Standing Committee on Industry, Science and Technology

EVIDENCE

Tuesday, June 6, 2017

Chair

Mr. Dan Ruimy
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The Chair (Mr. Dan Ruimy (Pitt Meadows—Maple Ridge, Lib.)): Welcome back, everybody, for another exciting journey into the Standing Committee on Industry, Science and Technology. This is meeting 65, and we are continuing our study of intellectual property and tech transfer.

Today we have with us by video conference from the Association of University Technology Managers, Stephen Susalka, chief executive officer. Welcome.

From Innovate Calgary, we have Kenneth Porter, vice-president, intellectual property management. Welcome.

As an individual, we have James Hinton, intellectual property lawyer, Bereskin & Parr LLP, adviser, Council of Canadian Innovators.

We're going to start off with Mr. Susalka. You have seven minutes.

Mr. Stephen Susalka (Chief Executive Officer, Association of University Technology Managers): Good morning.

Thank you to the members of this committee for the invitation to speak today. I wish I could be with you in person.

My name is Steve Susalka, and I'm the chief executive officer of the Association of University Technology Managers, also known as AUTM.

AUTM is a non-profit organization composed of over 3,200 individuals, including some 200 Canadian members who represent more than 300 academic and research institutions worldwide and focus on supporting inventions as they move from the lab to the marketplace.

What exactly is academic technology transfer? That term can be defined in five words: research, invention, evaluation, protection, and commercialization. Using data from AUTM's annual licensing activity surveys, I will compare the technology transfer efforts of Canada and the U.S.

First, on research, academic technology transfer is fully reliant on the money that is spent on research at universities, colleges, and hospitals. According to AUTM's 2015 surveys, the 36 Canadian institutions reported approximately $6.1 billion U.S. in research expenditures. In comparison, the U.S. reported approximately $66.6 billion U.S. Because the U.S. has approximately 11 times the amount of research expenditures that Canada has, I'll divide the U.S. numbers going forward by that multiple—about 11—in order to make a fair comparison.

The next step is invention. Technology transfer activities begin when a scientist, student, or staff person at an academic institution develops an idea for a new invention. Canadian institutions reported 1,813 invention disclosures in 2015. That correlates to approximately $3.4 million U.S. per invention disclosure. For perspective, data from U.S. institutions demonstrate that Canadian institutions spend about 28% more on research expenditures per invention disclosure produced.

The third step is evaluation. Canadian technology transfer offices receive hundreds of these invention disclosures each year; however, not all of them are commercialized. Why? Some inventions might not be protectable enough, and others might not address a substantial market need. Technology transfer offices assess the viability of the various inventions they receive and invest in as many of them as they can afford.

Looking at the number of patent applications filed is a good proxy for the number of invention disclosures actually pursued, recognizing that there are a number of caveats. If you look at the number of new patent applications by research expenditures, you will see that about $5.9 million U.S. in Canada results in one new patent application. Compared to the U.S. rate, Canadian institutions spend about 42% more on research expenditures per new patent application.

The fourth step is protection. The protection of the inventions, generally through patent and/or copyright protection, is a critical piece of the technology transfer process. Without it a company will not take the risk of investing the substantial resources needed to develop an early-stage idea into a product. As this committee no doubt recognizes, a strong and reliable patent system is absolutely crucial for a flourishing technology transfer ecosystem.

The final step is commercialization. Of course, the ultimate goal of academic technology transfer is to create new products and services to help Canadians and serve the public good. Since academic institutions do not sell products, the institution's intellectual property is instead licensed to companies that develop and market the institution's invention.

Canadian institutions reported 700 option and licence agreements in 2015, demonstrating that Canada was just about as efficient in optioning and licensing intellectual property compared to the U.S. when normalizing to research expenditures.
Another result of effective Canadian academic technology transfer practices is the generation of new start-up companies based on academic intellectual property. In 2015, Canadian institutions reported 90 start-up companies formed, again demonstrating that Canada was just about as efficient at forming start-up companies as the U.S., when normalized by research expenditures.

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Interestingly, the equivalent option and licence agreement rates do not result in similar licensing revenue when compared to the U.S. In fact, Canadian institutions accounted for only $62 million U.S. in licensing revenue in 2015, which worked out to only about 27% of the normalized U.S. licensing revenue figure. Although licensing revenue numbers are often swamped by a handful of home runs, this difference in licensing revenue is dramatic.

Three points can be made with this data.

First, Canadian technology transfer is about 28% to 42% less efficient in generating invention disclosures in patent applications. Why? One reason could be inventor-owned IP policies are lowering the number of reported inventions and patent applications. They are being created, but just not counted. Also, there might not be as much of an emphasis on intellectual property disclosure and protections as in the U.S. through the Bayh-Dole Act that requires federally funded inventions to be disclosed.

My second point is that Canadian technology transfer is just as efficient in agreements executed and start-up companies formed, even though they start with fewer invention disclosures and patent applications. How? First, this statistic is impressive and reflects well on the quality of the technology transfer professionals in Canada as they are doing more with less. Second, successful Canadian start-up accelerators are likely contributing to the significant number of start-up companies. Third, a focus on IT-based technologies by some institutions are also likely to contribute to more start-ups than expected, due to lower overhead.

My final point is that Canadian technology transfer only produces about 27% of licensing revenue in comparison to the U.S. Why? First, again the inventor-owned intellectual property policy means some inventions, and perhaps some of the higher-value inventions, are not being counted here. Second, downstream funding sources, for example, for institutional prototyping funds or governmental commercialization funds, are perhaps not as prevalent as in the U.S.

I look forward to continuing the discussion as we find ways to further increase the commercialization of the diverse and impressive research being pursued in Canadian institutions.

Thank you.

The Chair: Thank you very much.

We’re going to move to Mr. Porter from Innovate Calgary.

Mr. Kenneth Porter (Vice-President, Intellectual Property Management, Innovate Calgary): Good morning.

I am Ken Porter, vice-president for intellectual property management at Innovate Calgary. Innovate Calgary is a non-profit corporation that provides economic development support for entrepreneurs and enterprises in Alberta, and technology transfer services for the University of Calgary.

I am also a board member of the Association of University Technology Managers and immediate past chair of the AUTM Canadian subcommittee, through which hundreds of Canadian technology transfer professionals organize networking, training, and advocacy activities. Of note, directors from across Canada will be meeting in Montreal on June 25, and I invite all committee members to join us there.

The mission of an academic research enterprise is to create and disseminate knowledge. Our mission as technology transfer professionals is to support knowledge creation, for example, by facilitating industry-academia research collaborations, and to support knowledge dissemination via commercialization.

Knowledge and technology created over the course of academic research can be transferred to the public through a variety of mechanisms: publications, meetings and presentations, student employment, consulting, industry-sponsored research, licensing, and start-ups.

Relevant to our discussion today, researcher incentives for disclosure and participation in technology transfer and commercialization are unique to each individual. They may include a desire for a positive impact on society, opportunities for industry partnerships, experiential learning and employment opportunities for students, a sense of personal fulfillment, recognition, and financial rewards.

Conversely, there is a variety of reasons why researchers may not choose to disclose IP. They may consider it a distraction, an impediment to scholarship, a source of financial or personal risk, irrelevant to their academic careers, or unlikely to yield any useful outcomes. They may be unaware of the benefits of disclosing IP, or of institutional policy obligations to do so. It also takes time and effort.

Government, academic institutions, and technology transfer professionals can support and encourage researcher participation with time, such as entrepreneurial leave and teaching load reductions, recognition for patent and commercialization activities, funds for research and partnerships, and education.
Universities rely on technology transfer professionals to provide education through outreach, presentations, and workshops. However, Canadian professionals are often stretched to provide essential services, such as patent prosecution, marketing, licensing, and startup creation, thereby reducing opportunities for outreach. From 1995 until 2009, universities were funded by the tri-council's intellectual property mobility program, which directly supported staff. Since IPM's discontinuation in 2009, however, staffing levels have declined, which has impacted researcher education.

Funds for research and partnership have also been reduced. The popular CIHR proof of principle grants, which directly supported knowledge mobilization, were discontinued in 2016. In addition to bringing back the IPM and POP programs, Canada could enhance academic innovation through programs such as the U.S. SBIR and STTR programs, both of which leverage university IP and research capabilities.

An example of a current Canadian funding and collaborative research program, funded by Western Economic Diversification, is the Western Canadian Innovation Offices consortium, which incorporates features of both the IPM and POP programs.

WCIO connects western Canadian industry needs with the research and innovation resources at WCIO's 40-member consortium of universities, colleges, and polytechnics. The goal is to improve engagement between industry and academia and address industry-driven innovation challenges. The current pilot program supports the energy sector. To date, WCIO has funded seven technology development projects, leveraging $1 million in funding to attract over $5 million in research investments from industry. The seven projects involve partners from 10 universities, one college, three polytechnics, and 12 companies.

In addition to project funding, WCIO supports eight business development professionals who lead WCIO's outreach activities. The BD professionals learn academic capabilities and match them to industry opportunities for collaboration.

An important objective for WCIO is to involve polytechnics in innovative research projects. Polytechnic facilities, used for prototyping and fabrication, are well suited to supporting WCIO projects, and the faculty and students are highly motivated. A student recently said that, as a machinist, being involved in innovation made him feel like a superhero.

At a recent WCIO showcase, I moderated a panel and asked the industry representative how their project would be affected if there were no WCIO. He simply replied that without WCIO, there would be no project. Clearly, incorporating polytechnics into research projects such as WCIO is crucial for the Canadian innovation ecosystem.

WCIO makes no claim on IP ownership, which is instead decided on a case-by-case basis by the collaborators. Such flexibility of IP approaches is a strength of the Canadian system. The degree of control over IP that an institution requires depends on the nature of the work, the scientific field, and how the contract fits with a particular research program. In most cases, IP rights granted to a sponsor are sufficient for commercialization without inhibiting the future project of an academic research program.

IP policies in general reflect the nature of research at an institution, the campus culture, and the infrastructure available to mobilize commercialization. Institutions with medical schools can often invest years of patent and clinical development into a therapeutic agent or medical device and may be better served by an institution-owned IP policy. Conversely, institutions without significant medical research are in a far better position to embrace a creator-owned IP policy, where speed to market drives innovation for fields such as IT and software innovations.

It's important to recognize that intellectual property extends beyond patents and includes copyrights and trademarks that provide opportunities for knowledge mobilization beyond the STEM fields. The Canadian profession, through organizations such as Research Impact Canada, has made great strides towards disseminating innovations from non-STEM faculties, including the social and clinical sciences, education, architecture, and the humanities. Such faculty members are often unaware of the value of their innovations and of the possibility of disseminating knowledge through non-academic channels.

Innovate Calgary hosts events to showcase their work, creating an open forum for dialogue among faculty members. Most recently, an event held in partnership with the Werklund School of Education attracted over 60 researchers, and attendees extended the conversation to nearly five hours. Researchers presented innovations from a variety of disciplines, including psychology, business, kinesiology, social work, women's studies, and education. One researcher expressed that he was starting to understand that commercialization wasn't all about the money, that it was also about scaling impact.

Thank you for inviting me here today, and I look forward to our discussion.

The Chair: Thank you very much.

We're going to move to Mr. Hinton. You have seven minutes.


Thank you, Chair and esteemed members of the committee, for the privilege of appearing as a witness before you.
I'm an IP lawyer and patent and trademark agent with Bereskin & Parr, an assistant professor at Western University. I also advise the executive of the Council of Canadian Innovators. I work almost exclusively with Canadian companies to help them benefit from their technology through intellectual property.

I've researched and written in this space with the Centre for International Governance Innovation and the Centre for Digital Entrepreneurship and Economic Performance.

I will first identify where there are limitations with Canadian tech transfer and IP and finish by presenting constructive opportunities to move forward.

Should Canadian universities and research institutions drive innovation, fostering Canadian companies that own and benefit from Canadian-developed technology or should they only invent and educate, create world-leading technologies, and allow others to commercialize and reap the economic benefits of these technologies? If we want our publicly funded research institutions to be champions of innovation, we currently have problems. The technology is suboptimally protected, and even where protected, the technology is being given away.

Our academic institutions are not patenting at the same rate as their foreign counterparts, as we just heard. This is particularly relevant in the clean technology space. On average, Americans are patenting 2.3 times more per academic publication than Canada. China is patenting at a rate almost 15 times more per academic publication than Canada. We have not been keeping up with our international competitors to capture the value of our technology through international IP systems.

If there's no patent and the invention becomes public, then there is nothing to prevent someone from practising the invention. It's not only that we don't protect, but we also allow the technology that we have protected to be raided by foreign firms. In particular, IP benefits from public-private partnerships are flowing out of the country. To commercialize research, publicly funded institutions currently partner with industry players. Many agreements end up with newly developed intellectual property wholly owned by the industry partner, or licensed, because they have the vision to harness and capture the value of the IP. These industry partners are very often foreign companies, leading to critical IP leakage out of the country.

What's worse is when a Canadian company is looking to develop similar technology, the foreign tech can prevent that Canadian company from practising that technology, or force them to take a licence. We are essentially encouraging a system whereby Canadian companies must then license back Canadian taxpayer-funded IP from the big foreign technology competitors. Instead of reinvesting in Canadian R and D, Canadian companies are paying IP royalty fees.

How bad is the outflow of IP ownership? We've done some research on the invention and ownership in the artificial intelligence machine learning space, and more than half of Canadian-developed IP is now owned by foreign companies. This is not an isolated issue. Of all Canadian invented patents issued last year, 58% are now owned by foreign companies. This is up from 45% a decade ago. The trend is getting worse.

This means that Canadians are doing the hard work to create great technologies, but we are not able to benefit from them. This further prevents us from being able to reinvest in new technologies and new industries. If we are embarking on Canada's innovation age, we must prevent the IP from being raided by foreign firms and instead capture the resultant wealth and associated economic benefits so we can create successful and globally competitive companies that rival the world's best.

How do we do this? Education and increased sophistication for Canadian innovators is a start. Ultimately, we need to generate more IP and ensure that IP that is generated in Canada with taxpayer funding is available to Canadian innovators. Traditionally, policy-makers are focused on domestic IP rules. The problem with that approach is that most Canadian innovators don't secure Canadian patents because the market is just not big enough, so changing our domestic rules will have little impact for Canadian innovators.

We have to find mechanisms to help Canadian innovators compete in global marketplaces where the large commercialization opportunities lie. That means playing by the IP rules of foreign countries. IP exposure reduction measures, such as the strategically designed patent collective or sovereign patent fund is one solution we have studied that would help deal with the challenges facing Canada's innovation ecosystem.

As the data shows, we don't own the existing IP in many industry sectors, so our firms do not have the freedom to operate in those markets. The strategy is to acquire and bundle foundational patents, international patents, in a manner that provides Canadian innovators with market access opportunities. Instead of having to take licences individually when companies have the most to lose, the collective approach allows Canadian companies to have improved freedom to operate internationally.

Still further, many of the foundational patents developed by our public institutions can form part of the pool, providing Canadian firms with the freedom to operate under university-generated IP.

This improved freedom to operate ensures that Canadian companies are able to have a strong position when entering global markets and ensures that taxpayer investments are not flowing out via royalty payments to the owners of foundational patents.

Our taxpayers expect more from their investment—that the benefits flowing from the technology and the IP provide the expected taxpayer return. We have to ensure that the IP strategy for technology transfer has a focus on national public benefit.
Imagine having to tell a promising Canadian technology company which is trying to scale up, find markets, and increase profits that the government has just given its biggest established technology rival, foreign technology rival, access to Canadian university research. If the Canadian firms are not able to compete with the foreign technology firms for Canadian-developed technology, the funding research in Canada looks a lot like a subsidy for the development of foreign technology firms' IP. This not only wastes a lot of money but also disadvantages Canadian technology companies and our future prosperity.

In this innovation age, we can't treat IP as we do our natural resources, by selling it off early. The value in IP is speculative value, so selling early doesn't allow for that big upside. As Ben Bergen, executive director of CCI said, "The countries that have IP are wealthy, and the countries that lack it are seeing their prosperity erode."

Thank you.

The Chair: Thank you very much for that illuminating speech.

We are going to move directly into questions, starting with Mr. Longfield. You have seven minutes.

Mr. Lloyd Longfield (Guelph, Lib.): Thanks, Chair.

Thanks to everybody for being here in person and virtually.

We have a big topic today. I would like to continue with our last presenter, Mr. Hinton.

When we're talking about international companies having access to Canadian universities, we have an example in Guelph, where my riding is, where we're developing clean tech. We're developing water technologies. Some of the local water technology companies haven't been able to purchase access to some of the equipment that's been put in place. There's a barrier to entry for some of the small firms to using some of the university resources, whereas larger firms can come in and invest.

You mentioned clean technology, and I used clean technology as an example. By sector, do you have an idea of where the biggest challenges are with small business having access to university resources?

Mr. James Hinton: There has been a lot of study on the clean tech space. Our focus has been on clean tech and AI, and there are a lot of opportunities, but in the clean tech spaces you're talking about, there are a lot of regulatory issues that you have to build into your IP strategy. Getting the regulation right, and the standards, and where you have to meet, and where the technology needs to meet are very important.

We need to ensure that Canadian IP can meet these standards, and if it can't meet the standards, then we're losing that opportunity.

Mr. Lloyd Longfield: When you look at leakage, I'm chairing the innovation and post-secondary education caucus, and we had a curve presented to us from Universities Canada that shows our services. Our royalty fees are in a massive trade deficit. You have mentioned that trade deficit when we're doing an IP study. Could you comment on that deficit, or do you know of other countries that have been in a similar position that have been able to get out of that position?

Mr. James Hinton: There are very few countries that have an IP trade surplus. The U.S. is one example. Japan is another example. A lot of other countries are struggling with this problem. France, Japan, and Korea are a few examples that I've researched. There are different ways of trying to balance this.

The research shows that we don't own very much intellectual property, so we need to find creative mechanisms to encourage more creation. The SBIR, including some costs for intellectual property generation, is very important. Then being more sophisticated with what we're publicly funding is there.

I think there are a lot of good examples that come from international actors, other countries, and their national IP strategies, and what they are doing that we can learn from. The sovereign patent fund is one of the examples we studied.

Mr. Lloyd Longfield: Thank you.

I want to move over to Mr. Susalka, who met with us when we were in Washington.

Thanks for joining us again this morning.

You brought up some really good points when we were in Washington around the industry participation in research funding. In Canada, 11% of research funding comes from industry, while in the United States, it is 7%. It's been flat for 10 years, you told us. Licences that include equity have increased by 40%. You mentioned that Canada seems to be doing more with less. Is this an example? With Mr. Hinton we were talking about leakage into the United States. Is AUTM looking at U.S. businesses operating in Canada, putting research dollars into Canada, and drawing IP out of Canada? Is that something AUTM is concerned with or is looking at through its Canadian membership?

Mr. Stephen Susalka: Thank you for the question [Technical difficulty—Editor].

The Chair: Sorry, could I get you to restart the answer? You froze on us.

Mr. Stephen Susalka: Sorry about that.

The quick answer is that we do not collect that type of [Technical difficulty—Editor] investment in Canadian technology transfer.

I will point out one thing. Just to echo your comment earlier about industry funding, I'll say that one of the real advantages of Canadian technology transfer is the close interaction with industry. Collaborations and the types of centres that Mr. Porter mentioned are examples of great overlap between industry and academic institutions, an overlap which the United States doesn't have at that level.

Mr. Lloyd Longfield: Thank you.

Mr. Porter, when we look at SAIT, there is a template that SAIT has been using for IP. This is maybe an open question here for anybody.
Is whether templating is being done successfully in the United States or other jurisdictions something that we want to be looking at in Canada? Is there anything around standard templating, portal creation for registering patents, or going for non-exclusive licence agreements that are open agreements?

Mr. Kenneth Porter: Well, there are a couple of things.

Polytechnics rarely claim ownership of IP, and that is due, in part, to the kind of work they do. Usually the ownership of IP goes to intellectual contribution. For projects at SAIT, as a rule, the industry comes to SAIT with a problem they want solved, and then SAIT applies its capabilities. However, on the university side, typically the IP is the result of a multi-year, multi-person project, so the intellectual contributions come before the IP is generated through the project; just like for SAIT the intellectual contributions come from the industry side.

Mr. Lloyd Longfield: Does the consortium have a common collecting point, or does it go in to SAIT all in the same way?

Mr. Kenneth Porter: It's on a project-by-project basis. From the intellectual property side, I think Steve mentioned the flexibility we have, whereas in the United States it's all institution owned, IP mandated by Bayh-Dole and by federal funding that supports university research.

The tri-council doesn't mandate IP ownership to any one party here in Canada. The institutions are free to choose whether they are more comfortable with inventor owned. Waterloo is the extreme there with inventor owned with no obligation to report. The University of Calgary is inventor owned with an obligation to report and to share revenue. We also have institution owned. So, in some ways, the IP policy can fit the research enterprise at a particular institution, and that's an advantage in Canada.

Mr. Lloyd Longfield: Thank you.

The Chair: We're going to move to Mr. Dreeshen. You have seven minutes.

Mr. Earl Dreesen (Red Deer—Mountain View, CPC): Thank you very much, Mr. Chair, and to all of our guests.

Stephen, it was nice to have an opportunity to see you. Unfortunately, our technology doesn't seem to be finding its way seamlessly across the border right now.

I know some of the things you talked about with regard to the dollars invested in research in Canada and the U.S., when you take a look at the relationship of size, there are a lot of efficiencies and a lot of things we do well, but the key thing you spoke of is the tech transfer only getting 27% of the bang for its buck as it does in the U.S.

I spoke a couple days ago with a venture capitalist. Basically, what they were saying is that when you look at what happens in the U.S. and the way in which they court investors, and the way it is done in Canada... You'll go down there and they're going to take you to the football game. They're going to show you the whole place. They're going to show you the town. If you come to Canada and you want to talk to researchers, they're going to take you into some office and give you a slide show, and that's going to be the relationship. I think it might have been exaggerated a little, but I think that's part of it.

When they're wooing people with dollars to invest, it's a good job that is done by universities.

I don't know if that ties into part of this, or why it is you can get people who are a little more aggressive in their investments to go into some of those areas.

I do appreciate the opportunity to see you again. Our trip to Washington certainly helped us a lot to understand that.

I wonder if you could quickly talk about that Canadian tech transfer, and what you see as maybe one of the key components that we should look at.

Mr. Stephen Susalka: There are a number of initiatives that [Technical difficulty—Editor] is pursuing.

The Chair: Sorry, could you just back up a second? You froze up for more than a couple of seconds.

Mr. Stephen Susalka: I'm sorry about that.

I was going to mention that one of the initiatives that's being pursued by more and more universities in the United States is prototype development, and further development of intellectual property at an institution level. This is an area which I think Canada is well-poised to pursue, given, as Mr. Porter mentioned, the polytechnics that exist, as well as the strong industry interaction.

If you think about intellectual property, a lot of times an academic invention is very early stage. Perhaps it shows a design for an orthopaedic drill, for example. Developing that into at least a prototype [Technical difficulty—Editor]

The Chair: Sorry. You dropped off at “prototype”.

Mr. Stephen Susalka: Sorry.

By developing a prototype, you are providing a better resource for a licensee, whether it's that venture capitalist who might fund a new company, or perhaps a company that might be interested in licensing that intellectual property. That's an area where I think again, Canada is well poised with their polytechnics and other relationships to further develop that intellectual property to allow it a better chance to be commercialized downstream.

Mr. Earl Dreeshen: I think that ties in well for Mr. Porter and what you were talking about with the WCIO and the 40-member consortium, trying to tie in the prototypes that you see, and the ability for people to work forward there.

I wonder if you could expand on what you had spoken about with IP, copyright and trademarks, and so on, and where that ties in to the way in which our polytechnics and our universities try to work together in order to secure the technology ownership.

Mr. Kenneth Porter: There are two parts there, so I'll go back just a bit to the WCIO and the matchmaking that we do between academic capabilities and industry needs. Regarding the illustration you provided with the football games in the U.S., this kind of work is a contact sport, and it's a person-to-person sport.
When we first started thinking about WCIO, we thought we would go to academic institutions and provide a list of the strength of the research enterprise, go to industry and ask what their needs were, put that in a database, and everybody would find each other. That didn't work at all. What did work was hiring these eight people from Winnipeg to Vancouver who learned the capabilities and the needs in their region. They also speak to each other on the phone once a week so that they can share this information across provinces and then put the opportunities and the capabilities together. It took that level of involvement to get our seven projects. It's really slow, meticulous, and painstaking work. That's that part of it.

As for copyrights and trademarks, we haven't expanded to the polytechnics yet. Polytechnics are a critical component to the industry-academic relationship with respect to prototyping, fabrication, and all the wonderful things that they offer, which is unique to Canada over the U.S., and a strength that Canada has over the U.S. as far as the comparable community colleges that the U.S. would have are concerned, which are not to the degree that we have at our polytechnics here.

With respect to copyrights and trademarks, that is a new effort. It started about three years ago in Calgary, and I think it's spreading across Canada. York University is a leader there. David Phipps has organized Research Impact Canada. It is an opportunity and a campaign to let folks across a university know there are opportunities for them to play in this arena, in intellectual property, by partnering with industry in ways to expand the reach of their research beyond publication and presentation. Now I know all 13 deans on our campus, not just in science, engineering, and medicine, which is with whom I would have worked exclusively five years ago.

We were very fortunate in Calgary. We have a wonderful example of a social enterprise. In disclosures through technologies that we get, 95% of the time we have a licence to an existing company, and they would have the infrastructure to commercialize a particular invention, and 5% would go to start-up companies where all the infrastructure has to be created. In the social sciences and the clinical sciences, there's nobody to take your idea forward except for you, and so the reverse happens, and for 95% of social innovations, you have to form your own company if you want to spread it through the marketplace.

We have a great example of that at the University of Calgary. It's a program called LivingWorks. It's an approach to suicide prevention. It was developed over 15 years of academic research in the 1970s and 1980s. They became known as world leaders in suicide prevention but exhausted their ability to disseminate their program through academic channels. They knew there was a demand worldwide, and if they wanted to meet that demand, they had to do it through the private sector, so they formed a company in 1990 and are still operating. They have about three dozen employees in Calgary. They have tens of millions in revenue. They deliver their program 150,000 times a year. They have headquarters in Australia, North Carolina, and Calgary. Just last year they sold their company.

That's a tremendous example of using the private sector to expand the impact of that program.
Mr. James Hinton: Thank you for that comment. Actually, before I got into law, I worked for heavy truck manufacturing in Woodstock, Ontario. We made parts for heavy trucks, for International Truck and Engine, in Chatham, which is no longer there, and Stirling, in St. Thomas, where the same sort of thing has happened. I worked on the shop floor as an engineer. I understand that these are great jobs.

The focus we need to have is this. Jobs are the success story of having great technology be ours. We don't own this intellectual property. We have a very small fraction of the freedom to operate. If you don't have the IP, you don't have the freedom to operate and so you're subject to the international players that have this IP. You don't have the control and you don't have the opportunity to keep the jobs where you want them. The recent report that I was referencing said that 58% of IP that's generated in Canada is now foreign owned.

That's what we do. We are creating all these great ideas, but because we don't own them, we don't have the opportunity to exploit them, control them, keep them in Canada to benefit...and to keep refuelling those jobs in future R and D. We don't have this freedom to operate. We don't have the IP. It's a constant struggle and we're just reinvesting in the end game of getting more jobs. What I would like to see more focus on is keeping the ownership of the technology, the IP that we're creating, and then we'll be able to keep refuelling with those manufacturing jobs as well. That's the first point.

The second point is that when we're getting into these trade agreements—you're thinking about NAFTA, you're thinking about TPP that's coming on again, and you're thinking about the China agreement that's being negotiated now, and CETA that's come along in the past—a lot of that is focused on our Canadian domestic IP rules.

As I said in my remarks, the Canadian IP rules are almost insignificant to Canadian companies. We're sitting here fighting about an insurance policy on a house that we don't own. We don't have any property and we're tweaking these things. Maybe there's a balance between the innovators and the users in Canada, but that's not helping Canadian innovators. Canadian innovators have to play by the international rules.

What do we do when we're going into those places? How can we get a better leg up when Canadians are trying to commercialize globally so we can retain the ownership for Canadian companies? That's one thing we've researched in the patent collective. You collect the critical mass of IP, patents. You create freedom to operate, buy up U.S. patents, and license them so the members are not subject to those patents. They have the freedom to operate under those patents as a collective. The collective will be able to benefit and won't have to take licences individually. They will have that freedom to operate, to go into the U.S. markets and exploit the technology there, and then bring that value back into Canada and refuel those jobs that you mentioned earlier.

Mr. Brian Masse: Do I have any time left, Mr. Chair?

The Chair: Fifteen seconds.
Mr. Kenneth Porter: Yes.

Mr. Frank Baylis: —but they're not actually forced to do that, to disclose it.

Mr. Kenneth Porter: Right, but that information is publicly available so it could be done.

Mr. Frank Baylis: To a certain degree it's public. If there is a patent pending, if they're not fully published—

Mr. Kenneth Porter: There is an 18-month period of silence, but after 18 months it's all available.

Mr. Frank Baylis: Okay.

Would we not have to search every patent office in the world if we were going to do it that way?

Mr. Kenneth Porter: If you want to get every single one.

Mr. Frank Baylis: That's right.

Mr. Kenneth Porter: You could get the bulk of them, I think, with the U.S. and Canada.

Mr. Frank Baylis: I'll turn to Mr. Susalka.

If we were to use something like the Bayh-Dole Act, I understand it necessitates that the people who are being funded disclose that information, that as part of the deal that we're going to fund you, you're going to tell us what you're doing, what you're patenting, and not necessarily just what you're patenting, but what your know-how and your expertise is.

Could you elaborate on that? I think you touched on the point when you mentioned your statistics and you said that in the industry you know it; they don't even try to patent it. You're actually going out there to try and make that link between the industry and the researchers?

Mr. Kenneth Porter: Yes.

Mr. Frank Baylis: —but in this case you know it; they don't even know it—

Mr. Kenneth Porter: Right.

Mr. Frank Baylis: —so you have to go out to push it to them.

Mr. Kenneth Porter: It's the other way. We draw on it.

Mr. Frank Baylis: You draw on it. You're pushing it to the industry. You're trying to push that knowledge to the industry that you have this expertise, so asking what they are looking for, and saying, “We can help you.”

Mr. Kenneth Porter: What are they looking for, and that type of

Mr. Frank Baylis: You're not sitting on your hands hoping that the industry knocks on your door.

Mr. Kenneth Porter: Which we would call a push, yes.

Mr. Frank Baylis: You're actually going out there to try and make that link.

Mr. Kenneth Porter: Right.
Mr. Frank Baylis: You're doing that at a microcosm level. You haven't done it across the country.

Mr. Kenneth Porter: Right, across the four provinces with just eight people.

Mr. Frank Baylis: When you show up, are the industries open-minded? Are they interested or not?

Mr. Kenneth Porter: Well, we had a little bias, things in our favour. We started with the energy industry, and we know the people in the C-suites in Calgary and used those personal connections. They have to trust you enough to share their problems with you. Most companies will say that they don't have any problems.

Mr. Frank Baylis: With that reception and once they trusted you, how was that?

Mr. Kenneth Porter: Once they trust you and you get the kernel of information that can describe it such that it doesn't point to deficiencies in their company, but in a specific enough way that you can say, “That knowledge is available at the University of Alberta, and I can make the introduction...”

The Chair: Thank you very much.

We're going to move to Mr. Nuttall. You have five minutes.

Mr. Alexander Nuttall (Barrie—Springwater—Oro-Medonte, CPC): Thank you, Mr. Chair.

I'm going to start with Mr. Susalka. I'm sorry I didn't get the opportunity to go down to Washington.

I have a couple of questions, and I want to follow up on what Mr. Baylis was asking you about.

In terms of a reporting mechanism and database related to federal funding of research or development—and I don't know, so excuse my ignorance—does that then get transferred to the private sector as well, where there are opportunities for venture capital, etc., to be able to pinpoint these different technologies?

Mr. Stephen Susalka: Predominantly that database is used for the federal government to keep track of the inventions that are supported using federal funds. It's not exactly designed for this market pull piece. It is different.

AUTM has done certain things to help accelerate that connection [Technical difficulty—Editor] solution to a problem, and you hope that problem lines up to an industry's concern.

By going down Mr. Porter's approach where you're actually asking the industry what is their concern and let us create an invention, as opposed to having created an invention and asking whether there is a solution to solve—that's a different approach—the Association of University Technology Managers has created a worldwide portal where technologies can be posted and reviewed for free by venture capitalists and industry.

We currently have about 22,000 technologies available, including many Canadian institutions. That again is not a federal database. It is our association's database.

Mr. Alexander Nuttall: Okay.

Mr. Stephen Susalka: Out of other countries—

Mr. Alexander Nuttall: We talked about an IP deficit in Canada, and we've seen it over and over again. Yesterday, a friend called me and said they have a health care platform and they got an investment of $1 million out of Boston. This basically means it's now owned out of the U.S.

Is there any encouragement from the government, including state or local governments, to look outside of the U.S. and pull technology back? Do they subsidize that at all?

Mr. Stephen Susalka: Nothing comes to mind that way, although I can look at the reciprocal. You may be familiar with the SBIR, small business innovation research program, or the STTR, small business technology transfer program, that are designed to support and grow research and development in small U.S. companies. That's almost the exact opposite of what you're saying. Here the government is funding small U.S. companies that will hopefully grow, nurture, and allow them to attract more employees and develop intellectual property difference. It's almost from the U.S. out, as opposed to pulling from outside the U.S.A. in.

Mr. Alexander Nuttall: Thank you.

The Chair: Thank you very much.

We're going to move to Mr. Arya. You have five minutes, please.

Mr. Chandra Arya: Thank you, Mr. Chair.

Mr. Susalka, I thought when I was listening to you that your words appeared to be more about IP licensing than knowledge transfer. Is that correct?

Mr. Stephen Susalka: Academic technology transfer does involve technology and licensing, but it also relates to knowledge transfer.

Mr. Chandra Arya: Knowledge transfer has two components, if I'm not wrong. One is codified knowledge and the other is tacit knowledge. How do we cover the tacit knowledge?

Mr. Stephen Susalka: The tacit knowledge is a little trickier. Of course you have knowledge that's being transferred by, say, a university student who then goes to work for a Canadian company, so you have that transfer of knowledge. You have transfer of knowledge just through publications, which might not be related to intellectual property that can be protected. You're right, then; there are different types of transfer.

Mr. Chandra Arya: Thank you.

You mentioned that Canadian institutions spend 28% more than institutions in the U.S. on inventions and 42% more per patent than in the U.S. I may be wrong, but I think that's what you meant. Previously, one witness mentioned that in the U.S. researchers are typically paid for only eight months a year, and for the remaining four months they go to industry. Maybe that way the knowledge transfer takes place more efficiently.
Mr. Stephen Susalka: It really is on an institution-by-institution basis. There's no particular requirement for that approach, but you're right that knowledge transfer does occur by way of, say, consulting. Many universities have a one-day-a-week consulting policy whereby the inventor might work with a [Technical difficulty—Editor] on the development. You're right. There are many different areas of transfer of knowledge.

Mr. Chandra Arya: Thank you.

Mr. Porter, I put the same question to you.

Mr. Kenneth Porter: We touch on it. Thank you for calling on me for that one.

Knowledge translation through consulting happens all the time, in STEM and non-STEM. We've run into it mostly in going into non-STEM, into clinical and social sciences—

Mr. Chandra Arya: No, my question is not about knowledge transfer through consulting. It is regarding how you tie the knowledge transfer to the IP transfer. The consultancy provided by the professors and the researchers is—

Mr. Kenneth Porter: Right. That's what I was trying to get to. Those are one-on-one. How do you scale that opportunity? If the knowledge transfer happens only in a face-to-face situation, only by the creator, it's not a scalable opportunity, and that's what we're looking for with these social enterprises. How do you put that in a forum? How do you put it on a website? How do you make an app out of it? How do you train others to deliver the program, so that it's not just you?

An opportunity to scale these consulting opportunities—

● (0950)

Mr. Chandra Arya: You seem to be a bit hesitant to recommend that all partially or fully federally funded technologies be made available. Is there a reluctance on your part?

Mr. Kenneth Porter: Say that again, please.

Mr. Chandra Arya: You seem to be a bit hesitant to state that whenever the federal government funds fully or partially we should get back the output. You seem to say that it's all patented, and people can go and search.

Mr. Kenneth Porter: Oh, you mean the reporting back to the government. No, I have no problem with that. I've worked in the U. S. for most of my career, and reporting is a very small component. If it would be useful to the government, then I'd be all for it.

Mr. Chandra Arya: Okay.

Mr. Hinton, I will ask you the same thing about technology transfer and knowledge transfer.

Mr. James Hinton: You can see this as a great IP strategy for foreign tech firms. The idea is that you can buy off most of the research by getting one researcher in a key technology area and having them report back to the mother ship with all of the research that the institute is doing. They bring this information back and strategically patent the commercial aspects. This is what we've seen with many big tech companies with the resources and sophistication to outgun.

Mr. Chandra Arya: Mr. Hinton, you also mentioned that 58% of the Canadian IP generated is owned by foreign companies. What can we do? We know it should be available for Canadian companies because the Canadian taxpayer investment is there. What is there that we can do by law to prevent this?

Mr. James Hinton: As I was commenting, many of the issues we're running into are international. We're dealing in international markets, so the legal mechanisms and the levers of the Canadian patent system are probably not going to do a lot. We have to think of other mechanisms that we can put into place. The patent fund is one example. Funding mechanisms, I think, are very important, and also ensuring that if we're funding certain resources and technology development, we make sure that we're being very shrewd about who is going to be able to use it and where the benefits are going to flow.

I think it's more a funding issue than a legislative one.

The Chair: Thank you.

We're going to move to Mr. Lobb. You have five minutes.

Mr. Ben Lobb (Huron—Bruce, CPC): Thank you very much.

Mr. Susalka, I want to ask you about the U.S. Chamber of Commerce international IP index. You would be familiar with that, of course. Canada is pretty far down the list, probably where a developed country should be, with many universities and some very successful high-tech companies. From an American perspective, looking at a Canadian issue, where is this relatively low ranking coming from?

Mr. Stephen Susalka: There are a number of factors in play. I mentioned a couple in terms of the percentage difference.

I would have to see exactly the calculations they use, but aspects that might influence this would be the number of inventions and patent applications that are developed and start-up companies that are formed.

I'd have to know a little more about exactly how those calculations occurred and how they relate. We only have a limited slice of Canadian technology transfer data at AUTM.

Mr. Ben Lobb: Right.

I wanted to get your thoughts on the World Intellectual Property Organization and its effectiveness in trying to streamline the intellectual property protocol for 184 countries.

Mr. Stephen Susalka: WIPO is a wonderful resource for academic technology transfer organizations, allowing a single patent application in the home language to be filed and retain rights in, as you mentioned, over 180 countries worldwide. That has been a great accelerator of protecting intellectual property that was developed in a particular country, be it Canada or the United States, and enabling more efficient protection of that invention in countries around the world.

● (0955)

Mr. Ben Lobb: Okay.

I read an article that I don't think is anecdotal. It's probably true that the Chinese, during their negotiations over the Paris climate accord, were really wanting to have access to some of General Electric's water technology. That was one of the terms in the negotiations of their signing on.
Do you see treaties like this as being problematic for protecting IP, or do you see them as a way to reinforce and strengthen it?

**Mr. Stephen Susalka:** I would hope the ultimate goal is to reinforce and strengthen IP between those countries. I'm not familiar with that particular story. Again, the purpose of these multinational agreements is to strengthen the IP across the globe, so that would be my hope going forward. Again, I'm not familiar with that particular clause or piece.

**Mr. Ben Lobb:** Okay.

I have one last question here, because my time will run out.

I recognize that Canada has a lot to do and can do a lot to improve its IP protocols, etc., but unless the rest of the world—countries like China, Vietnam, and others probably too numerous to mention—really buys into the whole idea of protecting and respecting other countries' IP, are we spinning our tires here? What can we realistically do?

**Mr. Stephen Susalka:** Are you there?

I'm sorry. I believe I heard your question, but would you mind repeating it one more time at your end?

**Mr. Ben Lobb:** Okay. You'll be pleased to know that our next study is strengthening the broadband service in Canada.

**Voices:** Oh, oh!

**Mr. Ben Lobb:** I can sum up the question. Countries like China, Vietnam, and others really have had trouble respecting the IP rights and technology of other countries when they're doing business there. In Canada we can do whatever we like, and we will, but are we spinning our tires, in a sense, unless those countries really come along and get with it?

**Mr. Stephen Susalka:** Got it.

**Mr. Ben Lobb:** I'm starting to wonder if the Chinese are hacking our system here.

**Mr. Stephen Susalka:** Over the last five to 10 years, the appreciation and understanding of intellectual property is diffusing throughout the world. Some of those countries, and other countries, are appreciating more and more the value of intellectual property. I think this will continue to improve as we go forward.

You mentioned WIPO earlier. WIPO does a great job of explaining the importance of strong intellectual property protection and systems. [Technical difficulty—Editor] They should continue to do what they are doing, and you will see that the rest of the world will appreciate more and more the value, and strengthen and enforce intellectual property rights worldwide.

**Mr. Ben Lobb:** Thank you.

**Mr. Kenneth Porter:** Can I just add a little to that?

**The Chair:** We've lost some time, so if you want to ask another question, go ahead.

**Mr. Kenneth Porter:** We have to remember that the intellectual property market is a worldwide market, and the intellectual property is going to go to the country and the business that is best able to develop it and deliver it to the population of the world. At Innovate Calgary, we have about 100 active licences in 24 countries. That's important to keep in mind.

Another thing that Steve mentioned was our start-up companies. We do quite well in Canada, relative to the U.S., in creating new companies. Things that we could measure in addition to the dollars, which we always look bad at, are jobs created, investment in these companies, and new products development. Again, as our companies mature, they often move to the U.S. because that's where the investment is. Just as the IP market is going to go where it can be invested in, our new companies are going to go there, too.

**The Chair:** Thank you.

**Mr. Jowhari, you have five minutes.**

**Mr. Majid Jowhari (Richmond Hill, Lib.):** Thank you.

**Welcome to all our presenters.**

Mr. Porter, I am interested in the comment you made that we are suffering from a low outreach because of the staffing in the tech transfer offices. As you know, between 1995 and 2009, through the IPM program, the government tried to infuse some funds in there and expedite or accelerate that commercialization. Do you think that worked?

● (1000)

**Mr. Kenneth Porter:** Yes.

**Mr. Majid Jowhari:** Okay.

**Mr. Kenneth Porter:** I know how it didn't work, too. When the funding was taken away, not only were the staffing levels reduced at the universities, but the most experienced people were lost because they had the higher salaries.

**Mr. Majid Jowhari:** Do you have any data so we could correlate this number of tech transfer officers in a university or in a mini-cluster such as the WCIO with this much commercialization? Everybody threw a lot of stats out. One of the stats I'm looking for is if you had a certain number of tech transfer officers, how much commercialization and how many jobs were created.

Also, do you believe that it needs to continue in this form, or should we look into possibly privatizing the whole tech transfer?

We can start with Mr. Porter and go to Mr. Susalka, and then probably Mr. Hinton can touch on it.

**Mr. Kenneth Porter:** I'll hit the last point. Innovate Calgary is a private company, so we do have that vehicle. AUTM also collects data on the number of professionals associated with each university. I see Steve getting really excited about that, so I'll let him go ahead.

**Mr. Stephen Susalka:** You're right. We do collect all sorts of data. There are two or perhaps three interesting data points to back up the importance of that funding and the absence of it affecting Canadian transfer in a negative way.

Number one, in 2003, licensing revenue by the Canadian institutions was $72 million. For perspective, it's $62 million now, 14 years later. It peaked in 2003, and then it dropped.
Another really important point, and Mr. Porter touched on this, is that funding allowed for continued education of faculty members. It should come as no surprise that a peak in invention disclosures... If you look at it in five-year intervals, in 2009 there were 1,921 invention disclosures, so [Technical difficulty—Editor] closer to 1,800. You can see that we had a peak and now we have a drop-off.

The third statistic I wanted to point out [Technical difficulty—Editor] start-up companies. In 2003, there were 58 start-up companies, and that dropped to 48 in 2009, so we had a significant drop-off, perhaps with the lack of manpower in those offices.

I just wanted to give you some statistics.

Mr. Majid Jowhari: Thank you. Could I ask you to submit those? Because of the technology issues that we have here, we probably did not capture all of that. If you could submit those stats, it would really be appreciated.

Mr. Stephen Susalka: Sure.

Mr. Majid Jowhari: With the little bit of time I have left, I want to go to Mr. Hinton. If you could, please combine two things. There's the answer to that question, and you also talked about helping our companies and universities to compete globally when it comes to IP. How, as a government, could we help the IP generators and companies to compete globally?

Mr. James Hinton: To the first question, there was an organization that existed from the 1930s until 1992 in Canada, called Canadian Patent Development Limited. There's one paper on it, if you want to see a coordinated approach on what happened to it. It was axed in the early 1990s.

I'll give you two stats. Apple and Google spend more on patents than they do on R and D. We're being woefully outplayed if we think that we can have a couple of tech transfer officers here and there and compete at this level. IBM got more patents last year than the entire country of Canada. We're being woefully outplayed. We're not capturing the IP. We have great technology, but we're just giving it away. Those are my stats.

What can we do about it? IP education is a start. I work at Communitech. I'm there every week, and I give out pro bono IP law clinic work. If a student from UW wants to talk about IP, I'm happy to give away my time. Getting the profession out and being more active at the hands-on ground level, professing, giving away this IP knowledge, and getting it in there, that's the base level.

Then, internationally, we need mechanisms that are going to enable Canadian companies to compete globally. This includes litigation support. If Canadian companies get into international IP litigation and they're being dragged down to east Texas to defend against a non-practising entity or patent troll, they need to have the sophistication, which is not available in Canada, to manage and navigate these systems. Defensively, we have great technology. Use this technology. Use the IP that comes from it to be defensive in a licensing way, if you're sued, in a countersuit.

Mr. Majid Jowhari: Thank you.

The Chair: We're going to move to Mr. Masse. You have two minutes.

Mr. Brian Masse: Mr. Hinton, one thing we're still struggling with in this committee is the final product at the end of the day, what we want. Again, I equate this with trying to create jobs for Canadians.

Mr. Susalka, just so you know, I live along the border, so I see our economies as integrated and very fruitful in that respect. I buy North American, including my car. Don't tell that to President Trump. At any rate, I view it as “buy North American”.

Maybe I'll start with Mr. Hinton and go across, and then end with Mr. Porter.

If there were one thing, low-hanging fruit, that we could do right now to help, what would it be? I know it's a tough question.

Mr. James Hinton: Well, you're saying one thing. I'm going to say four quick things.

IP education is the beginning. We need to at least know what we don't know. The second level is IP generation. We need to capture more IP. I guess I'll cut it off at three. The third thing we need to do is generate freedom to operate, and the patent collective is an example of that. These are three things that we can easily do.

Myra Tawfik at Windsor law school is working on IP education. There are all sorts of different mechanisms for generating IP, and the patent collective is something we've researched to ensure more freedom to operate. Those are three things we can do right away. As I said, Myra Tawfik at the University of Windsor has been doing a lot of great work in that area.

Mr. Brian Masse: Excellent.

Mr. Susalka.

Mr. Stephen Susalka: If you think about the development of inventions and commercialization, the nexus there is the technology transfer professional. Low-hanging fruit that actually doesn't cost anything is recognizing that the unique skill set of science, business, and law exists within technology transfer professionals. Having mechanisms where those technology transfer practitioners from around Canada come together, such as this June 25 meeting, are great resources to allow the transfer of ideas, approaches, contacts, and template agreements, to allow for better technology transfer within Canada. I would suggest encouraging the connection of technology transfer professionals throughout, such as at events that we do at AUTM and elsewhere.

Mr. Brian Masse: Thank you.

Mr. Porter.
**Mr. Kenneth Porter:** Help us keep the small companies that we're creating in Canada, and that relates directly to investment. Direct investment from the government is great, but so is helping to attract investors from around the world here to Canada to see our companies and invest in them here.

**Mr. Brian Masse:** Thank you very much, gentlemen.

**The Chair:** Thank you very much.

We're going to move to Mr. Baylis. You have seven minutes, and unless there are other questions, that will be the last question.

**Mr. Frank Baylis:** Thank you.

I'd like to swing back and talk some more about the technology transfer offices. Can you expand on that?

**Mr. Stephen Susalka:** Sure. Again, this is right in AUTM's wheelhouse. We provide training opportunities, whether they are webinars or in-person professional development opportunities, to share best practices that are created and implemented in technology transfer offices around the world. That is a wonderful aspect of AUTM.

One of the other things to recognize is that the technology transfer landscape system is constantly changing. New decisions on patents, etc., require a change in approach for technology transfer. That is a critical piece of that training.

We've talked about template agreements in the past. Template agreements are sometimes challenging to incorporate between universities, but they do provide key points. Again, it's this knowledge dissemination that we talked about earlier. It's a great way to share approaches that are used at different institutions.

I can expand on any aspect of that, if you'd like.

**Mr. Frank Baylis:** I'm interested in the contractual things, simplifying them. If I'm a business person and I have to do business with three universities, I don't want to get three lawyers and three... Is there standardization that we could look at within the contracting between a business and a given university?

**Mr. Stephen Susalka:** There have been approaches where a one-size-fits-all agreement has been tested. That is definitely not the major way. Many specifics on the institution, the company, or the intellectual property necessitate tailoring.

That being said, in the example you provided where you have three different institutions licensing intellectual property to a company, what is happening more and more is that those institutions will work together and all be part of the same licence agreement to that company. Exactly where the intellectual property came from is not important to the company; it just matters that the company gets the intellectual property. That gets back to this correspondence between technology transfer offices from different institutions. It makes it easy to pick up the phone, call those other two institutions, and say, "Here's the agreement we need to put in place. Let's get this done in one fell swoop."

**Mr. Frank Baylis:** You have 3,200 members, of which 200 are Canadian. I imagine that out of 3,200 there are a few others who are international, but the majority are American. Is that correct?

**Mr. Stephen Susalka:** That's exactly right. The majority are in the United States, although we do have representatives from 57 different countries.

**Mr. Frank Baylis:** What are we statistically like? If I understood AUTM's history, at one time you were more prevalent in Canada. Then you withdrew or kind of faded, and then you came back. Is that correct?

**Mr. Stephen Susalka:** Yes, I believe that was due to there being a Canadian organization at one time, ACCT Canada. When that went away, Canadian tech transfer professionals were looking for resources, and AUTM came back to Ottawa.

**Mr. Frank Baylis:** Okay.

Maybe, Mr. Porter, you could expand on those two issues. We're looking at being easy to do business with through contracting and because the person being spoken to is highly knowledgeable.

**Mr. Kenneth Porter:** Yes. First, on the knowledge, there's the Lambert agreement in the U.K. I don't know if you're aware of that.

**Mr. Frank Baylis:** I'm not.

**Mr. Kenneth Porter:** They have a really nice website and a suite of standard agreements that they've designed to fit particular situations. You can take a look at that.

**Mr. Frank Baylis:** Is it "Lambert"?

**Mr. Kenneth Porter:** Yes. At our Montreal meeting, we're going to have a panel on that. If you would like to join us for the panel, we will be discussing the Lambert agreements and standardization of contracts.

With respect to education, yes, ACCT Canada was disbanded in 2013. For a year or two, Canadian professionals had no go-to organization for organizing ourselves. We decided to come together and organize ourselves under AUTM, using the infrastructure of AUTM. That's been successful, and we continue to build—

**Mr. Frank Baylis:** That's fairly recent, though.

**Mr. Kenneth Porter:** Yes, starting in 2014.

**Mr. Frank Baylis:** Is that adding value in terms of the sharing of best practices?

**Mr. Kenneth Porter:** Absolutely, and I wanted to illustrate that. The Montreal meeting is our second meeting since we've reorganized. Last year, we had a meeting in Toronto. The first day of the meeting was a start-up course in sharing best practices among the institutions. We had room for 72 people, and the 72 slots were sold out before the early bird special expired. We got a second room and we piped in video for 40 more people.
Mr. Frank Baylis: There's a demand for our tech transfer officers, who need to know more. They need to know about these best practices.

Something fell apart, you reconstituted yourself, and you're trying to learn from AUTM, where they obviously have this tremendous wealth of knowledge.

Mr. Kenneth Porter: Exactly. Forty people signed up just to participate in another room by video.

Mr. Frank Baylis: Just to pull in that...

Mr. Kenneth Porter: Yes.

In the west, another Western Economic Diversification program we had was WestLink. It was an education program. It's been gone for five years or so, but we at Innovate Calgary—we haven't announced this—are very interested in reconstituting that in maybe a week-long course where folks across Canada can come—

Mr. Frank Baylis: I'm running out of time, but very quickly, you mentioned that one of the problems when the original funding dried up in 2009 was not just that we lost people, but that we lost the best people. What is the impact of that?

Mr. Kenneth Porter: It takes about three years to get a person who is not well versed in IP or technology transfer to where they're minimally useful. That three-year life is going to apply to any new inexperienced hire.

Mr. Frank Baylis: Okay.

Mr. Hinton, I'll give you the last word.

Mr. James Hinton: Yes, I think supporting the tech transfer offices is very important.

We have to be careful to realize that we can transfer the technology very well, but we have to make sure we are transferring it to Canadian companies that are going to be able to benefit and exploit this technology themselves. If we facilitate better technology transfer and it ends up going somewhere else, and we're not able to reap the economic benefits, then the purpose is lost. We need to make sure that the end goal is to benefit Canadian companies—

Mr. Frank Baylis: That's great. I just want to touch on that one point, because it's about what you measure. If I'm a university and I measure just my royalties, I don't measure my royalties from Canadian companies or my royalties from a Chinese company. In one way I have $70 of royalties that are only Canadian, and the other way I have $100 of royalties, but those royalties are all Chinese. You'd rather see $70 of Canadian royalties than $100 of Chinese royalties. Would that be fair to say?

Mr. James Hinton: Well, I'd like to have it both ways—

Mr. Frank Baylis: You want your cake and to eat it too.

Mr. James Hinton: You can have the royalties from the Chinese company and also have a licence for Canadian companies to have the freedom to operate under that patent: two licences, one for just freedom to operate and the other one for the Chinese company to—

The Chair: Thank you.

Mr. Frank Baylis: I have one last quick question.

Would it be feasible to say that whatever we find, you can licence anywhere in the world, but a Canadian company has the rights to it too? Can we do a carve-out? Would that work?

Mr. James Hinton: Yes, exactly. That's the collective concept that we've put forward, so in part.

The Chair: Thank you.

On that note, I want to thank our guests for being here today in person and over the WWW. It's much appreciated.

We're going to suspend for a couple of minutes and then come back and go on to some other business.

Again, thank you very much.

The Chair: We're going to get started again, please. Thank you, everybody.

The last time we spoke, we said that if we had time, we would go through some motions. Just to give you an update, there were four motions in all. Two have not been read in public and two have. One has been moved.

Mr. Lobb's motion on Retirement Concepts has been moved, so it's up to you if you want to bring that up. Alex's has been read in public as well, on the innovation leaders. Those two have been read in public—one has been moved—and the other two have not. I will open up the floor to anybody who wants to do something.

I don't see any hands.

Mr. Majid Jowhari: Are we talking about the first, Alex's?

The Chair: Right now the floor is open if you have something to say.

Ben, go ahead.

Mr. Ben Lobb: This motion goes back to February 28, and it deals with a review of the acquisition of Retirement Concepts, to make sure the committee felt it satisfied the Investment Canada Act threshold. When the minister was here for the main estimates, he provided a poor answer to my question, in my estimation. That's backed up by the fact that there's zero information on Industry Canada's website with regard to the acquisition.

This committee is supposed to be one of the main areas where we're able to make sure that the minister is doing things correctly, and the public servants who work under him were satisfied with their work. Nobody's questioning their work here, but the fact remains that the only ability we have as a committee to verify on behalf of Canadian taxpayers that this was a good purchase, and it was a good purchase by a company that has no state resources—which is a bit of a stretch, in my opinion—is to take the minister's word for it in a one-minute answer. The answer was a bit confrontational, probably both ways. The fact that there is zero information on the Internet and zero ability to question anybody who works at Industry Canada, I think it really behooves this committee to do the work that's required.
Again, this would be only two meetings. I think that's what we had discussed before. There can be more to get an idea of what took place here. This will be the first of many. I think we should go ahead with this. I'd be interested to hear what the Liberals' perspective is on this. I think we should move forward on this motion.

The Chair: Thank you.

Lloyd.

Mr. Lloyd Longfield: I think the answer was short because it was a fairly straightforward concept. If the application hadn't passed the threshold, it wouldn't have been allowed. It passed the threshold, ergo it was allowed.

To get into the guts of an Industry Canada commercial evaluation, I don't think is the role of the committee.

* (1025)

The Chair: Okay.

Brian.

Mr. Brian Masse: Mr. Chair, I think it is the role of the committee because the Investment Canada Act falls within our purview, I first raised non-democratic governments having the ability to purchase Canadian companies. That was done through the sale of Petro Canada when the Chinese government was purchasing Canadian shares in Canadian oil companies. Ironically, it wasn't seen as proper for Canadians to own their own oil in this country. China Minmetals Corporation was the catalyst for a review of that. This committee played a role in that. That's why part of the Investment Canada Act has that qualification under national security interests.

I think a meeting on this is fine. It's appropriate. Certain things can or can't be disclosed. The threshold has been dropped over the years as well. This committee has studied the Investment Canada Act several times.

It does lead to further discussion on whether we need to review it. The last time there was any discussion was during a omnibus budget bill, so if you go back to this committee's role in the past, not only was it raised under the Investment Canada Act, but later on when the Investment Canada Act was worked on, it was done as separate legislation.

In subsequent governments, both Liberals and Conservatives had the Investment Canada Act as part of their budget bills, so this committee has not vetted it since it was altered. I would be interested in a meeting on this just to find out how much more that process played itself out. I think that's our role as committee members, because the act has been changed a number of times without the committee hearing from any witnesses. It's like a review process. I don't see anything nefarious. It would be a good probe for us to find out whether there is an interest to look at the Investment Canada Act, given the threshold has dropped, the national security....

We have other issues too, and I'll summarize. An example would be private equity firms. We don't know who owns or has invested in them. They could be kingdoms. They could be other types of investors. We have no idea who's buying Canadian companies.

We have questions about some Montreal companies that have been bought. We have a series of things. This one stands out because it's gone through this current process, and I think it would be worth at least dipping our toes into it to find out how things are going by the way the act was changed, and it was changed without this committee's review. It was changed in a budget bill, so we don't know the mechanisms, and whether they're working or not.

I think those are the facts. I'd like to see if it's working for Canadians. It would be rather interesting because this committee... and I'm not trying to be overly political on this, but it's practically a reality. When we go to omnibus bills that include other legislation, it takes away the committee review and the full independence of the review of that issue. It takes away from business and public representation, from all those who would provide testimony and come back to us, as they would on any other bill. The repercussions are all that goes to Finance.

Inadvertently, we have ceded ground to the finance committee that does a pretty cursory flyover of issues in a bill, as opposed to doing the good scrutiny of legislation that committees used to do.

For that reason, it's worth at least a meeting to look at this, and I would move the motion at the appropriate time to have a vote on it. Let's be done with it. We won't be able to get to certain things because agreements have to be signed. That's the law, and that's fine, but at least we'll get enough information to know whether we need to do more work or no work.

The Chair: Thank you.

Lloyd.

Mr. Lloyd Longfield: I'm not intending to go back and forth myself. I wanted to lay on the table that if there was a role for the committee, it would be looking at the Investment Canada Act, but not auditing the process that's being used by Industry Canada.

The Chair: Okay. Thank you.

Frank.

Mr. Frank Baylis: Lloyd just touched on it. I think it's even what Brian's saying.

The concern I have with this particular motion is it's targeting one company. What we're talking about, Brian, is we should be looking at the process, and you mentioned the same thing. My concern would not be a specific Chinese company. There's an unfair trading advantage here. They can buy 100% of our company; we cannot buy 100% of their company. I'm quite concerned about our getting into a trade agreement that says we can buy 49% of a Chinese company; we cannot own 51% of a Chinese company, but they can come in and buy any company of ours.
I'm not interested in this particular motion because it's just looking at one company, but I would agree with Lloyd and Brian, if we wanted to take a look at the unfair trade practices with China right now. If I want to go to the United Kingdom, I can buy 100% of a United Kingdom company, and they can buy 100% of our company. We may or may not like it, but we're on a fair playing field. That's not the case here. If I want to set up a manufacturing plant in China, I cannot own it 100%. I think they're going to change that for manufacturing only—I think there's talk—but if I want to own a service company or anything else, they'd block it. That discussion is something I'd be open to.

The Chair: Before we move to Mr. Dreeshen, let me say that I want to keep us focused on the actual motion. There are two conversations going on here. One is trying to come up with another motion. That is not what's on the table. What's on the table right now is Ben's motion, and we should try to speak to that motion.

Mr. Earl Dreeshen: Mr. Chair, I think a lot of good discussion is taking place on this, and it all started and stems from the fact that questions had been asked and answers weren't being received. This was a major public concern in the discussions that took place, and it was as though the government had no intention of being forthcoming with the discussions.

We understand the concept of secrecy and that type of thing and we've been engaged in it as well, but we've also seen situations in which companies have been refused because of the structure of the government investment from outside countries.

I think it's important, if we go back to what the motion says—that's what we're talking about, making sure that we're staying on task here: looking at the review of the Retirement Concepts acquisition by Anbang Insurance—that this was in the public realm for quite some time. No one seemed to be getting the answers they required, and this is at least one of the reasons we're talking about it today.

We also talked about the Investment Canada Act threshold. When we're looking at it and are trying to make comparisons, I think to talk about the two together becomes useful.

We have to recognize what is going to take place, because industry is going to have a role. When we deal with TPP it's going to have a role, and a continuous role as we're dealing with CETA, and of course it's going to have a role when we're taking a look at NAFTA. All of these things we have to be aware of, and if the Investment Canada Act is something in which people don't have the confidence they require, I think this would be a great way to flesh it out with something that people actually understand, because of the concern that was presented earlier on.

The Chair: Brian.

Mr. Brian Masse: I think I may have a compromise amendment that might get to...and I'll ask that you see whether they'll review this.

I'll read it and I'll read it again next time, just so that you get the idea. I struck out the middle part of the amendment and put “that the committee consider undertaking a review of the Investment Canada Act, including a departmental public briefing and reply from the minister”.

Let me speak to the reason. I'll be very quick in speaking to it. It is that then we actually get a review of the overall thing—and there are a couple of others that I wouldn't mind getting a little more information on—and then we get a reply from the minister to the committee, and then we all get a good update, with just a couple of meetings to start with, on whether or not there is more work to be done. We get all of those things accomplished together. It takes a couple of meetings, and then the committee at that time can decide where to go from there.

In this way there is no singling out, such as the Liberals are concerned about. The Conservatives have a particular one here, and I have that one, but also there are a couple of others, the telco sector, and so forth, that are leading to other stuff.

Again, I think we get a good public briefing from the departmental side and from there we see whether the minister is available to go from there. I think that would wrap things up nicely, and then we will be able to decide whether there is further interest.

I'd ask that this be treated as friendly, and if we're good with that, I'm ready to move the motion with the amendment when appropriate.

The Chair: Could you repeat the amendment, please?

Mr. Brian Masse: We would strike out from the word “the”, so that the motion would read, “That the Committee consider undertaking a review of the recent acquisition of Retirement Concepts by Anbang Insurance and be satisfied that the acquisition met”, and then we put “Investment Canada Act”. Then we strike out “threshold” and then have “including a departmental briefing and reply from the minister.”

Again, it reads, “That the Committee consider undertaking a review of the Investment Canada Act, including a departmental public briefing and reply from the minister.”

We don't even have to have “public”. It can say, “a departmental public briefing and reply from the minister”.

There's at least a couple of days of meetings there.

The Chair: Ben, you're up.

Mr. Ben Lobb: Thanks very much.

Lloyd's logic is completely wrong.

I was on the veterans affairs committee for many years. The Liberals were in opposition. I can remember when Peter Stoffer was in opposition and all they did was question the decisions that public servants had made, and I was along with him questioning the decisions they had made. We're just talking about a different department and the decisions they make. That is your job as a member of Parliament, in my opinion.
Yes, I agree that they can't tell us all the details and dotted lines to all the different companies, because that would be under their non-disclosure agreement. However, we can question the officials on how they are satisfied with their decisions on whether or not this is a state-owned enterprise and on how the department ascertains that. That is completely within our realm as committee members, and they're not giving away any secrets about how they do that.

The other thing that's interesting is the question how it is that this company has basically backed off any acquisitions in the United States but was able to conclude one here in Canada. Again we can't get the specifics, but maybe the department can help us understand how they look at this.

I'm quite happy with Brian's amendment. It's fine. We're trying to deal with a serious issue, which is companies that try to maintain that they're a private company or whatever they want to describe themselves as, but quite likely, when you look at all the dotted lines, are owned in part by the Chinese government.

The vulnerability this leaves us with is that when the banks—whether it's the government or a bank that's run by the government, however the enterprise is set up—decide they need their money back, they want their money back. We've seen examples of that in the United States as well, in which the Chinese want their money back. I think they're having to go to get money from Russia or other countries; I don't know where they're getting their financing from.

These are the problems, and especially in this case we cannot leave people who are in nursing homes high and dry because China decides they can deploy their capital somewhere else and get a better rate of return. When we're talking about health care and about some very murky ownership structures, that is the job of this committee. I'll leave it at that.

I accept Brian's amendment, because it's trying to accomplish what we're trying to do, and yes, this is a more generic way of going at it. I'll leave it at that.

The Chair: Earl.

Mr. Earl Dreeshen: Speaking to the amendment, you have departmental officials coming in and you make it so broad as to talk about undertaking a review of the Investment Canada Act. I'm wondering whether we can be a bit more specific with respect to investments by perceived state-owned enterprises, so that our discussion is on what we really want. Otherwise we're going to sit here for an hour and we are going to hear the overall story about the Investment Canada Act, and all the different.... I'd like to see it focused.

I'm wondering whether there's a way of making it a bit more focused, or whether your intent was simply to have a broad discussion and then ask questions about the specifics that we're interested in.

I ask that question to see whether or not you think it's worthwhile or whether it makes the study too restrictive.

Mr. Brian Masse: Quickly, I appreciate the intent. The only thing we would be careful about, though, and the reason I would say no, is that with private equity firms, we don't know who really owns them. We'd get into a bit of that. “Non-democratic” then becomes a kind of mug's game related to some of these kingdoms and so on. Actually, they're quite sincerely some of the more important philosophical questions we ask.

I appreciate the sentiment and where it's coming from, but I think we can have some good research done beforehand and hopefully avoid that. I would just say to keep it simple for this, and hopefully that will be enough to get our colleagues to get this done.

Mr. Earl Dreeshen: Then I'm okay without adding to the amendment.

Mr. Brian Masse: Thank you. I appreciate it.

The Chair: Before we go to Frank, I have a question for the analyst or the clerk. We may not have the answer. Is there something down the line that's already going to compel us to look at the Investment Canada Act? Is there a review coming that we don't know about, such as with the Copyright Act, where we know we'll have to do a review?

Mr. André Léonard (Committee Researcher): I'm not aware of it, but I know that under Bill C-44, the threshold that you were talking about is going to increase from $800 million to $1 billion. For transactions over that threshold there has to be a review by the Minister of Industry.

I've done some research on that before. Since the act has been in existence, only one demand that was over the threshold was refused, and I think that was in 2009.

Mr. Brian Masse: It was MacDonald Dettwiler.

Mr. André Léonard: Yes, and it's refused if it's not in the best economic interest of Canada.

The Chair: All right.

We're going to move to Frank. We're still debating the amendment.

Mr. Frank Baylis: Well, I would like to start even a little further back. We had decided at some point that committee business would be done in camera. There are some issues here that I'm uncomfortable talking about in public. Was there a request that we not be in camera for this particular discussion? Is that why we're not?

The Chair: Right now this is just a motion, so committee business would be actually—

Mr. Frank Baylis: Maybe I'm misunderstanding this. To discuss this motion, should we not be in camera? There are some things here I'd like to express that I'm not—

The Chair: No. If we adopted the motion, for instance, then we would go in camera to figure out what the specifics are of that motion.

Mr. Frank Baylis: If we're choosing to discuss the details of a motion, and there are some interesting points I want to get into, I can still....

Let me ask this, then. If it's not supposed to be, I can ask that we go in camera. I have that right. Do I understand that correctly?
The Chair: You do, and then we would have a vote on that. I'm just going to point out that we have about two minutes left. I don't know where we're going with this at this point. We have two minutes left.

Mr. Frank Baylis: I have things to say about it, but I'm not going to discuss it. I'm just not comfortable. I'm just not comfortable.

I think I agree with what you're driving at, Brian. I like the idea. It's not something that I came, quite frankly....

Before I say, “Okay, let's just call a vote”, I'd like to think about it and reflect on it. You've made a good suggestion. There are things I'd like to share with you, but I'd also like to reflect on it first. You've made a suggestion to change this.

The way it stands right now, I was against this motion for exactly the reasons that Lloyd pointed out. I don't think it's our business, as overseers, to go into the nitty-gritty. If they follow the rules and we don't like the outcome, it's our job to look at the rules, but it's not our job to say, “Did you follow the rules?” We have to take, as overseers, that they're following the rules. If you're concerned that they haven't followed the rules, that's a different kind of conversation.

If you're concerned that the rules aren't right or the rules haven't been looked at, that's something I'm more open to doing. That's actually our role. We're not here to micromanage the process. I came in here against this motion as it stands. What you're suggesting, Brian, is radical. It's not just a tweak; it's a different perspective, which I'm more open to.

Mr. Brian Masse: If it was radical, it would be ruled out of order, and it's not. I have permission, and it's a friendly amendment, so—

Mr. Frank Baylis: Excuse my language. I didn't mean to say “radical”—

Mr. Brian Masse: I shouldn't interrupt, I apologize.

Mr. Frank Baylis: It's okay, Brian. I didn't mean to say “radical”. I was just saying that it's a shift I didn't perceive. I don't mean radical, and I'm not saying you're out of line. It's just the way I was looking at it, but I am open to—

Mr. Brian Masse: It's the first time I was called that.

Some hon. members: Oh, oh!

Mr. Frank Baylis: I'm not surprised about that either.

The Chair: There's still some debate going on with the amendment, so we're going to have to drop it, because we are over our time. Again, we'll find some time to continue this conversation, if we have time after the next one. We'll keep working on that.

Thank you very much, everybody.