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**EVIDENCE**

## Monday, March 24, 2014

## Chair

**Mr. David Sweet**

# Standing Committee on Industry, Science and Technology

**Monday, March 24, 2014**

● (1530)

[*English*]

**The Chair (Mr. David Sweet (Ancaster—Dundas—Flamborough—Westdale, CPC)):** Good afternoon, ladies and gentlemen.

Welcome to the 15th meeting of the Standing Committee on Industry, Science and Technology. We continue on our study of the entertainment software industry in Canada.

Colleagues, we have some business to take care of, so I'm going to be targeting about 10 minutes at the end. I know your agenda says about five, but we'll target 10 minutes, because I know there's usually a transition as we wish the best adieu to our witnesses. We'll have one item in public and one item in camera.

Without any other delay, let me introduce the witnesses we have here.

Our first witness is from Warner Bros. Games Montréal. Martin Carrier is vice-president and studio head.

On video conference from Vancouver, British Columbia, from the Centre for Digital Media, we have Richard Smith, director and professor of the master of digital media program.

On video conference from London, Ontario, from Digital Extremes, we have Michael Schmalz, president.

Colleagues, there's just one thing before we begin with Mr. Carrier's opening remarks. Please remember that we have folks on teleconference. I know it's easy to forget because they're on the screen rather than live with us, so please make sure they get adequate questions as well.

Monsieur Carrier, please go ahead with your opening remarks.

[*Translation*]

**Mr. Martin Carrier (Vice-President and Studio Head, Warner Bros. Games Montréal):** Good afternoon.

[*English*]

Thank you so much for having me this morning. I would like to first apologize. I have a “man cold”, so I may sound a little “Clint Eastwoodesque”, but since I'm from Warner Bros., that should be a good fit.

[*Translation*]

My name is Martin Carrier. I am Studio Head at Warner Brothers Games Montréal. I am pleased to appear before you today to help you better understand the Canadian video games sector. I thank the committee for having invited me. After my presentation, I will be pleased to answer your questions.

I am wearing three hats as I sit before you: I represent Warner Brothers, but I'm also president of Alliance numérique, the Quebec video games industry umbrella group, and a member of the board of directors of the Entertainment Software Association of Canada, better known as ESAC.

I have worked in the video game industry in Canada since 1997. I began my career at Ubisoft Montreal. I also worked in Paris. From 2008 to 2010, I worked as a consultant, setting up a new studio in Montreal which became the Warner Brothers Studio.

I am going to tell you a bit about Warner Brothers Games Montréal, the Warner Brothers development studio.

[*English*]

I have just a couple of notes. I heard before we started that we had some fans of *Looney Tunes* in the house. I heard some great impressions. Obviously, we know Warner Bros. from TV and we know Warner Bros. from the movie side of the business. We've been around for 90 years and we've been known for some classics throughout those years. About seven years ago, we turned our sights to video games as a way to bring some of our content to the new masses of consumers, namely those people who play video games. We have great brands that we use and that we can bring through the medium of video games.

As Warner Bros. decided to enter the space of video games, we acquired studios around the world. We have studios in the U.K., and in Seattle, Chicago, and Boston, among other places. In 2010 we decided to set up a studio in Canada because, as I told the folks at Warner Bros., if you want to make movies, you should go to Hollywood and if you want to make video games, Montreal is definitely a place where you want to be.

That did not endear me to the movie-making community in Montreal. However, I do believe it is the place to be for video games.

● (1535)

[*Translation*]

The Montreal studio activities began on June 1, 2010. On that first day, there were four of us. I am proud to tell you that today, 400 people work in Montreal for Warner Brothers. We work on the studio's big brands, that is to say everything related to DC Comics, such as Superman, Batman, Wonder Woman, Green Arrow, The Flash and all the others, and also of course, Looney Tunes, as I mentioned briefly. Warner Brothers owns many properties.

In four years, we launched four major titles. First, *Batman Arkham City Armored Edition*, for Wii U. That also includes two titles for children, *Cartoon Universe*, which features *Looney Tunes*, and *Scooby-Doo*, as well as *LEGO Legend of CHIMA Online*, that can be played online on the Web, and simultaneously, on iPhone and iPad mobile devices, which constitutes a first in that market. Our most important product is *Batman Arkham Origins*. That game was offered for sale on October 25 last. From the outset it ranked first in global sales, and was among the first 20 most successful video games at the end of the year. That is a huge success for a young studio like ours.

To achieve that level of success and quality, we count on multidisciplinary teams made up of artists, designers and computer programmers. Clearly in Montreal we have an incredible talent pool. In a radius of 2 km, about 6,000 people work in the video game sector. This concentration is unequalled anywhere else in the world. That is an incredible asset, and one of the reasons that explains our meteoric growth in Montreal.

From our studio in Montreal, we have also built our quality control global excellence centre.

[*English*]

They are also known as testers, and do the quality assurance on our products.

[*Translation*]

Thanks to our testing and production activities, we create hundreds of jobs in Quebec and contribute to an ecosystem that employs 9,000 people in the province.

Building on the success we have known up till now, we anticipate going from 400 to 500 employees in our studio, by 2018 at the latest. We can thus say without reservation that the headquarters of Warner Brothers, based in Burbank California, trusts its Canadian studio and the business environment that surrounds it. I must point out that this business environment and the special expertise of Canadian resources and talents are important for the growth of the studio.

When I am asked the question, I like to remind people that in Canada video games began to take root in the 1980s when the NFB launched digital animation programs that led Daniel Langlois to create Softimage. This led to the creation of a creative and technological community, which then led to video games.

From that spark the sector grew quickly, relying on a strong academic environment and partnerships with institutions. In Quebec, tax credits were the real spark plug that was the catalyst for existing conditions involving high technology, the academic environment and creativity.

Government programs, it must be said, including provincial tax credits or federal R&D credits such as the SR&ED program allow us to be competitive as a studio within the Warner Brothers Group. Since our name is “Warner Brothers”, people come to us every week to ask us to open a studio in their area. In Montreal we compete internationally to obtain a mandate. So it is important that we benefit from a positive competitive and regulatory environment to help us attain that objective.

This also allows us to take certain risks and to innovate by creating a game such as *LEGO Legends of Chima*.

I see Mr. Van Kesteren has an iPad, I believe.

● (1540)

[*English*]

Maybe he's playing Lego Legends of Chima online as we speak.

**Voices:** Oh, oh!

**Mr. Martin Carrier:** He could be. I'll make sure to check afterwards.

**A voice:** It's multiplayer.

**Mr. Martin Carrier:** It is multiplayer, so maybe someone else is using their iPhone to play with Mr. Van Kesteren.

That is the type of innovation we've been able to create out of Montreal using the different programs that I have mentioned before. That game, using the Lego licence that we work with, is something that is unique, that you can play on the web and you can play also on your iOS Apple device.

[*Translation*]

We compete with other Canadian enterprises to benefit from various programs. During the various meetings of this committee, you have had the opportunity of discovering an industry that is worth supporting, and whose future is very bright.

I must not forget to mention that federal research and development programs could be improved to encourage sectors that show strong growth and contribute particularly to the development of new technologies and expertise.

Canada excels at video game technology. Our slogan is the same as Canada's slogan at the Sochi Olympic Games: “*Let's go for gold*”. However, as in hockey, we need talented people in order to succeed.

Which leads me to talk about resources, a key issue for our sector. By resources, I mean the talent that exists in Canada. Others have mentioned it before the committee before me. We compete with studios everywhere in the world. We even compete with our own studios, for instance in London, England. Sometimes we look for people who have very specific expertise, but there are very few of these people throughout the world. It is important for us to have access to the best candidates from all over the world.

Although Canada is in a good position to train the best employees, sometimes we have to go abroad to fill certain positions demanding a particular level of expertise and experience. Sometimes there are only a few people in the global industry who have relevant experience or who have developed innovative techniques or processes.

[*English*]

I will give you a quick example of an international search for talent that we had to do before we started our game Batman: Arkham Origins. We needed a creative director, someone who is technically very savvy, who is also very creative, as per the position title. We eventually found this person to be working in North Carolina. He was a Scotsman who had worked in Vancouver for EA, had moved to North Carolina and was working for Epic. We eventually brought him back to Montreal.

This is just to illustrate the flow of talent and how that can work in our industry. And when we need that guy or that gal, we're very adamant that we need to be able to get that, and we hope to be able to have flexibility in our programs on the federal side so we can bring in these people in a very timely manner, because if we find someone, you can be sure that someone else knows they exist and is trying to get them also. We'd rather have them here with us and help develop our young talent than have them go somewhere else.

[*Translation*]

Qualified foreign professionals are essential to fill important gaps at the studio, when they give us an advantage by transferring knowledge.

Delays and restrictions related to the Temporary Foreign Worker Program are preventing the needs of the Canadian video games sector from being met. The sector hires highly skilled workers—let me emphasize the fact that they are highly skilled—who are paid much more than the national average, and contribute to the growth of a sector that is a leader in the digital economy.

As you have surely heard from some of my colleagues, each person we bring here represents a major investment and we do not do so lightly. These are very calculated investments and we hope to obtain excellent yields from them in knowledge and leadership. As is often said, few people in the sector come from other countries, but they are important people, and often, their contribution helps in job retention.

In closing I would like to emphasize the fact that the video game sector is a niche sector within other digital industries. It shows that Canada can compete in the world and succeed. This sector shows that Canada can and must continue to encourage job creation for the workers of the future.

Thank you very much. I would be pleased to answer your questions.

● (1545)

[*English*]

**The Chair:** Merci, Monsieur Carrier.

Now we'll move on to Richard Smith, who's with us via teleconference, please.

**Dr. Richard Smith (Director and Professor, Master of Digital Media Program, Centre for Digital Media):** Good afternoon, everyone, it's my pleasure to join you here. Chairperson, honourable members, and witnesses, thanks for including me in this committee's activities. I especially appreciate the opportunity to appear by video conference and avoid the travel.

I'm a professor from Simon Fraser University, but my role is as a director of the Centre for Digital Media, which is a joint venture of four universities: the University of British Columbia, Simon Fraser University, Emily Carr University of Art and Design, and the British Columbia Institute of Technology. We have a professional master's program called the master of digital media program, and it's one of the main outcomes of that joint venture of four universities.

This initiative—four universities working together—originated in a gift from a company called Finning. They're a Canadian global dealer of heavy equipment. They're the people who sell you your Caterpillar bulldozer, truck, or whatever. They're based in Canada, but they operate worldwide, and from the middle of the last century, they've performed what you'd call final assembly, customization, and service for the engines of a resource-based economy.

When they left their headquarters, which is near the rail yards in southeast False Creek in Vancouver, they donated the 18 acres of land there to the four universities. Since that time, we've dedicated ourselves to the same project in a way: the final assembly, customization, and service not of physical engines but the intellectual engines of a digital economy, highly qualified people.

It's a bit of a gimmick to make that connection between Caterpillar tractors and people, but on the other hand it is very much the case that young people, technically savvy people—as a previous witness just spoke of—are the engines of this economy. As I said, the main activity at our centre for digital media is a professional master's degree but we also have space for digital media firms, spinoffs from our school, and others who are attracted to the site, both Canadian and non-Canadian companies that come there, as well as events and non-credit offerings.

Many of our graduates go on to create their own companies, and we try to support those entrepreneurial ventures with space and support, but I'm going to try to focus my remarks on the program itself, the jobs the students get, the graduates get, and the companies they create upon their completion.

The digital media industry was the impetus for creating our school. This is not, to be fair, the brainchild of the universities. It really was the industry that got the other parties going, and Electronic Arts in particular provided a $1.25 million donation to get things started, and they pushed things through something called the Premier's Technology Council in a previous government that got provincial funding for the start-up and operation of the school—about $40 million.

There was a larger vision for this centre. It was going to be the world centre for digital media, and a lot of other funding was sought that did not materialize, but we have been quite successful with the funding we did receive—about $40 million. Because of that high initial support, good business planning, and to be honest, high tuition fees, the school operates on a break-even basis, including full accounting of all cost of facilities, operations, faculty, and staff. That's a pretty remarkable achievement for a graduate program in Canada, not to be dependent on taxpayers.

We enrol about 50 students every year in a one-year intensive program. It's course and project work, and they follow that year by a four-to-eight-month internship that takes about two semesters. In a typical year about two-thirds of our students come from outside Canada, paying about $52,000 in tuition. Canadians pay two-thirds of that, about $30,000.

They receive a graduate degree. A master of digital media, and it's accredited by all four universities, a unique thing, a parchment with four seals on it. That four-university arrangement has its advantages, but it also has its challenges, and I have to attend a lot of senate meetings and things like that. But we've simplified things a little by having one of the partners, Simon Fraser University, effectively be the managing partner, handling financial services, student services, and academic services.

● (1550)

I am sure you are not so much interested in the day-to-day running of the school as you are in the career outcomes. I will talk to those in a moment, but I wanted to talk a bit about the uniqueness of our program, because I think it speaks to what's different about a digital economy and why it requires a special kind of education and a special kind of support.

Ours is a graduate degree. The students arrive with a bachelor's degree from across a broad range of fields. About a quarter of the people we recruit you would call technical. They have computer science and engineering degrees. About another quarter are in fine arts and animation, and then the remaining half of the students come from almost any area—business, finance, science, arts, or social sciences. Digital media is fundamentally a blending of art and technology, and that blending is typically done by the people who are in neither camp but are in between those camps, because you're really trying to blend content with technology.

There are three main aspects to our program. There's coursework, which anybody with a graduate degree or undergraduate degree would be familiar with. We have a big project activity, which is a little bit different from the internship with which people are probably familiar. The courses are offered in a regular classroom although there are a lot of whiteboards and room for group activities, but it would look pretty familiar to anybody familiar with university education.

We have courses in creativity and storytelling, project management, digital media theory, law, and business. Those take the entirety of the first term really and get the students ready for their second term, which is unique to our school because it is a project term. The students take on a sponsored team project with a real client, real deliverables, and a real deadline. We have a faculty supervisor, and the sponsor also provides weekly supervision. It's experiential, project-based learning at its best, and the students learn at a "gut-feel" level by actually delivering to real clients and getting the network they will need after graduation.

They take a course in interaction design concurrently, but otherwise they work four days a week on 12 credits equivalent to a master's thesis. They're doing it in a group and they're building something. They're making a prototype, a proof of concept, or a vertical slice of a game. They're doing some sort of applied research and development.

The third term can be a reprise of the second term with another sponsored project, but they're also offered the opportunity to broaden and deepen their knowledge by taking an elective course, quite often from our partner universities. They can go to UBC, SFU, Emily Carr, or BCIT. They also have the opportunity to substitute for that second industry project what we call a "pitched project," in which they do product development of an idea of their own. About one third of our students elect to do that. What they're really doing is starting a business at that point.

In their fourth term—so after a year of coursework when they come back in the fall—they go into an internship term. Probably two-thirds of the students go on to do what we would call a regular internship, a paid placement at a digital media company, usually in Vancouver but it can be all around the world. Almost one third of the other students elect to take that pitched project they did in the summertime and turn it into a real business. They form what we call a "venture internship" in which they form a company and effectively hire themselves as their first interns. We provide space and mentoring support with entrepreneurs and residents and so on, as well as some physical facilities that they need.

A small number of students seek further education—they maybe want to go on to do a Ph.D. We provide an opportunity for them to go and work in a lab or something. We call that an academic entrepreneurship.

What are the outcomes of this kind of an education? We have very high placement rates. This is a program that industry wanted, that industry pushed for. Industry hires almost all of our graduates either immediately upon graduation or within a couple of months. Our students have very good outcomes in terms of staying in the industry. It is a volatile industry, and there's a lot of grunt work that sometimes grinds people out, but our students move into higher positions of product design, product management, and leadership. Really the motivation for our school was a recognition that Canada produced excellent undergraduate people in digital media, but not enough people trained in management.

● (1555)

Our students are able to ride out the inevitable ups and downs in that industry and continue on, and to start businesses as well. We've had 11 spinoff companies since the program started in 2007.

Your focus is the entertainment software industry, and that's video games. About 40% of our graduates go into video games directly, but I think importantly, the other 60% go into a broad range of industries. I think this is indicative of the enormous impact video games are having on everything else in the world, ranging from banking, to health care, to education, to retail. Our students are in all of those sectors.

The lessons learned about engagement, about how to find and retain customers, how to keep people going, all those lessons learned in virtual worlds are playing out in the real world now with things like 3-D printing and immersive and augmented reality. Our students are part of that revolution that's changing the entire world, not just the video game world.

When our school started, that's when the iPhone launched, so there was a moment in time when everything was about the virtual and online world. Then it became all about the mobile and ubiquitous world. We've transitioned quite a bit.

I think the third wave is upon us now. It's really the things we call Internet of things and augmented reality, all the ways in which digital media is coming into our cars, into our houses, and into our built environments. It's a very exciting time, but it's also very challenging.

I look forward to answering your questions, and talking about how highly qualified people play a big role in that future.

**The Chair:** Thank you very much, Mr. Smith.

Now it's on to Mr. Schmalz for his opening remarks.

**Mr. Michael Schmalz (President, Digital Extremes):** I'd like thank the committee for asking me to speak before you. I'm delighted to tell the story of Digital Extremes and to answer any of your questions about our company or our place in the Canadian and international game industry.

Digital Extremes is an independent video game developer, meaning we're not associated with any other publishers or any other part of the industry, and we work completely independent of them. We were founded in 1993 so we're now in our 21st year of operation. We have a 35,000-square-foot studio that's presently located in London, and we employ about 200 people.

The games that we make primarily have been for retail sales, and they've primarily been the box games. We have focused in the last 10 or 12 years on making the big box console games, and have worked with a number of different publishers, making games on our own and also in collaboration with other game companies. We've worked on some of the big game industry franchises, such as Halo and BioShock. We've done some work-for-hire projects doing a comic book adaptation of a game, The Darkness, and also a movie adaptation for a large-budget video game for *Star Trek*, collaborating with Paramount.

Back when we started Digital Extremes in 1993, the video game industry literally did not exist in North America. There was nothing here. Our games were highly pixelated pinball games that were distributed on clones of 386 computers in a day before the Internet really was anywhere. People would get our games for free when they bought a cloned computer, or a clone computer, and they'd play through it a little bit. There would be a screen at the end saying that if they liked our game to please mail a cheque to this address and we would send them the rest of it, or some extra levels, or some extra pinball tables.

That's how we got started. We had the good fortune, shortly after, of teaming up with an American company called Epic Games and working on the Unreal franchise, which was also primarily a PC game.

In 2003, we realized as an independent developer that the industry was moving towards consoles. That year, there were more people playing video games on consoles, such as Xbox and PlayStation, than there were on PCs. So we adapted our techniques and our technology and transformed our company into primarily a console company. For roughly the last 10 years, we've been making games, first for the Xbox and then the Xbox 360, as well as for PlayStation. Again, those have been mostly work-for-hire projects.

The industry of course, during those years, developed in ways we never envisioned it would. It was becoming bigger and more spectacular, and in fact an increasingly difficult place for an independent developer to compete. Unlike some of the larger publishers that have been around for 15 or 20 years, in which the names don't change, it's very uncommon for an independent developer to be able to stay around that long. Many of our independent game companies don't get the hits and go out of business.

I want to emphasize that we, the content creators, are probably at the most precarious end of the game industry, because when things don't work out—and it has been, quite honestly, a very difficult last five years for the game industry—that's where the hardship hits the most. You'll see that a lot of the layoffs and studio closures do in fact impact the independent game developers.

Over the past 10 years, Digital Extremes have developed our own proprietary game development technology with the aid of the federal SR and ED program. This has given us some competitive advantages in allowing us to create video games more efficiently, and to be able to develop certain functionality in ways that other developers have a difficult time doing.

● (1600)

Our most recent transition, then, has taken place probably in these last one or two years, in which we have gone away from the retail boxed-game sales into the digitally distributed, free-to-play model using microtransactions. This is getting back to the roots of our gaming of almost 20 years ago. It's an interesting cycle where we will publish a game on the Internet for free. People download it for free, and then if they like it, they have the opportunity to buy additional features or additional items in the game for which we can charge them via a microtransaction model over the Internet. Presently, our last game called Warframe is monetizing like that in about 125 different countries around the world, and is doing quite well for us.

I also want to emphasize the fact that the colleges and universities, over the past 10 years since we've been in operation, have been very, very good at developing entry-level designers, artists, and programmers. We're very fortunate to have such a great system.

Unfortunately, for many of those years, our American and other friends realized that there were also great resources here, and we had a lot of game industry professionals move to the United States and elsewhere to take up that profession. As a result, one of the common themes is that finding mid-level and senior-level employees with 5, 10, or 15 years of experience continues to be a challenge in Canada. We want to grow the industry, and the current immigration policies make it difficult, especially for independent developers to be able to tap the wealth of experience that exists outside the country.

We feel that the immigration system is more set up to keep people out than try to find reasons to let qualified people in. So I would also support that point that was made earlier on today.

● (1605)

**The Chair:** Thank you very much for your opening remarks, Mr. Schmalz.

We'll now go to rounds of questions. Colleagues, we're at seven minutes, straight across the board. That should bring us—if everybody is disciplined—right to the time when we need to give our witnesses a thank you and ask them to depart so we can go into some committee business.

I'll begin with Mr. Lake for seven minutes.

**Hon. Mike Lake (Edmonton—Mill Woods—Beaumont, CPC):** Thank you, Mr. Chair.

Thanks to all the witnesses today. I'm going to start, if I could, with Mr. Smith.

Mr. Smith, you bring an interesting perspective to the conversation because we've heard much said about the quality of Canadian employees in this industry, but have also heard there is a lack at that higher experience level.

As I listened to you, when you talk about your students, I was wondering, first of all, about their backgrounds. You said what degree backgrounds they're coming from. Are there a number of them who are coming with a certain level of experience within the industry before they come to you for their master's program?

**Dr. Richard Smith:** Yes. We have the traditional graduate student, I guess, who has just finished their graduate degree or is maybe one or two years out. Our average age is I think about 27. We have students in their thirties and forties and actually even one or two in their fifties, so I think for a number of people it's.... Quite often, people get started in the game industry with a bachelor's degree. They rise to a certain level. A few of those people go right to the top, but others just kind of top out and are not getting the advances they'd like. For some of those people, our program is a way to advance in your career and take on those roles that are more in management and are so essential to the growth and sustainability of viable companies. It's one thing to have a vision and a passion for digital media, but you have to run a real business. That's one group of people, and quite often they have five or ten years' experience.

The second group of people who have experience and come to our program are people who are looking to transition from some other industry and into digital media. I have a couple of architects. I've had teachers. I have people in the business world and in science. Everybody around us realizes the importance of digital media, but they don't have the training and, importantly, they don't have the network. That's why people do an M.B.A.; it's for the people you do the M.B.A. with. By doing a graduate degree in digital media, those people get not just an education, but also a network.

In a third group are people who are coming back for certification and the sort of elite training they really need to advance their career. I have this year three people who are currently college and university instructors and who managed to rise up to a certain level with their talent, but they aren't going to move on to full professor or whatever because they don't have a graduate degree yet. That's a third group.

But across that, we do have a fair number of people with training, and that is a really important thing for the quality of this school, too, so we really appreciate having them.

**Hon. Mike Lake:** In terms of the program you have, are there other organizations in Canada doing similar work to yours, with similar programs, and if so, to what level do you work in cooperation with them?

**Dr. Richard Smith:** We're ourselves a copy of a program called ETC at Carnegie Mellon University. About three years ago, the University of Waterloo launched a program that's based in Stratford and is very similar to ours. It's called "master of technology and digital entrepreneurship" or something like that. Just last year, Ryerson launched a program, with the assistance of my predecessor to set up another master of digital media program at Ryerson. It's substantially the same, especially in the coursework component, although they have sort of dialled back the project aspect, which is a very difficult thing to manage, quite honestly. I think we now do a good job of it, but I think that's partly why Ryerson chose not to go down that path. It is a very challenging enterprise to keep that running.

**Hon. Mike Lake:** How much interaction do you have with those other organizations or other groups that are doing the same thing, just to ensure that we're....? We've heard about this significant need from the industry. How comprehensive is the approach on the academic side?

● (1610)

**Dr. Richard Smith:** I'd say it's modest at best. For example, if you were hearing from schools of engineering, they would have a national council and a professional association and all that sort of stuff to deliver a coordinated effort.

I know the people who run the other programs. We've gone to visit them. They've come to visit us. But it is very much on an informal basis. There's not any sort of mechanism to coordinate our activities. We don't really have anything formalized to do that. It probably would be a good idea, but we're only six or seven years old, and the others are really just two and three years old, so we're maybe a little young yet to have that kind of coordinated approach.

**Hon. Mike Lake:** Thanks, Richard. I'm going to switch over to Martin.

Martin, I have to follow that same theme. You said that there are 6,000 people in Montreal, I believe, 6,000 people working in that two-kilometre area. To what extent is there interaction? Obviously there are competitors in that area, but there's definitely a common interest in growing the industry. Also, you would face common problems, as you've mentioned, with labour. We've heard everybody talking about the labour, especially in that high end or mid-to-high end.

To what extent is there interaction and cooperation among the companies to, number one, get together, talk about the issues, and identify those common issues, and then to, number two, work with organizations like Richard's to come up with ways to address them?

**Mr. Martin Carrier:** I've been around since about 1997 in the games industry in Montreal, so I've had time to see things ebb and flow and there was a time where it was actually a lot more about competition than it was about cooperation.

We'll always be competing companies in the sense that we put out competing products, but I would say over the past two years there has certainly been a change in the scenery in the fact that now the companies in Montreal—and also in Quebec City, where there's another sizable hub—are definitely working together. One of the ways we do that is through Alliance numérique, which I mentioned before, and through ESAC also. We're also working with the different schools in the city, both at the college level, or CEGEP, and universities.

So you can see a sign of maturity in the industry in that sense. Technologically we're always on the edge, so it's never mature, but in terms of the industry you can see something that's really coalescing into an ecosystem that is a lot stronger and a lot tighter than it once was.

**The Chair:** Thank you very much, Mr. Carrier, that's all the time we have.

Now we go to Ms. Nash for seven minutes.

**Ms. Peggy Nash (Parkdale—High Park, NDP):** Thank you very much, Mr. Chair.

I want to say it's a real pleasure to be part of the industry committee again. Mr. Warawa and I go back a number of years on this committee so it's great to be back here.

My three sons would be thrilled to know that in my first meeting I'm here studying the video gaming industry.

Mr. Carrier, I have to ask you, how do you get to be a video game tester? My kids really would want to know.

**Mr. Martin Carrier:** You look for the oversized thumbs, that gives it away, usually.

There's no particular curriculum that people follow. It's probably one of the areas in our industry that hasn't yet really professionalized itself. There are some programs more on the high school level in Montreal that guide people towards this, but it's not—

**Ms. Peggy Nash:** So gamers just compete? It's just whoever plays the most games?

**Mr. Martin Carrier:** It's about knowledge. The cliché is that people are just playing, but they're actually really testing and they have extensive and exhaustive test cases that they have to go through and follow, so it is very technical work.

I worked in aerospace before 1997, before games, and in testing QA there was a very professionalized approach in that you can get a technical degree in that kind of QA-ing. But you can't yet in our sector. As we saw with our game, Arkham Origins, suddenly we're testing a product that is much more complicated than before, that is online, that has integrated microtransactional aspects as Mr. Schmalz was alluding to. We're now seeing that it's much more complex, so the oversized thumbs just don't do it any more, we need people who actually have gone to school and have a very good analytical mind.

● (1615)

**Ms. Peggy Nash:** You need an oversized brain as well, now.

**Mr. Martin Carrier:** That would probably help.

**Ms. Peggy Nash:** In your presentation, you talked about the importance of the SR and ED tax credit. Not just your company but your whole industry is one that must constantly innovate and sometimes, I expect, your lead time in your R and D before a game finally starts making money can be quite lengthy. I would love to hear about that.

There were some cuts to the SR and ED tax credit. Does that affect your industry? Is there something else you're looking for in terms of government assistance that helps spur innovation in the gaming field?

**Mr. Martin Carrier:** To your point I would say, yes, this is a fast-moving industry. What I like to point to is that when we started the studio on June 1, 2010, the iPad didn't exist, and now that's become a major gaming device. It just shows the speed at which our industry moves.

We're very appreciative of programs such as the SR and ED credit that allow us to take the extra risk of investing in this cutting-edge technology. Sometimes what we don't necessarily see is that this technology that's developed in video games often applies to medical imagery, and it can apply to aeronautic simulators. We see that in our recruitment of folks because we sometimes have programmers and engineers who come from CAE Montreal or who have come through the medical side of the business.

So these programs are important to us, we've made use of them in the past, and want to make good use of them in the future. It's a way, also, whereby when we go after mandates from our head office, in the case of Warner Bros., we're able to point to these programs and say, you know what, we have a very favourable environment for development of new technology, and we have good support from the government. And that says a lot.

**Ms. Peggy Nash:** So you're happy with the support you have now.

**Mr. Martin Carrier:** Yes, and we want to make sure that keeps going.

**Ms. Peggy Nash:** You talked about the issue of international talent. It sounds like we lose talent to the U.S. in this industry, but we don't have the same flexibility to bring talent into Canada. It sounds like those international collaborations are quite important.

Is that an issue you would like to elaborate on?

**Mr. Martin Carrier:** Whenever we need to get someone in the country, we're always in a rush. It's very indicative of our industry. We're in a rush with technology. We're in a rush with talent. This is very fast moving. There's also the issue of lead time as you said. If we're not acting today, then we're wasting a lot more time down the line. That's why we're always looking for the best flexibility in our ability to bring people on board to our different companies, be they in Ontario, B.C., Quebec, or across the board.

I think the programs had a bit of a lull. Things are getting better, but I think it's important for us to keep reminding everybody and send the message that flexibility is key for us to bring in that talent, which is not cheap labour. It's actually well-paid labour that brings expertise, and allows us to keep building and keep creating jobs here in Canada.

**Ms. Peggy Nash:** Thank you.

Mr. Schmalz, thank you for your presentation. It's quite fascinating that you have had not only a window on the industry, but you have been an active part of this industry for all this time, 21 years I think you said. That's quite remarkable to start up a small business and grow it to a medium-sized business, and sustain your business in competition with a number of industry players in Canada and around the world.

I heard you speak as well about finding those mid-level managers, that we lose some of them to the U.S. and the difficulty with bringing them into Canada.

What advice would you give for other start-ups? Given your long experience, what advice would you have for starting, growing, and maintaining a successful business in this field? This seems to be an area where Canada really can compete with the best.

● (1620)

**Mr. Michael Schmalz:** That's a great question, and I get it quite a bit.

I would say if you're starting a business in the video game industry, you have to really love games. You have to love the idea that you're creating new and potentially extraordinary experiences, and you have this potential for reaching worldwide markets. That's a pretty awesome thing, especially for young graduates.

I would also warn them that, as with any start-up, there's a lot of potential for failure. You need to embrace failure as part of the process, and you need to learn from it.

What it takes to build a company, as we've done with Digital Extremes, is you need to get a hit. To get that hit you have to have a combination of the right timing, the right skill, the right idea, and a whole bunch of luck. I think we have done that at least two or three times over the last 21 years. We've pulled a few rabbits out of our hat to be able to make it there.

That would be my advice. Get prepared for those hard learning experiences. Also to a recent graduate I would say to start out for the first couple of years in a job in an established video game company, whether it's a medium, large, or even a small one, and get a sense for the business dynamics of it. It's one thing to be able to go and program stuff—

**The Chair:** Mr. Schmalz, I'm sorry, but I have to interrupt. We're way over time. I tried to allow you to answer, but I'm going to have to move on.

Now we go to Ms. Bateman, for seven minutes.

[*Translation*]

**Ms. Joyce Bateman (Winnipeg South Centre, CPC):** Thank you, Mr. Chair.

I also thank all of our witnesses for being here.

[*English*]

Mr. Schmalz, I'm going to give you the first 20 seconds to finish your thought, because I was very interested in what you had to say. If you want to finish what you were saying, sir, you were basically saying to get some real experience. I find that fascinating—

**Mr. Michael Schmalz:** Yes, exactly—

**Ms. Joyce Bateman:** —because the juxtaposition of industry pushing to get Mr. Smith's organizations for universities to create a program.... I'm humbled here today, because I didn't know there was a program in digital media and digital technologies. The juxtaposition of what you're saying with this academic approach is in saying to get some real experience, to get a real job in a real company that's doing real gaming work.

Is that basically it?

**Mr. Michael Schmalz:** That's part of it, yes, the fact that they have internships. We've been in touch with a number of programs that were mentioned here, at Ryerson and over in B.C. They understand that this is a big part of it, because besides being a great programmer or a great entrepreneur or whatever, you have to understand the business and you have to be able to see it first-hand; otherwise there are many big bear traps out there that can take you down before you've even started.

**Ms. Joyce Bateman:** Fair enough.

On the same theme, perhaps we could go to Monsieur Carrier. But I'll start with Richard Smith.

Your program, Richard, is in existence because the industry came to you and said, we need qualified people. You categorized your typical student by saying that there are some who need to learn how to run a business and there are some who are transitioning from other careers—maybe as an architect, and you used a few other examples of professionals such as teachers—such that they want to build their skill in a different way.

That fascinates me. I'm a business school graduate—I went to Ivey—and I'm a chartered accountant. If I were hiring, if I were running the business—and this is why I want to make sure I get Monsieur Carrier's position as well—I wouldn't go to your one-year program. I'd hire a business school grad and then work with that person, because these guys can manage any industry. We have somebody who's been in this career since 1997—Monsieur Carrier—who was also in the aerospace industry. That speaks to the skill transfer piece.

I'm fascinated with the fact that industry put up obviously a lot of money to.... You're clearly filling a niche that is required. Can you tell me what it is and why they need you and not the business schools?

● (1625)

**Mr. Richard Smith:** When I came into this position, a colleague of mine who also ran a professional degree gave me some really good advice, which is that my program needed to be industry-relevant but also had to be research-informed.

If you build a program that only responds to industry, you end up reproducing that industry, and in the case of the video game industry, reproduction is not a viable option. You can't produce the game that somebody produced last year. You can't do that; this is an industry full of innovation. It comes in our program and in programs similar to ours from the blend of research and industry.

On the industry side we have a program that has a lot of industrial input, in the projects and in the internships. But we also have the input of our four universities and the global research community to create the new knowledge, the new approaches, and the new ideas. Quite frankly, the heads of the young people coming out of graduate degrees are bursting with new ideas.

So it's in that blending and making sure that it's industry-relevant but also research-informed, so that you are advancing the industry and are pushing it forward with your new graduates. That is really the distinctive and the absolutely important element of running something that is not vocational but professional.

**Ms. Joyce Bateman:** Thank you very much.

Could we have your view, Monsieur Carrier? Clearly it will be slightly different. You're with a very big player, not a small independent. Where do you fit in this discussion?

**Mr. Martin Carrier:** What you point to is one of the interesting peculiarities of our industry: there are so many different needs, and we have so many job types that we cater to many different academic programs and many different employer profiles.

For example, we have a level designer who may not have formal training per se. The person may have gone to school and may have a college or university diploma, but you won't find anybody who has a level design graduate diploma. An artist may be an architect by way of background and a computer programmer. Usually I like to say that these people didn't hang out at the pub at university; these are very different people who have different backgrounds but who all work in games because they're brought together by their passion for gaming. We need many different academic programs and job trainings to be able to fill these different roles.

**Ms. Joyce Bateman:** So is it fair to say that you'd focus on the knowledge of the individual, however eclectic that might be, as opposed to the academic background?

**Mr. Martin Carrier:** Well it's actually both. We don't say that we need only people who graduate from university, but we'll look for someone who has been playing games for a really long time and knows them inside out, so it's really a mix of everything. It's a little hard to really sort of peg down, but we find success in our ability to mix it up, really.

**Ms. Joyce Bateman:** Okay.

You also mentioned that Montreal is the best place to be in the video gaming industry, this digital industry. I'm sure there are cities everywhere in Canada that want to know why. Why is it? What are the key recipes for success for this industry in your city?

**Mr. Martin Carrier:** Today we consider that it is, and pretend to be that because of the concentration of talent that we have.

If we go back, it is about universities, colleges, academic training, being on the edge, and having that culture of academia. It's also about creativity. It's about having, in a sense, that *je ne sais quoi* that you find, and it's that sort of spark that created Cirque du Soleil. You have that sort of creative spark in Montreal.

It also comes because there are lots of different influences in Quebec and in Montreal per se. It is an immigrant city, so you have people coming from all over the place and that sort of adds to the mix. So the mix is academia, creativity, culture, and technology also, because there are lots of high-tech industries.

**Ms. Joyce Bateman:** Okay.

**The Chair:** Thank you very much, Mr. Carrier and Madam Bateman.

Now on to Madam Sgro for seven minutes.

**Hon. Judy Sgro (York West, Lib.):** Thank you very much, Mr. Chair.

Thank you to all three of you.

This gets more interesting every week that we are on this study.

I'll start with you, Mr. Carrier. How did you end up going from aerospace into the gaming industry? What skill set did you take from aerospace that you were able to apply so successfully to this industry?

● (1630)

**Mr. Martin Carrier:** Back to my earlier point, lots of people have atypical backgrounds in games. I was a political science and then a business graduate from McGill, went into aerospace, and then this new company called Ubisoft came to town in 1997 and started hiring like crazy. I figured that maybe I had a shot. I was actually hired as their first communications and PR person.

Over a couple of years I parlayed that into evolving into the games industry, setting up as a consultant, and then I enticed Warner Bros. to set up shop.

That's sort of my background, and I think it just exemplifies the diverse nature of the industry.

**Hon. Judy Sgro:** It's clear that there are a lot of different skill sets. I'm sure many of our kids, specifically our sons, spend a huge amount of time on video games. I haven't quite seen it in females as much, but certainly for those of us who have sons, as Ms. Nash mentioned, we know they're very active in it. There is no question about that. That's why I was interested in finding out where your background was and how you flowed right into that.

I want to ask you this particularly, Mr. Carrier. Every one of the witnesses we've had has mentioned the issue of temporary foreign workers and the challenge of getting people over here. But my concern is, what level of expertise do they have that is so superior that we are just now, through the work of Mr. Smith and the universities, starting to raise the level of our game here? What level of expertise do they have that is so much further ahead of what we can get here in Canada?

**Mr. Martin Carrier:** I think it's the level of expertise and rarity, also. This is a fairly young industry, so we don't have many people who are, for example, the creative director type. There are not that many of these guys out there who have created high-level games who we could hand a Batman franchise, for example, that they would do.

It's expertise and it's also the fact that they are few and far between. For example, for our Chima online game with Lego,we had to get a network programmer from Korea where obviously connected experiences are very much advanced. We needed that one expert. There was one guy, almost in the world, who could do what we wanted because he had the experience in that field.

These are very targeted individuals, and once we do find them, we want to get them in as fast as we can.

**Hon. Judy Sgro:** Mr. Schmalz, would you like to comment on that issue of how you have managed in 21 years? And congratulations, by the way, on what is appearing as a new industry for everyone else.

**Mr. Michael Schmalz:** Thank you very much.

We're not quite to the point where we're looking for those one or two people; we are looking for general skill sets. The problem with the video game industry, in terms of programming, is that we're looking for people with programming languages that are a little bit off the beaten path from what normal university programs will teach. In general we're looking for people who have studied languages like C++ and would have gone to university with a view to eventually getting into the game industry. And then again, we're looking for people who are at the top of their class, so that we can compete internationally. So we're looking for people from among a relatively small group.

It's the same with some of the other disciplines that we have, such as art and design. We're finding, as I said, that we're getting great entry-level people. Whereas in the 1980s everyone wanted to become doctors and lawyers, now it really does seem that all of the smartest people want to be somewhere in digital media. So we're getting great smart people at the entry level, but we find that we're now having to repatriate a lot of ex-Canadians, bring back to Canada people who have gone to companies such as ILM or Pixar or Electronic Arts in the United States. We have to bring them back, plus we have to look for that senior talent, people who have experience at the senior levels, because it's very difficult to get a network programmer who's very smart and has 15 years of experience and bring him into an entirely new industry such as video games and expect that person to perform. That creates a relatively small pool of potential candidates for these senior roles that we need to fill.

● (1635)

**Hon. Judy Sgro:** Mr. Smith, I would expect that at the completion of this meeting today you will have learned a lot—again, from a different angle on the industry—as you're planning your program, to try to get that expertise and provide those opportunities for our many Canadians who clearly have an interest in this.

In terms of funding and the future, how do you see that unfolding with the partnership you currently have?

**Dr. Richard Smith:** We have a stable financial model for our school. We have an endowment that helps support the school, and the tuition carries the remainder of the burden. Our tuition is probably too high. Interestingly, it's regarded as a reasonable price or a good price by Americans, Europeans, and Asians; Canadians think it's way too expensive. They're used to paying 30 or 40 cents on the dollar for their education, and they kind of choke on the full price. But that's the nature of our program. We're not eligible for NSERC scholarships and things like that.

But I'm quite excited—apart from the topic of video games—to be running a graduate program that supports itself, that breaks even every year. I think that's a remarkable model for education in Canada, and I anticipate...and seek to move forward. It gives us some independence. It gives us the ability to move in new directions; we don't have to wait for the funding to appear. So I'm not too worried about the funding. Of course, it's always exciting to have more, but I think that the better issue is how we keep ahead of a very dynamic and fast-changing industry.

You'd be surprised actually, you were making reference to the—

**The Chair:** Thank you very much, Mr. Smith. I'm sorry, that's all the time we have.

Now on to Madam Gallant, for seven minutes.

**Mrs. Cheryl Gallant (Renfrew—Nipissing—Pembroke, CPC):** Thank you, Mr. Chairman.

First of all, to Mr. Carrier, what types of federal government policies attract talent from other countries or help you to attract talented people from other countries? Is it low taxes? Are there some other aspects that provide something of an incentive when compared with where they're coming from?

**Mr. Martin Carrier:** I think our ability in a sense to guarantee... or at least help in getting people moving rather quickly is certainly key. Coming to Canada, people often know to expect sometimes higher taxes than they have where they come from, and often individuals are willing to forego that just to be able to have the opportunity to work on big projects. So often time is of the essence, and that's why for us the ability to get work permits and get people in is key.

**Mrs. Cheryl Gallant:** You mentioned work permits, and I'd like to raise the issue of the labour market opinion. How long does it take for you to get through that process?

**Mr. Martin Carrier:** I couldn't tell you exactly the number of weeks right now. I know it's gotten somewhat better, but I'd have to check with my HR folks. I don't remember the exact amount of time.

**Mrs. Cheryl Gallant:** Has that been the difference between your getting the right person at the right time for the right job, or not?

**Mr. Martin Carrier:** Sometimes it has. Often, it becomes a little more difficult to convince people to hold on to our offer, because, obviously, that gives more time for either their current employer to up the stakes or for someone else to swoop in where they are already.

**Mrs. Cheryl Gallant:** So it's a bidding war as well, perhaps even within Canada, for the same person?

**Mr. Martin Carrier:** Yes, it is.

**Mrs. Cheryl Gallant:** Okay.

Once the person is here, what can the federal government do to create the conditions to help you retain that employee?

**Mr. Martin Carrier:** I remember, I think at some point before, there were some income tax holidays, where if people qualified under a certain researcher level, or something like that.... That's often very important—it's not something that lasts ten years in time, but maybe one or two years—and it becomes very much an incentive for people to make the jump over.

● (1640)

**Mrs. Cheryl Gallant:** Insofar as internship programs funded through NSERC or other entities go, are you able to take advantage of those?

**Mr. Martin Carrier:** We mostly go through universities for our internship programs, so that's not something we've touched upon just yet. But we're also a younger studio, so we started our internships about 18 months ago.

**Mrs. Cheryl Gallant:** Are these interns paid?

**Mr. Martin Carrier:** Yes, they are.

**Mrs. Cheryl Gallant:** Okay, thank you.

Dr. Smith, you mentioned three courses. Can you tell me with respect to the projects that your students undertake, whether there is funding from the company? Or is that a combination of the tuition and the partnership with whichever company is providing the project?

**Dr. Richard Smith:** The projects are paid and we have in-kind as well as a cash contribution that the industry actually pays, which helps cover the cost of the space and the instructors, and that sort of thing, and the equipment that the students might need. I regard this as a major indicator of industry support that the industry actually pays us to deliver a project for them.

**Mrs. Cheryl Gallant:** Going back to costs, with tuition, is the 30 some-odd thousand dollars that you mentioned per year or for the entire program?

**Dr. Richard Smith:** Well, because it's a one-year program plus an internship, it's effectively both. It's a year, and other than their internship student fees that are about $600, it's for the entire program.

**Mrs. Cheryl Gallant:** Okay. I thought there was a master's as well as a graduate program offered.

**Dr. Richard Smith:** Yes, that is a master's degree. But it's a one-year master's degree.

**Mrs. Cheryl Gallant:** Once someone graduates from your program, what kind of income can they be expected to earn?

**Dr. Richard Smith:** They tend to move into positions in about the $50,000-to-$60,000 range, mid-entry level positions, and then move up fairly quickly. Our students are typically earning about $80,000 to $90,000 within two years.

**Mrs. Cheryl Gallant:** I know that you said Canadians are only paying $30,000, but $30,000 after having been in school for a number of years is a lot to gather together for tuition. But what you're saying is that they're making fairly good money afterwards.

**Dr. Richard Smith:** We have a scholarship program.

**Mrs. Cheryl Gallant:** Okay.

With respect to the types of projects and education that they receive, would there be an inclination or any road forward into cyber-security jobs? Would that be an element?

**Dr. Richard Smith:** Yes, I had one student work for CSEC after graduation. It isn't a major focus of ours. We tend to focus on the part of digital media that's fun and entertaining. But, on the other hand, a key component of what we do is getting diverse groups of people to work effectively together.

Digital media is globally a very competitive industry, as my fellow witnesses will attest to. You have to compete on a global stage. The efficiency that is demanded is extreme, and a great part of that efficiency, because the resource here is the highly qualified people, is getting those people to work together effectively. It's the secret sauce that we're trying to deliver. In that sense, I think our graduates would be effective whether in games, whether it's medical games, whether it's educational, or even in security. Because those kinds of things are all delivered by digital technology people in teams.

**Mrs. Cheryl Gallant:** Okay.

Mr. Schmalz, in what ways can the government promote the video game industry in Canada besides tax incentives? Are there any barriers to your new developments that we can overcome?

**Mr. Michael Schmalz:** I would say that, in general, the tax incentives that we've seen in Ontario, especially over the past 10 years—and we've been in a dialogue with the Ontario government during that time—have basically brought the Ontario video game industry from when it was very small about 10 years ago to being quite sizable now, in comparison with the other video game centres in Canada.

I would say that where subsidies are given, especially in Canada, they do offer the support that video game makers need to make those initial mistakes and still be able to continue and work forward and not lose their businesses right off the start.

The way that the video game industry—

● (1645)

**The Chair:** Thank you very much, Mr. Schmalz. I'm sorry that I have to interrupt you again. I apologize, but time is always our enemy here, and I did allow some time to go over.

[*Translation*]

Mr. Côté, you have the floor. You have seven minutes.

**Mr. Raymond Côté (Beauport—Limoilou, NDP):** Thank you very much, Mr. Chair.

I thank the witnesses for being here with us today.

Where to start? I have a lot of questions. I have found this study very entertaining. I also learned a lot, but most of all, I hope to be able to help the sector develop.

I use my iPad for work but I am also a faithful *Clash of Clans* player, a Supercell game. I realized that some of our witnesses were probably among my gaming partners or opponents.

I will begin with you, Mr. Smith. I know that you are a researcher and that you have worked in various sectors. You are interested, among other things, by the social impact of new technologies. Do you conduct any research in your program and the school that you direct?

[*English*]

**Dr. Richard Smith:** Personally, I've had to limit my research because of the administrative load of running the program, but we do maintain some limited research by virtue of our connections to our four partners. We are the national headquarters for something called GRAND, which is a federally funded centre of excellence in animation and graphics. We also have visiting researchers from UBC, a group called Mitacs, which is basically an interaction design group from Computer Science at UBC. We also have some cognitive science people from SFU and UBC working on our campus. Our campus will also be the home to Emily Carr University in two and a half years so we'll have that benefit as well. So we do bring research in, and of course we have visiting researchers. We run programs for visiting professors. We had professors from Poland, France, and the United States in the last couple of years.

[*Translation*]

**Mr. Raymond Côté:** That is interesting.

Aside from cuts to research and development, there is also talk of reorienting programs to allocate most efforts and means to applied research, thus neglecting basic research, and research in the humanities in particular.

Moreover, you referred to the sectors you work in, in the context of your program. Let us just take augmented reality as an example. There could be surprising applications we do not even suspect yet.

In the course of our committee's work we became aware of the support we could give to scientists to further research on cancer or viruses. In the magazine *Nature Structural & Molecular Biology* they discussed supporting scientists by involving gamers in dismantling the proteins in a virus.

Do you have anything to do with things like that? Are you worried by the fact that basic research and humanities research, which aim to understand the phenomenon of new technologies in our society, may be threatened?

[*English*]

**Dr. Richard Smith:** Yes. I called our projects industry projects, but in fact about a quarter of those industry projects are sponsored by research scientists, who use their research dollars to get our students to build things either at the front end of research—so tools, as you say, to unfold proteins, or whatever, using digital media tools at that level—or importantly, to communicate the results of science.

Nowadays science funding generally requires what they call knowledge translation. Our students are extremely good at telling the story of the science and the science work that we've done. We've done work with arthritis researchers, with such things in health as mobility, walking, and gait recognition, with forestry, and with fisheries. We're involved in the process of science. We regard that as a big part of our program and the breadth of our students' opportunities.

● (1650)

[*Translation*]

**Mr. Raymond Côté:** Thank you very much.

I will now address my comments to Mr. Carrier.

When we heard the Ubisoft representatives, Ms. Poulin talked to us about a particular problem concerning workers located outside of the country. In light of your extensive hiring experience, I would like to know if you have also observed that this was becoming a growing concern.

Since Canada is a locus of development and expertise, we have exported a great deal of young talent. I am talking here especially about young single people who left to go and work and build a life elsewhere in the world. However when we offer those people the possibility of reintegrating the same company or joining a Canadian company that wants to repatriate this precious expertise, which may be unique in the country, these young Canadians do not want to come back because they can't bring their spouse or families with them.

Have you observed this phenomenon? If so, is it getting worse? And does this represent a real problem for the industry's development?

**Mr. Martin Carrier:** On that I must say that Ubisoft operates at another level than we do. It employs between 3,000 and 3,500 people located in Toronto, Montreal and Quebec.

For our part, we have not encountered that particular problem. Thanks to their spouse's work permit, wives—since we are generally talking about women—have been able to come with their husbands. Fortunately, I have not had to face this type of problem up till now and I hope that this will continue to be the case in the future.

**Mr. Raymond Côté:** Fine.

**The Chair:** Mr. Côté, you have 30 seconds left.

**Mr. Raymond Côté:** I am going to sacrifice those 30 seconds, Mr. Chair. Thank you.

I also want to thank the witnesses.

**The Chair:** Thank you, Mr. Côté.

[*English*]

Now we'll go to Mr. Van Kesteren and given him the opportunity to clear up whether he was actually playing that Lego game on his iPad when Mr. Carrier mentioned it.

**Mr. Dave Van Kesteren (Chatham-Kent—Essex, CPC):** I'm not to be caught with my fingers in the cookie jar.

Mr. Chair, it's good to be back on the industry, science and technology committee. As a matter of fact, I was doing a presentation just this past week. They presented my bio and said that I was a member of this committee. I called my staff and told them they needed to change that, but about an hour later the whip's office called and informed me that I would be serving on this committee as well, so I guess that change doesn't need to be made.

Mr. Carrier, I have to tell you that the last time I played a game, I think it was Pac-Man. I'm really not one of those who have fallen into the lure of video games, but I know it's quite a trend.

It was mentioned in a number of questions and comments that a lot of bright minds are getting into this industry. I think back, and if we were to tag the 20th century, it was a century of innovation and growth. Incredible monuments to humanity were built. I think of the automobile industry, engineering, the Hoover Dam, science, space travel, and medicine.

Great minds gravitated to these things. As a result, we have some wonderful aspects that we all enjoy and we all have profited from, for instance, space travel. One of the things we always remember is when Texas Instruments came out. Had it not been for that mission to the moon, they never would have created that. Is there spinoff in your industry?

I'm going to ask all of our participants if they could answer this question. Are there spinoffs to other sectors of society? Perhaps you could elaborate and tell us about those. Remember, they're all going to answer this question, so perhaps you could zero in on one or two.

**Mr. Martin Carrier:** All right.

Well, I'll start off by saying I think I got a high score notification from the office on your gaming, but....

**Voices:** Oh, oh!

**Mr. Martin Carrier:** There are spinoffs. They're not necessarily always apparent but some of the stuff that we do in games, calculating physics for example, can definitely be used in other areas. We're obviously more in tune with creating entertainment. That is what Warner Bros. does. But some of the folks who work with us develop algorithms that can be used for physics or imagery in some of the games. For example, in our game Batman: Arkham Origins, it was a snowy day—it was a Christmas day action adventure game—so we developed a capability to have special snow falling down in the game. Without going into the specific examples, there are often technological advances in imagery, in visuals and graphics, that come through gaming that can then get applied to other industries, such as the medical side of things, as I talked about before.

● (1655)

**Mr. Dave Van Kesteren:** Mr. Smith, could you possibly tell us about some of the great advances that gaming has done for humankind?

**Dr. Richard Smith:** You could probably take your list of the Hoover Dam, the space program, and automobiles. If anything like that were to be built today, it would be built first in a virtual way, in a 3-D model on a computer screen, and then realized perhaps in miniature with a 3-D printer, and then produced in reality using computer programs. There is almost no human advance these days that would be done without computers and many of the skills and visualization, interaction, and design coming from the video game industry are going to be part of that.

A good example is the Tesla car, the Car of the Year last year from *Car and Driver* and *Consumer Reports*, which is effectively a computer with wheels. The interface is a 17-inch...bigger than your iPad and sits between the seats. Building a Hoover Dam or a mine... for example, no mine in this country is built without an advanced three-dimensional schematic that you can walk through long before anybody sinks a hole in the ground. All the exploration is done in computer models and computer games. Health care, construction, all of those things in the material and real world are fundamentally built as models first, even all the production plans and how things are going to be built. Probably the last one I should end with is robots. Robots are—

**Mr. Dave Van Kesteren:** Well, I'm going to ask you a question about that, so I'm going to cut you off. But before I do, I want to just switch.

Mr. Schmalz, we're going to talk about something else. I checked your web page. You're offering a job for somebody who has fluency in Chinese. Are there lots of opportunities, is there quite a market in China as well, too?

**Mr. Michael Schmalz:** One of the games that we're doing right now, Warframe,is a digitally distributed game, and it's being distributed all over the world. So, yes, we're distributing in China and we need some community support and customer support people to support those games. So we're shipping directly into all countries.

The good thing about this particular model, the free-to-play microtransaction model, is that now for the first time we're able to monetize Asian markets, and Asian markets view intellectual property, particularly digital intellectual property, a lot differently. You can't, and never have been really able to, sell it to them upfront for a fee, but what's been proven lately is that you can provide it as a service. Now the Chinese Internet companies have so much money, they're doing so well, that there are tremendous opportunities in places like China and Taiwan for the video game industry and the Canadian video game industry.

**Mr. Dave Van Kesteren:** Have I got 10 seconds?

**The Chair:** Ten seconds, sure....

**Mr. Dave Van Kesteren:** I just wanted to mention, Mr. Smith, you have a presentation or a lecture on human robot interaction, and maybe we'll have a chance to talk about that.

I think you were going to talk about that as well, too.

Thank you.

**The Chair:** Thank you very much, Mr. Van Kesteren.

Now on to Mr. Masse, for seven minutes....

**Mr. Brian Masse (Windsor West, NDP):** Thank you, Mr. Chair.

I'm going to give two of my minutes to Mr. Côté, if you can let me know.

I actually am a gamer. I started with Pong, then Intellivision, Sega, and then eventually PlayStation. I have played Batman. I finished it. It's a very good game.

Mr. Schmalz, I've played BioShock. That's a very good game. I actually had a couple of versions of that.

I want to cut right to the question I have in terms of growing our industry. Who is our major competition out there that could prevent us from growth? Who is it that could actually steal some of our business? Is it the United States or is it other jurisdictions as well?

I'd like brief answers from everybody on that, starting with our guest abroad, Mr. Smith.

● (1700)

**Dr. Richard Smith:** I think the competition is global. There is really not much stopping you from building a video game studio in any country in the world, as they are all growing that way.

Canada has an advantage through our ties to the entertainment industry in the United States and Europe, and our connections to really good undergraduate programs, but we can't rest on our laurels by any means. It's a very competitive industry.

**Mr. Brian Masse:** Thank you.

Mr. Schmalz.

**Mr. Michael Schmalz:** The competition model for the video game industry is, I think, quite unique. If you build something really great and you do a good job marketing it, you can and will create your own demand. I think the competition here is to be able to attract great companies to locate in Canada. To do so I think it would really be of benefit to have a national strategy around video games regarding how to do that, how to support the video game industry and allow those companies to come here. That's what other countries are doing, and they're starting to get some attention. I think that's what we need to do.

**Mr. Brian Masse:** Thank you.

Mr. Carrier.

**Mr. Martin Carrier:** I'd say, product-wise to Mr. Smith's point, it is global. But talent-wise, which is another part of our business, it's mostly the U.S. That's where people would have the most facility to move to.

**Mr. Brian Masse:** Mr. Schmalz and Mr. Carrier, I'll have you answer this question, and I'll have another quick one for Mr. Smith before I sign off here.

With regard to brand protection, how serious an issue is it? Say for example, if you have a Batman game that doesn't perform, how does that affect the overall brand of Batman and what could be a potential risk for a video game industry?

I don't think people understand the consequences, but there's nothing worse than buying a video game that sucks. I'd like comments on the exposure of brand and how important it is to protect that.

**Mr. Martin Carrier:** Obviously we work—in the case of Batman and all our other superheroes—closely with DC Comics, which is based in L.A., and they have us on a short leash to make sure we respect the canon of Batman. It's important for us to respect that brand.

**Mr. Brian Masse:** Thank you.

Mr. Schmalz.

**Mr. Michael Schmalz:** We're a hit-based industry and having intellectual property, in particular franchises, is very important. Once you've developed a title that has some “stickiness”, you definitely want to protect it. That can definitely help develop the business. I think that's something the video game industry is encouraged to do just by the internal economics of how it's run. Having a bad game can destroy that.

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

Quickly, Mr. Smith, I noted that when you were talking you said that two-thirds of your graduates come from outside of Canada. Are they then leaving Canada for good, or are they actually getting some jobs in Canada, or are they going overseas and competing against us there?

**Dr. Richard Smith:** Amazingly, they almost all stay in Canada. It's an incredible story.

I think this was part of the plan of the B.C. video game industry: we hoped to attract people and keep them here. We've been very successful at that. This is a great country and people come here from China, for example, but also from the United States, and they're eligible for what I think is called the provincial nominee program so they get sort of a kick-start on their permanent residency. A great number of my students stay on in Canada.

**Mr. Brian Masse:** I toured Ubisoft in Toronto and EA in Vancouver, and they work hard to keep them; that's for sure.

Mr. Côté.

[*Translation*]

**Mr. Raymond Côté:** I thank my colleague Brian. He is very generous in offering me some of his allotted time.

My question is for you, Mr. Carrier, because of Quebec's very particular context.

I have not taken the time to study the investment problem. Of course for the sector to develop, money is crucial. In the course of our work, and Montréal International in fact established this in 2012, it has become clear that the FTQ labour-sponsored fund is an investment partner in information technology enterprises, as is Teralys, a venture capital firm created in partnership with the FTQ.

Mr. Jason Della Rocca spoke to us about the Real Ventures fund; the FTQ also participates in that. Real Ventures contributed to launching his firm, Execution Labs.

As you know, the government has abolished the FTQ labour-sponsored fund's tax credit, although this was a very important fund in Quebec. As a partner, do you think that the withdrawal of that credit could have an adverse effect on the development or work of your sector?

● (1705)

**Mr. Martin Carrier:** Happily, this is not a concern at Warner Brothers.

However, as the president of Alliance numérique, I will answer that access to funding is very important for the member companies, especially for very small ones. In fact, think that the emergence of small players is actually the dominant feature of the Quebec video game industry. The industry also has some large players.

Let's take the example of a mall where you have a Walmart at one end, or a Zellers; they can be compared to Ubisoft or EA. In that mall you will also find small boutiques that represent small players who need access to funding.

The Canadian Media Fund is one example of a funding source. Without wanting to get onto the slippery slope of politics, there is no doubt that access to funding is very important for the small players who are part of the ecosystem and its wealth. This is very important development in Quebec, but elsewhere as well, for instance in Vancouver.

Some of these small players, who at the outset have two, five or ten employees, become champions in the industry. These are homegrown businesses, businesses that emerge from the Canadian territory.

Take Hibernum, for instance, a Montreal firm. We started working with that company in 2010 when it only had 15 employees. Today, it has 140. That is a good example of the success of a company that had access to funding.

**The Chair:** Thank you, Mr. Côté.

[*English*]

Now we move on to Mr. Warawa, for seven minutes.

**Mr. Mark Warawa (Langley, CPC):** Thank you, Chair.

I too want to welcome Peggy Nash to our committee. It's really good. I look forward to working with her, and each of you.

I want to follow up on some of the comments that were made by Mr. Côté and Mr. Van Kesteren in terms of how the entertainment digital economy also will benefit in other ways. I think back to 1981 when I bought my Commodore VIC-21 and played Pac-Man. If it would have been able to be a cloud system, maybe Mr. Van Kesteren and I could have played Pac-Man against each other, I don't know. But that evolved to Mavis Beacon and learning how to type on the computer, at about the time of the Gremlin, the car.

Anyway, it has evolved. One of the key factors...you talked about the creative director who creates a vision of where we can go, and you get these brilliant minds working together. Most recently, there are the developments in 3-D printing, something that I could not have dreamed of. It seemed to be fantasy, but here we see 3-D printing now.

Where is this taking us? How do you see this evolving?

Mr. Smith, you probably would be the lead person to answer this. What I would like to first find out is, what is the target demographic? Is it a younger group who do the digital entertainment....? Is it focused at a younger age group?

**Dr. Richard Smith:** Actually the reference to young men playing video games presumably in their mothers' basements is a misrepresentation of the video game market in Canada and around the world. The typical gamer in raw numbers is a woman over age 50. Casual and social games dominate the market. So the young, intense gamer on a console is a big part of the market, but so is everybody else.

The video game market, like the Internet, is now occupied by human beings, writ large. And so it's not simply a specialist group or a tiny elite, it's everybody. The people who bought VIC-20s in the 80s keep playing games as they get older. They don't stop. The game industry is everybody.

● (1710)

**Mr. Mark Warawa:** So the target audience is quite large. That's encouraging.

In terms of people entering the digital media program at Simon Fraser, are they also in large part mature students, based on their skills and interests?

**Dr. Richard Smith:** I'd say about two-thirds of our students are recent graduates, and the other third are 5, 10, 15, even 20 years out. It's one of those long tails where you have a bunch of people at the beginning, and then it kind of peters out. I think that's a very healthy environment. It's very good when our teams have sort of a grown-up on the team, someone in their 30s or 40s who can present that insight into humanity, or business, or whatever.

**Mr. Mark Warawa:** I'm thinking of a computer called Watson that IBM has. It was a television game. Watson now is evolving to be used in medical diagnosis and connecting doctors around North America, maybe around the world. The symptoms would be plugged into Watson, and Watson would recommend procedures for diagnosis and treatment. The success rate of that is dramatically better than the norm.

My question is, where does this take us? If we look back to the 1980s, we had Pac-Man followed by Mavis Beacon. Now where do we see this going? And how is education, Simon Fraser and their digital program, going to be evolving over the next 10 to 20 years so we can incorporate games, entertainment, but also benefit our societies, so that this helps us in many ways?

Mr. Van Kesteren asked about robots. They were also things of fantasy when we look back 40 years, but here we are.

Maybe each of you can comment on how we see this evolving over the next 10 to 20 years.

**Dr. Richard Smith:** We need to think carefully because obviously there will be enormous benefits, but there are also risks. Robots and such are things to watch carefully because of their impact on the labour market and all that sort of thing.

You know that story of the wise man who saves the king and is asked what prize he wants. He suggests he would like a grain of rice on the first square of a chessboard, and on the second square two grains of rice, and on the third square four grains, and so on. The king heartily agrees. That sounds like no big deal. By the time you get to the 32nd square, it's more rice than could be grown in two big fields. The interesting thing is on the 33rd and the 34th you get into numbers that are staggering, and by the 64th square, it's more rice than has ever been grown and ever will be grown on the earth.

I think we are now in the 33rd square of digital media. We have had a doubling and a redoubling. It's called Moore's law. It has been going on since the 80s. Now we're in that 34th square, and as things double this year, and the year after that, and the year after that, the changes will be absolutely profound.

I can't predict them. I can only tell you the movie *Her* and stuff like that is not never going to happen. That's going to happen, and it's going to happen in our lifetimes, and Watson is just an example. Watson's going to be the size of your hand. It's not going to be a room full of computers. You can carry it in your pocket.

We can't predict what the future is, but we sure know it's changing very rapidly.

**The Chair:** Colleagues, I have the suspicion you would want to hear the other two. The time has run out, but this question was where it's going. Do I have unanimous consent?

Mr. Schmalz, do you want to answer that question, and then we'll go to Mr. Carrier, and that will be the end.

**Mr. Michael Schmalz:** I think one of the great challenges of the 21st century for humanity as a whole is going to be figuring out how to communicate in a globalized and knowledge economy, and what role the Internet is going to play.

Last year I bought my first refrigerator that's connected to the Internet. We're going to be buying watches and eyeglasses that are connected to the Internet. It's going to be in our clothes. In our lifetime it's probably going to be flowing through our veins.

These are absolutely essential questions that we as people are going to have to deal with. In dealing with some of these first steps and first problems of the Internet in terms of Internet commerce, communication, simulation, optimization, I think the video game industry is on the cutting edge of that. To the extent that Canada can embrace the video game industry, we are going to be in a position to have the expertise to respond to some of these opportunities and some of these threats in the future.

● (1715)

**The Chair:** Mr. Carrier.

**Mr. Martin Carrier:** Thank you.

Just to your earlier point, Mr. Warawa, on games, even Frank Underwood in *House of Cards* is a video game player. He's played since his childhood among other things.

But I think ultimately where games will take us is connectivity between devices. Games are pushing the technology that connects the devices, and in a sense, because of the demands of our players, we push the different companies to come up with new ways to have a connected experience. I think that's one of the ways we'll see how games impact our future, not just through games, but in our everyday life.

**The Chair:** Thank you very much, Mr. Schmaltz, Mr. Smith, and Mr. Carrier.

We appreciate your testimony. It's been intriguing and educational.

Now, colleagues, we'll suspend for a couple of minutes while we disconnect our distant witnesses and say goodbye to Mr. Carrier, then we'll go into some business.

● (1715)

(Pause)

● (1715)

**The Chair:** Colleagues, our first order of business is in public and then we'll go in camera for a brief portion.

Our first order of business is to make sure the vice-chair is replaced. Madam Charlton is no longer with us. I suspect Mr. Lake has a nomination in that regard.

**Hon. Mike Lake:** I haven't made up my mind yet whom I'm going to nominate, but I think members of this committee would probably share my joy—is joy the word I'm looking at?—at the nominations and the spirit of camaraderie—

**Ms. Peggy Nash:** Yes.

**Hon. Mike Lake:** Joyce, my colleagues on this side are going to raise a point of privilege here in a minute.

I'd be pleased to nominate Ms. Nash as vice-chair.

**The Clerk of the Committee (Mr. Andrew Bartholomew Chaplin):** It has been moved by Mr. Lake that Ms. Nash be elected first vice-chair of the committee. Are there any other motions?

● (1720)

**Ms. Joyce Bateman:** I move that we close nominations.

**The Clerk:** The committee has heard the terms of the motion. Is it the pleasure of the committee to adopt the motion?

(Motion agreed to)

**Ms. Peggy Nash:** I want to thank my nominator. Thank you to the committee for your support. I thought the finance committee was a friendly place. The industry committee seems like a very friendly spot. Thank you so much and I'm looking forward to working with everyone.

**The Chair:** You haven't seen anything. There's a lot more love where that came from.

We'll just suspend for another minute and we'll go in camera.

[*Proceedings continue in camera*]