's successful cross-border IPO in 1989 and its second cross-border offering three years later. Mr. Charbonneau is a member of the Institute of Chartered Accountants of Ontario, and in June 2003 he was elected by the Council as a Fellow of the Institute in recognition of outstanding career achievements and leadership contributions to

the community and to the profession. Mr. Charbonneau holds a Master of Business Administration from The University of Western Ontario and a Bachelor of Science from the University of Ottawa.

Jeff Hauswirth, Managing Director Canada, Spencer Stuart

Jeff Hauswirth is a member of Spencer Stuart's global CEO and Technology, Communications and Media (TCM) Practices. Jeff has led important projects in all of the TCM sectors including telecommunications, computing technology, software, and IT. He also founded Spencer Stuart's international Bridge Project, which advances the firm's global reach and coordinates its international activities on behalf of clients. Jeff is also the managing partner of the Montreal, Toronto and Calgary offices as well as a member of the firm's global Board of Directors. Before turning his focus to executive search in 1994, He demonstrated an entrepreneurial spirit, co-founding a unique valet laundry service business and an electronic B2B real estate-based offering, provided to select clientele. Jeff sits on the Board of Upopolis, which is a private social utility that connects young patients in hospitals with community, friends and family around them. A graduate of the Canadian Junior College in Lausanne, Switzerland, Jeff holds a B.A. in Economics from the University of Guelph.

MODERATOR: Neil Wolff, Chair of Management, Entrepreneurship and Strategy, School of Business Management, Ryerson University

Neil Wolff is the Chair of Entrepreneurship and Strategy at Ted Rogers School of Management, Ryerson University. Neil earned an MBA from Clarkson University and a BComm from Ryerson University. He is currently working on completing his PhD at Open University. Neil has been involved in many business start-ups and consulting endeavors. His research interests feature a strategic framework to acquire resources, opportunity identification in business development and self-employment. He actively mentors young nascent entrepreneurs. Neil lectures extensively on Strategic Entrepreneurship to many organizations. Neil is also the Chair of the Advisory Committee on Academic Computing at Ryerson and a faculty advisor for SIFE Ryerson. Neil was recently appointed the Associate Dean of the Ted Rogers School of Business Management. His appointment will commence July 1, 2008.

Luncheon Keynote

Phil Sorgen, President, Microsoft Canada

Innovation & Productivity: Competing in the 21st Century Marketplace

Phil Sorgen joined Microsoft Canada as President in January 2006 after a 10 year career with Microsoft Corp. in the United States. Mr. Sorgen is responsible for all elements of Microsoft Canada's business and for deepening the company's commitment to this country. He is driven by

a passion for innovation and the positive impact that technology can have on people's lives, on organizations and on Canada's competitiveness. Mr. Sorgen is responsible for Microsoft Canada's annual CAN>WIN summit on innovation, productivity and Canada's global competitiveness. Mr. Sorgen also leads Microsoft Canada's Citizenship efforts, which are focused in two areas: First, on helping ensure that no one is left behind in the digital revolution through education programs like Partners in Learning and Unlimited Potential and through creating specific technology solutions for those who do not currently have access, such as children in hospital or the visually impaired. Second, Mr. Sorgen is the driver behind Microsoft Canada's programs to help mitigate the unintended negative consequences of technology, such as online child exploitation. Before joining Microsoft Canada, Mr. Sorgen was General Manager of Microsoft Corp.'s US Enterprise Sales Operations Team where he was responsible for managing the alignment, synergy, and integration of the Enterprise Sales, Enterprise Partner, Inside Sales, Commercial Licensing and Industry organizations. Prior to his role here in Canada, he was also a member of the US Leadership Team responsible for sales, marketing, services and industry strategy across the US Enterprise Business and was the General Manager for the Gulf Coast District. Mr. Sorgen has a BA and MBA from the University of North Texas.

Kevin Francis, President & CEO, CenterBeam

Kevin Francis joined CenterBeam as President and Chief Executive Officer in 2002. Francis implemented a total quality process throughout the company that has resulted in increasing customer satisfaction to 95%. He scaled CenterBeam's operations, opening a technology operations center in Saint John, New Brunswick, to serve CenterBeam's quickly growing roster of customers. Mr. Francis re-invented the industry-standard terms of the multi-year outsourcing contract to one simple, month-to-month agreement: Total Satisfaction Guarantee. Prior to CenterBeam, Mr. Francis was President, Chief Executive Officer and Director of Accelio Corporation. Before joining Accelio, Francis held a variety of positions with Xerox including chairman, president and CEO of Xerox Canada, a \$1.6B (Canadian) organization. He joined Xerox Canada in 1972 as a sales representative and held leadership positions in marketing, customer service, process re-engineering, strategic planning, administration, information systems, general management, customer satisfaction and quality. Mr. Francis has been involved in a number of organizations and demonstrates a long standing commitment to sharing his time and talent. His current appointments include serving on the Board of Directors of SoftChoice Corporation in Toronto as well as a member of the CEO Council for the Entrepreneurs' Foundation in San Jose, California. Recently, Kevin Francis was named the Best Turnaround Executive by The 2006 International Business Awards. In 2005 Mr. Francis was named Industry Leader of the Year at New Brunswick, Canada's Knowledge Industry Recognition and Achievement (KIRA) gala. Kevin Francis was born in Sydney, Nova Scotia, Canada. He earned a B.Sc. from St. Francis Xavier University and a B.Ed from St. Mary's University. In 1999, Mr. Francis received an Honorary Doctorate in Commerce from St. Mary's University in Halifax. In

2008, he received an Honorary Doctor of Laws degree (LLD) from Saint Francis Xavier University.

Mary K. Marsden, Sales Leader, Relevance-X Product Line, Acxiom

Mary K. Marsden serves as Acxiom's Sales Leader for the Relevance-X Product Line. In this capacity, she is responsible for the global sales of products and solutions focused on delivering superior results for interactive marketers through intelligent and timely use of demographics, life stage and psychographic marketing data. Acxiom is a Global Interactive Marketing Services providers that works with the Global 2000 companies. Mary K. brought over 23 years of strategic global experience and hands-on skills to the company in 2004 when Acxiom acquired her company, Message Effect. As CEO of Message Effect, Mary K. was responsible for all operations of the business, including securing investments, acquiring technology assets, developing strategic partnerships and growing the client base. Prior to Message Effect, Mary K. was founder and principal of Touchpoint Strategies and The Mar.Com Group, both in Austin, Texas, and senior executive at Novell, Inc during its rapid growth from 1986-1994. Mary K. has done business and lived in Canada, the US, Europe and Japan. Mary K. was a biology major at the University of Ottawa with a computer science minor in the bilingual program. Mary K. sits on the board of several companies and is an investor in The Hunger Project a non-profit committed to ending hunger in the world by empowering women. She is fluent in English and French, has 5 years of on-air television experience and is a regular speaker at conferences. She currently resides in Manhattan.

Paul Russo, President & CEO, Silicon Optix, Inc.

Founded in 2000, Silicon Optix is a venture funded fabless IC company focused on the highest quality video processing via its powerful (trillion ops/sec) platform running HQV (Hollywood Quality Video) algorithms. In 2007, the Company's Teranex unit received an Emmy award for contributions to the television industry. Prior to Silicon Optix, Dr. Russo was the founder, Chairman and CEO of Genesis Microchip (recently acquired by ST Micro), General Manager of GE's Microelectronics Center, Senior Manager in GE's Industrial Electronics Group and Head, Microsystems Research at RCA's David Sarnoff Research Center. Dr. Russo received his B. Eng. from McGill University and his MSc and PhD in EECS from UC Berkeley. He holds six U.S. patents, is a Fellow of the IEEE and has received numerous RCA and industry awards, including the IEEE Centennial Medal and the 2006 Tech Pioneer Award from the World Economic Forum. In addition to Silicon Optix, he currently serves on the boards of start-ups in semiconductor materials, nanotechnology, wireless (60 GHz) and web 2.0 markets.

MODERATOR: Mark Romoff, President & CEO, Ontario Centres of Excellence

Mark Romoff joined the Ontario Centres of Excellence (OCE) Inc. as President and CEO in fall 2004. He is a career foreign service professional with a strong track record for advancing the competitive interests and opportunities for Canadian companies internationally. Mr. Romoff's

Foreign Service career started with assignments in Malaysia, Mexico and Nigeria. From 1992 to 1996, he was Minister-Counsellor in the Canadian Embassy in Tokyo with responsibility for Canada's trade with Japan. In 1996, he became Consul General in Buffalo, New York, where he helped improve trading relationships and established the basic policies governing cross-border trade between U.S. and Canada. In 2002 Mr. Romoff was seconded to the federal Industry department, as Executive Director of the Ontario Region. Among other things, he was responsible for building the export readiness of Ontario companies and for encouraging foreign investment in Ontario. Mr. Romoff has a B.A. in Mathematics from McGill University, and a Master's in Applied Science from the University of Waterloo.

Closing Keynote

Antoine Paquin, General Partner, Rho Canada

A Vision for Canada's Future

Antoine has 12 years of experience as an entrepreneur in the field of communications systems and semiconductors. He was most recently President and CEO of Axiom Microdevices, a startup, venture-backed company based in Orange County, CA with breakthrough power RF semiconductor technology that was spun-off from the California Institute of Technology (CalTech). Prior to joining Axiom Microdevices, from 2001 to 2002, Antoine was the CEO of BitFlash, a publishing platform vendor for small integrated devices such as cellular phones and PDAs. Previously, from 1998 to 2000, Antoine was the CEO of Philsar Semiconductor, a wireless IC venture-backed startup that specialized in wireless integrated ICs (synthesizers, transceivers). From 1996 to 1997, Antoine was the CEO of Skystone Systems, a fiber-optic data transmission IC startup that was co-founded by Antoine and spun-off from Aurigor. During his tenure at Skystone, Antoine led the original venture funding, recruited the management team, and generated key customer wins until the company was acquired by its largest customer, Cisco Systems in 1997 for approximately CDN\$120 million in cash and stock. Prior to joining Skystone Systems, from 1993 to 1995, Antoine was the cofounder and CEO of Aurigor Engineering, an engineering consultancy that custom designed entire communications systems and sub-systems (ICs and Software) for fiber optics systems. Antoine holds a few awards from his entrepreneurial career, including Entrepreneur of the Year (1997) for the Canadian Capital, recipient of the National Research Council's Innovator of the Year Award, and recipient of the IWAY awards for exceptional entrepreneurial achievements (Canada's Information Highway Initiative). He also serves on the board of GMP Capital, one of Canada's most successful investment banks for small- to mid-size equity companies (TSE: GMP) and remains an active angel investor in a number of technology companies. He holds a Computer Systems Engineering degree from Carleton University and a Masters in Project Management from the Université du Québec.

Mark Henderson, Managing Editor, Research Money

Mark Henderson is the only journalist in Canada who reports on R&D policy and funding issues on a full-time basis. As Editor of RESEARCH MONEY since 1994, he has written extensively on Canadian R&D and science and technology, attracting a large and influential national readership.