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Alberta's Advanced Technologies

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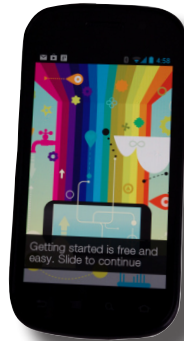
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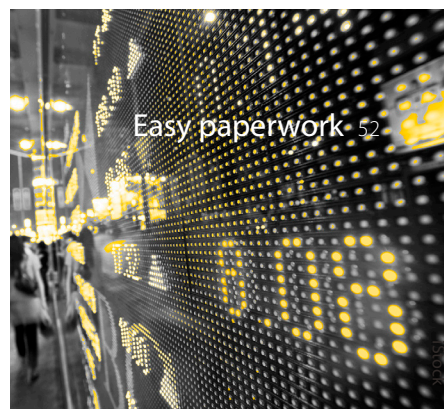


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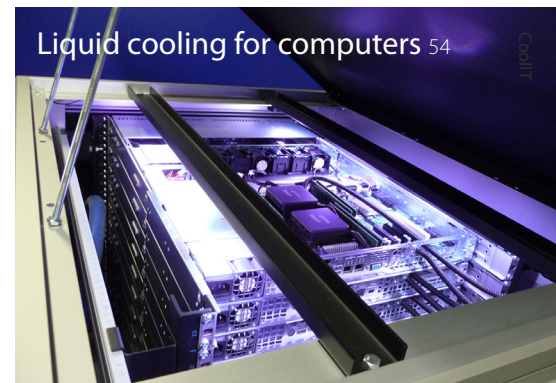
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Alberta's Advanced Technologies

Cool Companies is an industry guide and also an innovative business development tool. It's designed to deliver functional insights that help entrepreneurial-minded, senior-level business leaders make quick initial business development decisions and take action. Intended for readers all over the world, it is written from this entrepreneurial perspective in a unique, concentrated, easy-to-understand, fact-loaded writing style for all backgrounds. Please feel welcome to contact the people and companies profiled in this industry guide to develop your own collaborative partnerships.

ADVANCED TECHNOLOGY IN ALBERTA:

This *Cool Companies* industry guide is focused on companies in the province of Alberta, Canada. Alberta is a place well-known for its fresh air, the natural beauty of the Rocky Mountains, the wide open spaces of the prairies, the boreal forests of the north, and the haunting beauty of the badlands.



Alberta Government

Alberta is also very fortunate to have an abundance of natural resources—oil, natural gas, coal—that have made it an **energy world leader**. In 2011, Alberta had the highest GDP per capita of any state or province in North America, and has been the province with the strongest economy in Canada for the past 20 years. As a result, it is the only province in Canada without a provincial sales tax. Very entrepreneurial, in the last decade Alberta has had the highest number of new small business starts in Canada. Albertans are also among the best educated people in North America (source: Alberta Government).



After energy and agriculture, **advanced technology is the third largest industry driving Alberta's economy**. Alberta's technologies industry is home to thousands of high tech companies and a number of these are world-class innovation leaders. Alberta's strengths in the advanced technology industry include software, medical technology, life sciences, micro/nanotechnology, electronics, wireless, geomatics (GPS), clean technology and digital media.

Focus: It is important to emphasize that the companies included in this *Cool Companies* guide are **only a sample** of advanced technology companies in Alberta; there are many more.

This *Cool Companies* industry guide focuses on advanced



technology companies based in Alberta with a product or service that is enabled by software, hardware and/or communication technologies. This grouping is more formally called **information and communications technology (ICT)**. It includes electronics, digital media, imaging, mobile apps, analytics,

and information management. ICT is a wide scope technology that has made an impact on every industry.

While there are many innovative technologies and companies that support the oil and gas industry in Alberta, this has not been our focus for this guide. We wanted the freedom to see a **new and refreshing window into the innovation and growth happening in Alberta's advanced technology industry** beyond oil and gas, and that's exactly what this guide delivers.

WHAT IS COOL?: We will be the first to admit that "cool" is not exactly a scientific term. However, we've used the word to describe those special companies that are doing really amazing things and have achieved such impressive success that you can't help but think, "Wow!... Cool." Here is a more defining set of minimum criteria. Cool Companies:

- **are innovation leaders** pushing the boundaries of thinking in their space. Their products and services that are unique to the world and are of interest to *Cool Companies'* readers,
- **generate revenue**, and are growing and/or have **strong growth potential**,
- **are headquartered in Alberta** where the company's strategic decision making happens,
- **offer significant and unique value** to customers,
- **are a small or medium sized company (SME)**. A handful of larger companies are profiled to give a sense of breadth and depth to Alberta's advanced technologies industry.

- **are global thinking** and exporting outside of Canada or are export ready and will begin in 2013,
- **are willing to work with us** to develop and review their profile, and to help each other by getting the word out to their network that they are involved in the *Cool Companies* business development effort,
- and of course, are the calibre of company that make you think, "**Wow....Cool!**"

Let's get to the fun part now. In this guide, we have divided the 116 profiled companies into 4 chapters: consumer electronics & apps, health technologies, enterprise solutions, and industrial applications. We now give you an overview of some of the companies grouped by their core technology or special properties.

VIDEO GAMES: Alberta is home to global technology companies that have become household names. One of these is Edmonton-based **BioWare** (p.91). BioWare has produced best-selling role playing video games that have entertained millions of fans around the world and have won multiple *Game of the Year* awards. Its games have included **Baldur's Gate** (p.26), **Neverwinter Nights**, **Star Wars: Knights of the Old Republic**, and the **Mass Effect** and **Dragon Age** series of games. In BioWare's role playing video games, the players assume roles of the characters in a story and play through a huge adventure where they must unravel a series of mysteries.

Alberta has a growing cluster of companies based on video game technology. In 2012, Edmonton video game company, **Overhaul Games** (p.26) launched a successful remake of BioWare's legendary game **Balder's Gate** (pictured right). Also from Edmonton, we have profiled video game companies

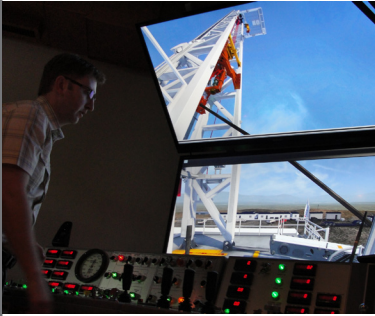
Fluik Entertainment (p.25) and **XGen Studios** (p.27). From Calgary we have profiled **Games Cafe** (p.25) and **Neojac Entertainment** (p.26). **Robot & Pencils** (p.27)

is a hybrid company that makes iPad/iPod video game apps for consumers as well as corporate video games.



TRAINING & EARNING: Alberta is also well-known for its innovative companies that use video game technology for corporate and industrial training and eLearning. For example, **3DInternet** (p.65) turns 2D building blueprints into a 3D virtual world on a computer, where you can “walk around” the building’s space and better imagine what the building will feel like to work in every day. This tool also makes it easier to communicate a common vision of the building’s design among a team and to figure out what needs to be improved in the design before construction begins.

A 3D virtual computer space is also a safe place to learn how to drive a really big construction truck. Using products from **3D Interactive** (3DI, p.71), you get hands-on experience in how to use the controls to drive the truck (pictured left), and it’s a safe and fun way to learn from making mistakes.



Our sample of Alberta’s eLearning companies includes companies that can develop customized eLearning solutions (p.42-44) and ones with innovative eLearning products. One of these companies with an award-winning learning tool is **Pyxwise** (p.23) whose software spelling app works on a reverse phonics idea where people learn how to pronounce and spell English words from hearing the sounds and then seeing the words.

Another company with an innovative learning tool is **Culture Connectivity** (p.42). It has pioneered video game-based tools to help people understand cultural differences that can impact work productivity and results when working with people from different cultures. Culture Connectivity helps people develop the necessary cultural attitudes and behaviours to interact and build trust with people of other cultures.

INNOVATIVE INTERFACES: As video game technology applied to 3D visualization and eLearning is helping us understand and better interact with the real world, another relatively new technology called augmented reality is helping us do this too. The most familiar example of **augmented reality** is

the computerized layer of digital information seen through the eyes of the robot from the future played by **Arnold Schwarzenegger** in the movie **Terminator**. When he looks at an object in the real world, he sees an additional layer of digital information about the object (pictured right) in real time. As a simple example of what augmented reality glasses could do for us, you might wear



them outside and see digital information about the weather, the temperature, your location and maybe the name of the person coming down the street. While still being tested, in 2012 the founders of **Google** were seen wearing augmented reality glasses.

Cool Companies found four Alberta-based companies with expertise in augmented reality. **Kip Fyfe** and **Victoria Brilz**, who founded and sold the well-known Alberta-founded sports electronics global leader **Dynastream Innovations** (p.92), are Co-Founders behind **4iiii Innovations** (p.18, pronounced “four ize”). The company’s first product is an audio-enabled heads-up

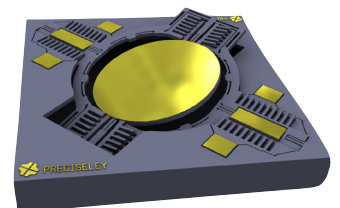


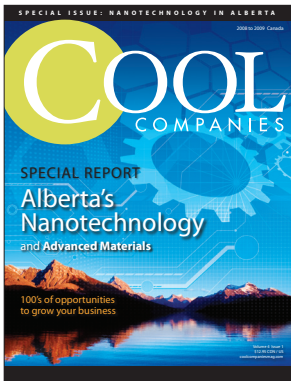
display technology (pictured left) to help athletes like cyclists, runners and speed skaters keep

their hands free and eyes focused ahead.

Preciseley Microtechnology (p.19) takes this idea one step further. It designs and produces a tiny mirror (pictured below) which is the key component in augmented reality glasses, as well as other devices that require an ultra fast and very accurate projection of virtual computer data. For example, embedded into a cell phone, it could project a presentation onto walls or create a virtual keyboard on a desk.

Preciseley is part of Alberta’s growing micro/nanotechnology cluster which includes world-leading researchers at the **University of Alberta** (p.78) and **University of Calgary** (p.78). Alberta





is also home to Canada's nanotechnology research flagship—the world-class \$150 million NRC National Institute for Nanotechnology (NINT) (p.80). The number of Alberta companies in the micro/nano community has more than tripled since 2008 when *Cool Companies* defined it (pictured left). This

guide is available for free on our website www.coolcompanies.ca.

Another pioneer in next generation interface technology that is changing our thinking of how we interact with computers is **POSH View** (p.19). POSH is a Canadian manufacturer of interactive, multi-touch technology that can be used by multiple users at the same time and can communicate with smartphones and tablets. Since you



can see computer images on glass, like a movie onto glass, you will be able to see virtual models moving in the clothes in a store window (pictured above). Like

the computer interface in the movie **Minority Report**, POSH is also developing an “in-the-air” touch screen computer interface to further the development of augmented reality.

Over 20 years ago, the world's first interactive whiteboard was invented, developed and launched in Alberta in the city of Calgary (pictured left). Used in many schools and businesses around the world, **SMART**



Technologies (p.44) has become a world famous brand as Co-Founders, **David Martin** and **Nancy Knowlton**, have grown the company into a world leader for interactive displays and collaboration. Publicly traded, SMART's 2011 revenue was \$754.8 million with 900 employees in Calgary and another 600 employees worldwide.

Another fun Alberta-developed computer interface we have profiled is the **Peregrine Glove** (p.23, right). Like a wearable keyboard, it enables computer commands by hand motions.



MUSIC TECHNOLOGY: Until we did the research for this *Cool Companies* industry guide, we didn't know there were so many musicians, including some very big name artists, using music technology invented in Alberta. One of these artists is **Grammy Award** winning **Skrillex** whose entire sound system, when touring, is custom designed, manufactured and installed by **PK Sound** (p.17, picture below).



Other examples of innovative music technology from Alberta that are used around the world are:

- Products from **iConnectivity** (p.17) allow musicians to develop music by wiring and controlling their music gear from an iPad interface. It gives them new options they never had before.
- A free app from **budtobud** (p.15) allows people to listen to music with their friends who might be anywhere in the world.
- **Eleven Engineering's** (p.16) SKAA wireless audio standard for high quality speakers is like Bluetooth is to mobile devices. One of its advantages is that you can play music or movies directly from your iPod or iPad. All the data transfer is wireless.

WIRELESS, GEOMATICS & M2M: Alberta has a very strong base of companies who, like Eleven Engineering, are market leaders in wireless technology for different applications. Alberta is also very strong in the related technologies of geomatics and machine-to-machine communications (M2M). Remote sensing and GPS are examples of **geomatics technology**. These are very versatile technologies, and they are the base technology behind many companies in every chapter of this *Cool Companies* industry guide.

One of the reasons Alberta has this strength and a large group of people with world-class expertise in wireless and geomatics technology stems from its history. For decades, Calgary was home to telecommunications and geomatics (GPS) superstars **Nortel**, **NovAtel** (p.94, which are known today as **NovAtel Inc.** (more later on this page) and **NovAtel Wireless**) and **CSI Wireless** (which re-branded to become **Hemisphere GPS** p.63).

Many former employees have also gone on to grow their own wireless companies (**Novatel** p.94). One of these companies is **Wireless Dynamics** (p.24). Most of us now have credit cards with computer chips that require a pin code password. Wireless Dynamics has already introduced the next generation of technology (pictured below). It is a case for smartphones equipped to quickly

and securely allow payment transactions at a store's point of sale using our smartphone. It is an electronic wallet that frees us from needing to carry our traditional wallets and loyalty cards, and it

will track transactions so we don't need to worry about keeping track of receipts either.

A credit card or Wireless Dynamics' electronic wallet exchanges data with the point of sale device in a store to get approval for a purchase. This is an example of **machine-to-machine (M2M)** communication. Whether wired or wireless, M2M is exactly what it sounds like: two devices exchanging data without a human in the loop. Another example of M2M is a sensor such as a

thermometer sending temperature data to a control system that catches it and turns it into a decision, such as turning up the heater.

Now that people in many parts of the world have cell phones, M2M is expected to be the fastest growth area in mobile. As the price of wireless service, sensors and transceivers have drop dramatically, there is an opportunity for more companies to achieve this level of connectivity and benefits. M2M is expected to be a large contributor to competitiveness and productivity growth in the industrial sector.

Alberta has many companies with innovative M2M technology, as this *Cool Companies* guide demonstrates. M2M has its roots in industrial applications, but is not just for this type of automation. Other examples include:

- Companies helping utilities get onto the **smart grid**: **ASAT Solutions** (p.66), **dTechs** (p.67), and **Times Three Wireless** (p.70).
- **NavNet** (p.22) is Canada's leading **home automation** technology manufacturer for smart homes.
- **Transportation** companies such as **FLYHT Aeromechanical** (p.60) use M2M to collect inflight data of aircraft that can be used to improve fuel efficiency, reduce maintenance time and repairs and cut CO₂ emissions.
- **OPIsystems** (p.64) is using M2M with sensors for grain temperature and moisture to help farmers manage their grain storage.

ROBOTICS & UNMANNED VEHICLES:

M2M technology is also used in robotics unmanned vehicles (vehicles without a human pilot, aka drones). Alberta has a number of established and emerging innovation leaders. The sector is supported by the **Canadian Centre for Unmanned Vehicle Systems** (p.81) based in Alberta. Companies we have profiled include:

- **CDL Systems** (p.59) makes the remote control software to fly drones. The Calgary-based company has 80 employees.
- With 65% to 70% of the world OEM market, **NovAtel** (p.94) is the world's leading supplier of high precision GPS technologies. **Boeing** uses NovAtel's GPS technology to land a full sized unmanned helicopter on a moving marine vessel. NovAtel's



technology was also instrumental in the successful execution of **NASA's Mars Rover Expedition** (pictured right). Headquartered in Calgary, NovAtel has 350 employees with operations in Calgary, California and India.



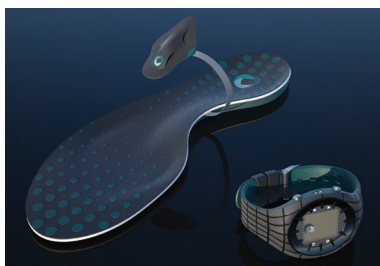
- **Mechatroniq** (p.61) makes an intelligent ground-based robotic platform that can be used for a variety of applications. Used as a sophisticated target practice simulation for law enforcement, it can mimic human behavior by stopping when hit, and running for cover when another robot is hit (pictured below). It can also be customized for indoor use as a robotic homecare assistant (p.33).



HEALTH IMAGING TECHNOLOGY:

Wireless and M2M technology is also used in healthcare.

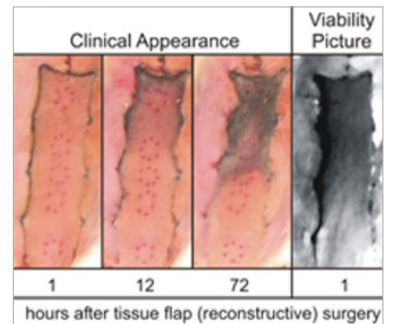
- **Vital Signals** (p.34), for example, has created a system that monitors a person's health by capturing data from interconnected wireless devices that collect data on blood pressure, physical activity, weight, blood glucose, oxygen saturation and medication adherence. This data helps the elderly and chronically ill to live healthy independent lives at home for as long as they can.
- **Orpyx Medical** (p.31) uses wireless technology and



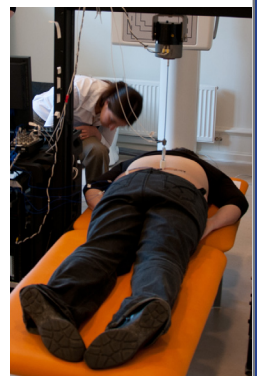
pressure sensors on an insole (pictured left). The data from a patient's feet is sent to a stimulus pad worn on the lower back so that the patient essentially feels as though

they are 'walking' on their lower back. The brain will rewire itself to accept the sensory stimulus from the lower back. Orpyx technology can also be used to prevent feet related complications from diabetes and for rehab with stroke, spinal cord, nerve or traumatic leg injuries.

- **Kent Imaging** (p.30) has another interesting new medical imaging technology (pictured right). Kent's technology gives clinicians insight on the health of tissue and its ability to survive following an operation or trauma.



- Lower back pain is a common problem for millions of people and **VibeDx Diagnostics** (p.32, pictured right) has developed a new imaging technology that will revolutionize how back problems are assessed. Leveraging the fact that different types of back injuries have distinct movement patterns, VibeDx uses non-invasive tiny vibrations to gently move the back and uses pattern recognition analytics to determine the presence of injury and type of injury.



ANALYTICS: In addition to VibeDx, there are other Alberta companies using advanced computing to uncover business opportunities hidden in data and use it to drive the enhancements and optimization of business operations. This big data analytics technology is called **machine learning**.

- **Granify** (p.40) uses machine learning to help online stores predict when a shopper is at risk of not purchasing and how best to motivate the shopper to make a purchase.
- Alberta has a team of researchers in the **Alberta Innovates Centre for Machine Learning** (p.78) that is ranked one of the top 3 machine learning centres in the world.

PRODUCTIVITY: Alberta has many fascinating companies with products focused on helping businesses work smarter to increase their productivity (p.45 to 53). These include:

- Technology from **Hookflash** (p.48) enables you to have an instant, free, real time, high definition voice and high definition (HD) video conversation with people in your **LinkedIn** network.
- **Group RFX** (p.48) has automated the purchasing process to significantly reduce the time and work involved for buyers and suppliers
- Using green computing, software from **Userful** (p.57) helps organizations around the world significantly reduce their computer hardware and computer staff.
- **PureWeb** (p.56) has found an easy and very fast way to transform server-based software into web, cloud and mobile based apps. Instead of taking years, PureWeb's technology can produce these apps days without sacrificing performance, responsiveness or functionality of the original server version!



CROWDSOURCING: Another way to increase productivity is to use crowdsourcing. **Crowdsourcing** harnesses the wisdom of a digital community (the crowd) to get insights that can be used for the development of a new product or service, or to improve business operations. We have profiled two of Calgary's innovators in crowdsourcing:

- **Chaordix** (p.39) has become a global leader in using crowdsourcing to create market intelligence for clients such as **P&G**, **IBM**, and **American Airlines**.
- **Mob4Hire** (p.55) uses crowdsourcing to help its clients do quality assurance testing of their mobile apps and websites. Its crowd of 60,000 mobile enthusiasts is the world's largest crowdsourced community for on-demand real world testing.

CONNECTIVITY & NETWORKS: Alberta has a number of innovation leaders that make it easier for companies to manage their computers and software. We have profiled some companies who focus on

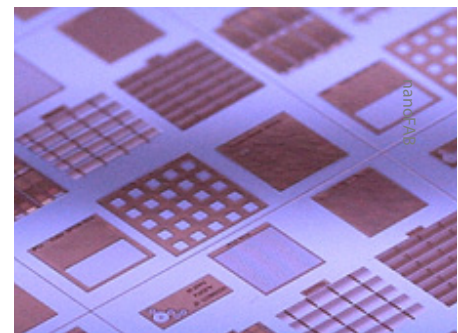
- **IT security** such as **Wedge Networks** (p.57) for virus protection and **DataGardens** (p.54) for disaster recovery, and who

- **Making IT easier** such as **Riva CRM Integration** (p.56) that provides an easy way to sync email and customer relationship management (CRM) software. **Mover** (p.55) makes it easier to move big files to and from the cloud.

ELECTRONICS DESIGN & MANUFACTURING:

This *Cool Companies* guide also contains a sample of 15 companies (p. 86-89) offering electronics design, engineering and contract manufacturing services. During the development of this guide, we talked to some of these companies and we discovered a few interesting things that made us decide to create a special chapter highlighting them:

- Many of them have world-class services, including expertise in wireless, micro technology (**Norcada** p.88, pictured right), embedded systems and next generation vehicle design (**Motive Industries** p.88). They have earned the long term trust of some really impressive large international clients that include **NASA** and Fortune 500 companies. These companies are eager to find and work with more clients around the world.
- These companies wanted North American hardware product-based companies to understand that you don't have to go to Asia to get your product manufactured at a good price anymore. The tide has shifted and companies need to adjust their thinking. On page 87 we breakdown the details of this thinking.
- Some of the equipment manufacturers profiled use the services of the contract electronics design and manufacturing companies, but often didn't know about all the options available in Alberta.



SUCCESSFUL EXITS: Another new chapter in this *Cool Companies* guide is a collection of 25 companies with Alberta roots that have successfully been sold for millions of dollars. These deals are called **successful exits**. People in North America are fascinated with exits since they generate big money when sold that makes millionaires.

These companies are the type of companies that successfully attract investors and venture capital money.

To show our international readers the world-class calibre of Alberta's software and hardware technology companies that became successful exits, we created the largest collection of exits ever assembled in one place. It profiles 25 companies, plus additional companies documented in the table on page 98-99, for a total of 43 exits.

Studying this collection of companies and their stories is fascinating! It is a powerful story of Alberta's strong advanced technology history and a source of pride for Albertans. For up-and-coming and future entrepreneurs, it is our hope that they can use it both as a learning tool and as a tool to show potential investors when hunting for capital.

ABOUT COOL COMPANIES:

- **Market traction:** Launched in November 2004, *Cool Companies* is published once a year.
- **Primary audience and distribution:** Entrepreneurial-minded senior-level business leaders all over the world looking for cool opportunities. Thanks to our partnership with the **Government of Alberta's** International & Intergovernmental Relations team, this worldwide distribution of *Cool Companies* includes the Alberta Government's events and support from more than 150 of Canada's consulates and embassies worldwide.
- **Secondary audience:** People in Alberta interested in discovering some of Alberta's innovation leaders in advanced technologies.
- **Print version:** Thousands of print copies are sold and distributed around the world.
- **Free online version:** This *Cool Companies* industry guide is also available in electronic format for FREE at www.coolcompanies.ca.
- **Profiled for free:** All companies included in this *Cool Companies* guide are profiled for free. They are required to work with us to develop their profile. This involves an interview with a senior representative in their company and reviewing their draft profile for accuracy.
- **Community effort:** We also asked each profiled company to help us, and help each other. Once the guide was launched, each company was asked to

get the word out to their network that they are part of this special business development effort. They had the freedom to spread the word with whatever activities they felt comfortable. We appreciated the extra effort of profiled companies that wanted to give away copies as gifts so we made this purchase at a break-even price.

- **Editorial voice:** The goal of each *Cool Companies* profile is to sound like a regular person telling another about the concept of the company and the real pain it solves. It is very important that the reader can imagine themselves in the customers' shoes. Since we want it to be widely read and people are not experts in every industry, we have tried to keep the technical words and marketing word salads to a minimum. Writing a few sentences in easy language for a profile is harder than it looks.

TERMINOLOGY IN THE PROFILES:

- **% exports** is the company's percentage of revenue from sales outside of Canada.
- **Growth stage:** Companies selected themselves as Pre-Revenue Startup, Early Revenue Stage, Early Growth Stage, High Growth Stage or Market Leader.
- **Growth strategies:** These are the business development opportunities companies want readers to contact them about.





Consumer Electronics & Apps Companies

PHOTO CREDIT: PK Sound (p.17)

We were surprised and delighted to find an impressive collection of companies with innovative world-class consumer electronics and apps in the province of Alberta, Canada. This *Cool Companies* chapter is a sample of 26 of these technology innovators. We have sorted them into 4 categories: video games, music technology, media & more, and the very new technology called augmented reality.

VIDEO GAMES: **BioWare** (p.91) is Alberta's largest video game company with critically-acclaimed, award-winning role-playing videogame titles that include the recent **Mass Effect** and **Dragon Age** games. The huge success of BioWare put Canada's province of Alberta on the map in the video game world. Alberta is now home to many more video game companies in both Calgary and Edmonton. One of these is **Overhaul Games** (p.26, 90, 91) which has remade and improved BioWare's first award-winning video game **Balder's Gate**. Alberta also has a healthy group of companies using video game technology for consumer training (p.23, 24), corporate training (p.42-44) and industrial training (p.65, 66, 71).

MUSIC TECHNOLOGY: We have profiled 7 companies based in Alberta with innovative music technology

products whose customers include well-known international music artists. For example, when *Grammy Award* winning **Skrillex**, or non-stop touring artist **Excision**, hit the stage (pictured above) their entire sound system has been custom designed, manufactured and installed by **PK Sound** (p.17).

MEDIA & MORE: One example of consumer electronics and apps in Alberta is the wearable keyboard called the **Peregrine Glove** (p.23, pictured right), which enables computer commands by hand motions.



AUGMENTED REALITY: The most famous example of augmented reality so far is the heads-up display sunglasses worn by the **Terminator**, which gives the user a virtual layer of digital information over their physical, real world environment. A more recent example are the augmented reality glasses introduced to the world by **Google** in 2012. We found 4 companies in Alberta who are leading the world with their augmented reality technology. One of these is **POSH View** (p.19) which has several interactive multi-touch screens and is pioneering a computer interface like in the movie **Minority Report**.

budtobud

Listen to music with your friends, no matter where they are budtobud is a FREE app that lets you see what your friends are playing, listen to their music and chat with them, all in real-time as if you were in the same room. You can also rate each other's music, save or buy your favorite songs, review listening histories and share your experience on Facebook and Twitter. Introduced in April 2012 for Mac personal computers, budtobud is expanding to all platforms and all music service providers.

COMPANY: budtobud Inc., www.budtobud.com, 10 employees, founded 2009, Early Growth Stage, 90% exports worldwide, app available worldwide, investor/revenue funded, Suite 112, 1215 - 13th Street SE, Calgary, Alberta T2G 3J4, 403.605.5984

PRODUCT: App for real-time music listening with friends

GROWTH STRATEGIES: Seeks platform and music service partners around the world

CONTACT: Patrick Rousseau, Chief Visionary Officer & Co-Founder, prousseau@budtobud.com, 403.605.5984
Patrick was a Co-Founder of the *Successful Exit Blackline GPS* (p.91).



Dillinger Labs

Innovative portable stereo speakers

The first striking feature about these first Dillinger speakers is that you can see inside them and see how they work because their casing is clear. Like many high end portable speakers, Dillinger speakers are enabled with the SKAA hifi audio standard (**Eleven Engineering** p.16), which means you can control the audio that plays on the speakers directly and wireless from your iPod—there is no dock. Dillinger speakers are sold as a pair, with a left and right speaker, as true stereo should be, but is rarely done anymore. So, the sound you experience is true stereo. The speakers can play for 10+ hours at regular listening volume, which is longer than an iPod will last. Then, you plug them into the wall to recharge them. This first pair of Dillinger speakers retails for \$1,995.

COMPANY: Dillinger Labs, a division of Freq Industries Inc., www.dillingerlabs.com, www.freqindustries.com, 2 employees, founded 2009, Early Revenue Stage, first product launched late 2012, exports started late 2012, new product releases 2013, investor/revenue funded, PO Box 76132, 468 Southgate Shopping Centre, Edmonton, Alberta, T6H 4M0, 780.953.6473

PRODUCT: Portable wireless high fidelity true stereo speakers

GROWTH STRATEGIES: Seek retailers and distributors around the world

CONTACT: Samantha Sobota, CEO & Founder, sobota@freqindustries.com, 780.953.6473



Eleven Engineering

Creators of the SKAA global wireless hifi audio standard for portable sources

Wouldn't it be nice to hear music from your iPod on your home speakers without the need of a dock? Using a new technology called SKAA developed by Eleven Engineering, you are free to play music, movies and games wirelessly from your Apple device, laptop or Android phone with up to 4 speakers. It's fast enough to accurately sync the audio to movies and video games. SKAA technology is the new wireless audio standard for speakers, like Bluetooth is for mobile devices, except SKAA is just plug and play. It does not require setup, pairing, hotspots or software. SKAA is currently used by high quality audio system manufacturers around the world including **Nuforce**, **Monitor Audio** and **Audiofly**. SKAA works with Apple products, computers and laptops. Android transmitters available 2013.

COMPANY: Eleven Engineering Inc., www.elevenengineering.com, 21 employees, founded 1992, Market Leader, 99% exports worldwide, new products for 2013, revenue funded, Suite 900, 10150 - 100 Street, Edmonton, Alberta T5J 0P6, 780.425.6511

PRODUCT: Industry-redefining wireless audio standards

GROWTH STRATEGIES: Seek to work with manufacturers or brands of speakers, headphones and car stereos

CONTACT: John Sobota, CEO & Founder, sobota@eleveneng.com, 780.425.6511 x222



Eleven Engineering

HSTi

Leader in wireless media sharing across all your electronics
Even though they look like memory sticks, HSTi's products are do not store digital content (music, videos, digital pictures, files). Instead, without having to transfer a file, HSTi's products facilitate the direct wireless transfer of your digital content between your devices such as a computer (PC or Mac), smartphone, TV, stereo, Blu-ray DVD player, gaming console, digital picture frame or portable tablet. Just plug and play, it does this transfer securely through your WiFi network.

COMPANY: Home Server Technologies Inc. (HSTi), www.hsti.com, 15 employees, founded 2009, Early Growth Stage, 80% exports around the world, new products for 2013, revenue/investor funded, #218, 3016 - 19th Street NE, Calgary, Alberta T2E 6Y9, 403.710.2222

PRODUCT: Innovative streaming media products

GROWTH STRATEGIES: Seek partnerships with retailers and to develop custom solutions for industrial applications

CONTACT: Harry Diamantopoulos, Managing Director & Co-Founder, harryd@hsti.com, 403.710.2222



iConnectivity

Music connectivity technologies that make it easy to wire, network and control music gear

iConnectivity allows musicians to connect a mobile device, like an iPad, and computers to all their musical gear—equipment (MIDI based), audio components, audio monitors, even lighting equipment (DMX based).

Making these connections is as quick and easy as plug and play, and the result is an integrated music system controllable from one common interface on mobile devices or computers. In addition to more control over their gear, environment and music-making ability, musicians can greatly decrease the amount of wiring required for stage rig set-ups using iConnectivity's products. iConnectMIDI, the company's first product, is priced at \$179 USD.

COMPANY: iConnectivity Inc., www.iconnectivity.com, 8 employees, founded 2010, Early Revenue Startup, 95% exports worldwide, range of innovative products expanding, investor/revenue/grant funded, #21, 1725 - 30 Avenue NE, Calgary, Alberta T2E 7P6, 403.457.1122

PRODUCT: Unlimited possibilities to create, record, learn and perform music

GROWTH STRATEGIES: Seek more music gear retailers and distributors worldwide

CONTACT: Michael Loh, CEO, info@iconnectivity.com, 403.457.1122



PK Sound

A rockstar in innovative concert sound systems

There is innovation and art involved in creating high quality speakers. This is especially true for speakers that need to meet the demands of large concert performances. The sound must be clear, full-bodied and the bass both smooth and skull-crushing. Grammy Award winning **Skrillex**, and other contemporary music artists **Excision** and **Dub FX** believe speakers produced by PK Sound deliver, and they use PK Sound speakers when they tour. PK Sound designs and manufactures its speakers in-house in Calgary. These speakers are made to hang in a line, known as a line array speaker format. PK Sound is currently working on a new innovation to improve this array technique that will improve the sound technician's ability to adjust the system physically and audibly, in order to produce even better sound. In addition to producing speakers, PK will also work with artists to create a custom multimedia show including creative stage design, lighting and video.

COMPANY: PK Sound Inc., www.pksound.ca, 12 employees, founded 2005, High Growth Stage, 75% exports worldwide, retail product line available 2013, revenue/bootstrap/grant funded, office in San Francisco, Headquarters: 511 - 36 Avenue SE, Calgary, Alberta T2G 1W5, 403.452.6004

PRODUCT & SERVICES: Innovative concert-quality sound systems and full concert products

GROWTH STRATEGIES: Seek to work with more concert venues, production houses & touring artists worldwide

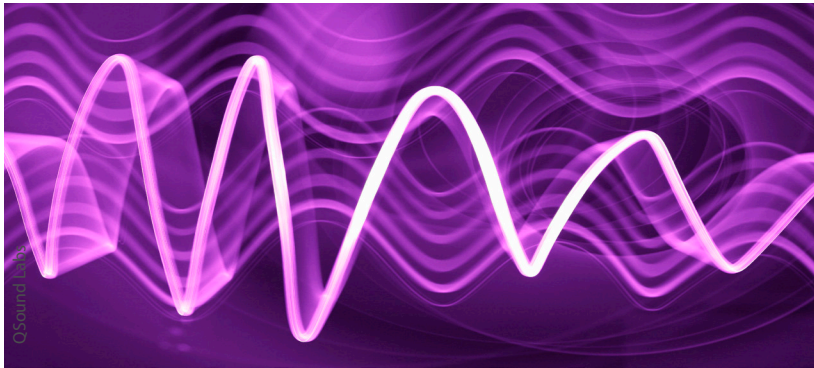
CONTACT: Jeremy Bridge, President & Co-Founder, jeremyb@pksound.ca, 403.452.6004



QSound Labs

Innovation leader in improving the quality of voice and music audio in cell phones

To minimize wireless bandwidth, cell phone companies remove tiny pieces of sound in our speech and music when we talk and listen on a cell phone. QSound Lab helps cell phone manufacturers overcome this low



quality compressed sound. With its complex algorithm-based software, QSound digitally fills in the missing pieces voice and audio pieces to produce increased richness in the sound from our cell phones. QSound's technology can also play ringtones, produce a virtual base to music, and make it easier for us to hear in noisy environments with noise reduction technology. The company is also an innovation leader in 3D audio which is placing the source of the music in different points around the listener.

COMPANY: QSound Labs, Inc., www.qsound.com, 30 employees, founded 1986, High Growth Stage, 100% exports worldwide, revenue funded, #102, 2816 - 11th Street NE, Calgary, Alberta T2E 7S7, 403.291.2492

PRODUCT: Turn low quality voice and music sound in cell phones into higher quality

GROWTH Strategies: Seek new market opportunities

CONTACT: David Gallagher, President, info@qsound.com, 403.291.2492

4iiii Innovations

Pioneer of heads-up display for athletic performance enhancement

Bike training for an Ironman race, co-Founder, **Ian Andes**, looked down to check his wrist-mounted monitor and hit a



pothole that threw him. To solve this problem, he worked with **Kip Fyfe**, Co-Founder of sports electronics leader **Dynastream Innovations** (Exit p.92) to produce Sportiiiiis (pronounced "sport ize"), which is an audio enabled heads-up technology to help athletics like cyclists, runners and speed skaters keep their hands free and eyes focused ahead. Sportiiiiis is a small monitoring device that clips to any pair of glasses. It provides full verbal updates and displays data from ANT+ sensors (on heart rate, pace, cadence or power) using a line of tiny LED lights placed in the athlete's peripheral vision. For the first time, athletes can get critical performance data without taking their eyes off the road and the competition. In

addition to enabling a safer environment, it also helps athletes increase their focus by bringing information to them when they want it, rather than having to remember to look away and get updates from their watch or cycle computer.

COMPANY: 4iiii Innovations Inc., www.4iiii.com, 16 employees, founded 2010, Early Revenue Stage, 90% exports worldwide, product sold online, investor/revenue/grant funded, 228 River Avenue, Cochrane, Alberta T4C 2C1, 403.800.3095, 1.800.218.3095

PRODUCT: Heads-up display coaching display, high-connectivity heart monitor

GROWTH STRATEGIES: Seek investors, equipment manufacturers and co-development partners

CONTACT: Victoria Brilz, CMO & Co-Founder, victoria@4iiii.com, 403.800.3095. Victoria was part of the *Successful Exit Dynastream/ANT+ Wireless* (p.92).

POSH View

Pioneer in next generation interactive multi-touch technology

POSH is a Canadian manufacturer of interactive, multi-touch technology that can connect with multiple users at the same time and can communicate with smartphones and tablets. For example, in the Calgary **BMW Gallery** owned by **Dilawri Automotive Group**, POSH screens allow customers to digitally search new and previously enjoyed vehicles, request sales assistance, digitally build their own vehicles, and move the information onto their smartphone or tablet. In addition to interactive platforms that can support up to 120 users at one time, POSH also makes mirrors with active customizable apps such as twitter feeds, weather and traffic reports, and email access. Like the computer interface in the movie **Minority Report**, POSH is also developing an “in-the-air” touch screen computer interface to further the development of augmented reality.

COMPANY: POSH View Inc., www.poshview.com, 50 employees, founded 2011, Early Revenue Stage, exporting since late 2012, revenue/investor funded, offices in Vancouver and Toronto, Headquarters: 1812 - 4th Street SW, Calgary, Alberta T2S 1W1403.680.3914, 1.800.775.1170

PRODUCTS: Interactive, multi-touch technology

GROWTH STRATEGIES: Seek more clients, partners, distributors and investors

CONTACT: Kenneth Bond, CEO & Co-Founder, kennethbond@poshview.com, 403.680.3914



Preciseley Microtechnology

World leader creating the magic behind augmented reality devices

The heads-up display sunglasses worn by the **Terminator** is the most famous example of augmented reality, giving you a virtual layer of digital information over your physical, real world environment. Looking outside for example, your device might tell you the temperature, your location, directions and names of who you see. Preciseley Microtechnology is a pioneer in the design and manufacturing of the tiny mirror component that projects the virtual data onto the retinal of your eye so you can see it.

Ultra fast and very accurate, Preciseley’s microcomponent is also used by cell phone manufacturers to project a bigger image of the display onto a surface, so you could see and interact with a virtual keyboard or make a presentation from your cell phone directly onto a wall.

COMPANY: Preciseley Microtechnology Corp. (also p.31), www.preciseley.com, 5 employees, founded 2006, Early Revenue Stage, 40% exports worldwide, revenue/bootstrap funded, 11421 Saskatchewan Drive, Edmonton, Alberta T6G 2M9, 780.492.4475

PRODUCT: Key component for augmented reality devices

GROWTH STRATEGIES: Seek more equipment designers in gaming, health, laser marking, optical coherence tomography (OCT, p.31) and maskless lithography

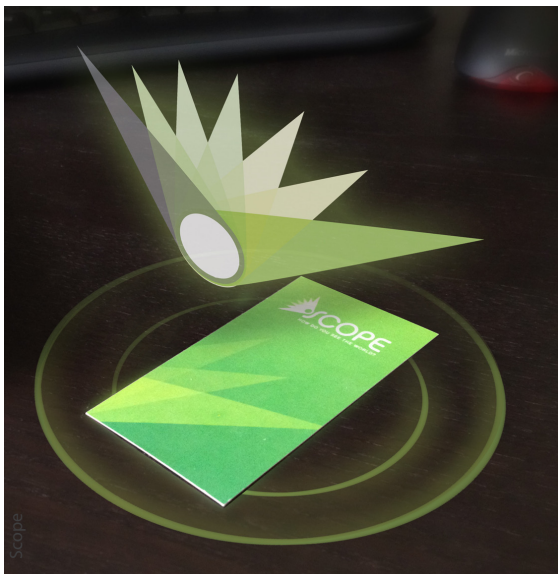
CONTACT: Dr. Tiansheng (Tian) Zhou, President & Founder, info@preciseley.com, 780.902.4137



Scope Technologies

Canadian leader in augmented reality program development implementation

Sharing the same name as the planet Vulcan of the **Star Trek** series, the town of Vulcan in Alberta has turned this coincidence into a tourist attraction. A new feature in the town highlights people associated with the **Star Trek** series. Scope Technologies is a pioneer in augmented reality design, a relatively new technology that Vulcan has adopted



that allows a tourist to see digital content come alive on their iPod or android device between them and the point of interest in Vulcan. This augmented reality experience could include an animated mini movie, photos, or other information about the **Star Trek** star character that the actor played that helps put the point of interest into context. As another example, Scope Technologies is helping machine operators of industrial equipment make repairs in the field by guiding them through the process of fixing it in augmented reality space.

COMPANY: Scope Technologies Inc., www.scopeapp.com, 5 employees, founded 2011, Early Revenue Stage, 75% exports in North America and Europe, revenue funded, 2nd Floor, 9932 - 81 Avenue, Edmonton, Alberta T6E 1W6, 780.616.6853

PRODUCT: Customized augmented reality software

GROWTH STRATEGIES: Seek more clients around the world.

CONTACT: David Nedohin, CEO & Co-Founder, david@scopeapp.com, 780.616.6853

Baseband Technologies

World leader of fast, low power, low cost software-based GPS for consumer electronics

Baseband Technologies' breakthrough GPS capabilities is revolutionizing how we can apply GPS technology to consumer electronics. The company's products include a software-based GPS receiver that can capture a position within 0.002 second and advanced satellite orbit prediction algorithms. Both of these technologies can significantly lower the time to finding a GPS position and therefore reduce battery consumption. Since these technologies are mainly software based, it is very low cost. Baseband's technology now enables digital cameras to tag photos with geographical data of where the photo was taken. It also enables automated Machine to Machine (M2M) communication such as remote monitoring of machines, children and pets through the use of smart devices.

Baseband's technology also expand the possibilities of GPS applications beyond cameras and M2M to include widespread use in cell phones and many other new applications where standard GPS receivers could not previously be used.



COMPANY: Baseband Technologies Inc., www.basebandtech.com, 6 employees, founded 2010, Early Growth Stage, 100% exports to US, EU and Asia, revenue/investor funded, Suite #120, 3553 - 31 Street NW, Calgary, Alberta T2L 2K7, 403.668.0699

PRODUCT: Embedded GPS technologies for consumer electronics

GROWTH STRATEGIES: Seek more opportunities for technology licensing, new product development, and investors

CONTACT: Francis Yuen, CEO & Founder, francis.yuen@basebandtech.com, 403.668.0699

Empire Avenue

What is your social media influence?

Empire Avenue can help you place a number to that as well as help you expand, engage and evaluate your social networks. Empire Avenue is a game where people and businesses have a share price in a virtual social stock market based on their online activity, influence and reach across social media networks such as blogs, Twitter, Facebook, YouTube, LinkedIn and Empire Avenue. As you play the game, you meet new people and gain insight to their social media activity across the web and an understanding of how to influence it. Empire Avenue can also be used to drive traffic and engagement to your online content and social profiles, and to gain relevant new fans, followers and subscribers. Empire Avenue's newest service, **GamrRank**, is the ultimate rank in games. By combining how gamers play, what they say about games, and community based respect, **GamrRank** shows video gamers how they rank in the world of gaming and can be rewarded for it. **GamrRank** allows advertisers to reach the 18 to 34 year gaming demographic through rewards, research and advertising.

COMPANY: Empire Avenue Inc., www.empireavenue.com, 7 employees, founded 2009, Early Revenue Stage, 90% exports primarily to US, investor/revenue funded, Suite 339, 14032 - 23rd Avenue, Edmonton, Alberta T6R 3L6, 780.665.2936

PRODUCTS: Social media influence game

GROWTH STRATEGIES: Seek partnerships with businesses who wish to reach digital influencers and engagers, and investors

CONTACT: Duleepa (Dups) Wijayawardhana, CEO & Co-Founder, bizdev@empireavenue.com, 780.665.2936. The founders and employees are from the *Successful Exit BioWare* (p.91).



EZ-Robot

Powerful easy-to-use software for machine to machine (M2M) communication

Don't let the hobby focus of the website fool you. EZ-Robot has created a software that allows a machine with a micro controller to communicate with another machine (M2M) wirelessly using Bluetooth. For example, if your coffee maker has a micro controller, you could control it with your smartphone.

EZ-Robot enables hundreds of machines to be controlled from one computer or smartphone, or hundreds of computers to be controlled by one controller.

In addition to this power, EZ-Robot's graphical interface with drop-down menus makes it very fast and simple to set up the M2M communications.

As an example, the company has witnessed robot hobbyist using EZ-Robot complete projects in an afternoon that experts take months to program using competing software. To make setup even faster, EZ-Robot is developing more plug and play products.

COMPANY: EZ-Robot Inc., www.ez-robot.com, 2 employees, founded 2011, Early Revenue Stage, new products coming out continuously, 90% exports worldwide, revenue/bootstrap funded, 4528 Stanley Road SE, Calgary, Alberta, T2S 2P9, 403.828.8217

PRODUCT: Powerful and low cost chip to program robots or M2M

GROWTH STRATEGIES: Seek resellers and partners to embed technology in their products

CONTACT: Alan Campbell, Business Relations, alan@ez-robot.com, 403.828.8217



EZ-Robot

Mobovivo

World leader in second screen social TV apps

Neilsen Research has found that most people don't just watch TV anymore. At the same time, they are using a second screen device such as a smartphone or laptop to communicate with their friends about the show or are looking up additional real-time online content about what they are watching. Mobovivo has become a world leader in creating second screen real-time social video apps and content that complement and extend TV shows to create more value for viewers. By providing a framework for the social interaction, fan engagement and gamification, Mobovivo is also giving broadcaster more control in guiding this interaction, demonstrating to advertisers and content makers that real customer engagement is taking place, and figuring out ways to have it generate additional revenue for broadcasters and advertisers.



COMPANY: Mobovivo Inc., www.mobovivo.com, 16 employees, founded 2009, Early Revenue Stage, 20% exports to US, UK and Brazil, investor/revenue/grant funded, Suite 1400, 700 - 2nd Street SW, Calgary, Alberta T2P 4V5, 403.668.7039

PRODUCT: Second screen social video apps

GROWTH STRATEGIES: Seek more clients in sports, reality, and news programming

CONTACT: Trevor Doerksen, CEO & Founder, trevord@mobovivo.com, 403.608.1923

NavNet

Canada's leading home automation technology manufacturer

NavNet designs and manufactures the hardware and software for turnkey home automation systems that can let a person control their home with the touch of a button on their smartphone, even when they are not at home and on the other side of the world. NavNet's system can control lights, security, thermostat, as well as music, movies, window shades and motorized gates. It can also monitor flood sensors, check if the garage door is closed, and allow control of a home's CO₂ emissions. The NavNet system allows all these devices to

be available from a smartphone through one intuitive graphically rich software interface. Its hardware is open architecture hardware that is totally customizable.

COMPANY: NavNet Inc., www.navnetinc.com, 25 employees, founded 2009, High Growth Stage, 15% exports primarily to US, revenue/investor/grants funded, #12, 12204 - 40th Street SE, Calgary, Alberta T2K 4K6, 1.888.628.6380

PRODUCT: Plug and play home automation devices

GROWTH STRATEGIES: Seek more distributors and investors

CONTACT: Nav Dhunay, President & Founder, info@navnetinc.com, 1.888.628.6380



Peregrine Glove / Iron Will

Revolutionary wearable keyboard

The Peregrine Glove gives you an edge. Instead of having to look down to hit keyboard keys, you can transform your hand into a keyboard where commands are fast and accurately triggered with different hand motions. You can customize it to 30 unique shortcut commands you chose. For gamers, it has been shown to increase their player reaction time by nearly 20%. It is more suitable for real-time strategy and massive-multiplayer online games than first-person shooter games. The \$150 device is plug and play capable of replacing a standard keyboard. A motion-sensing wireless glove sync via Bluetooth to a number of mobile platforms is available mid 2013.

COMPANY: Iron Will Innovations Canada Inc., www.theperegrine.com, (employee size not available), founded 2005, Early Growth Stage, products sold worldwide, right hand product available 2013, investor/revenue funded, wireless models available 2013, Unit 102, 3901 - 51 Avenue, Lloydminster, Alberta T9V 2Z2, 780.875.2135

PRODUCT: Touch and motion sensitive user interface

GROWTH STRATEGIES: Seek strategic partnerships in gaming, computer graphics/design, 3D modeling software, wearable computers, headsup active display, augmented reality, and stroke rehab

CONTACT: Brent Baier, CTO & Founder, b.baier@theperegrine.com, 780.875.2135



Pyxwise

Top education app for learning to read and spell English words

To teach reading words, traditional phonics breaks down words into spelling patterns such as *sh* and *th*, and a student sees these letters and has to remember the sounds that they make so they can sound out larger words. However, when

Lisa Welburn began teaching phonics to her son, she found a big disconnect. Phonics makes the assumption that the student plans to decode the text (convert the text to sounds) in order to read it. However, spelling requires the reverse process. When a student spells a word, he or she begins with a sound and attempts to encode it to create text. To solve the problem, Lisa invented a reverse phonics approach where the focus is on hearing a sound first and then teaching a student the letter pattern(s) that could make that sound. Using reverse phonics, her son quickly found that he already knew a lot about words and had a more positive experience. Pyxwise products helps students learn to spell with letter by letter audio feedback, have won many awards including 2nd place in the **2011 Best App Ever Awards**, and are available on the Apple store for \$4.99 with a 50% discount for schools.



COMPANY: Pyxwise Software Inc., www.pyxwise.com, 2 employees, founded 2011, Early Revenue Stage, 85% exports primarily in the US, revenue/bootstrapped funded, 1676 Tompkins Wynd, Edmonton, Alberta T6R 2Y4, 587.987.7286

PRODUCT: Apps for improving spelling and reading skills

GROWTH STRATEGIES: Seek new market opportunities and resellers

CONTACT: Dr. Lisa Welburn and Craig Welburn, Co-Founders, craig@pyxwise.com, 587.987.7286. Previously Craig worked at the *Successful Exit BioWare* (p.91).

Transformana

Helping students understand good financial choices

Money gives you options, but your decisions either give you freedom or make you a slave to debt. Transformana's first app is designed for high school and university students to learn about the decisions related to living away from home such as budgeting for living expenses, taking on student loans and making down payments on cars. Transformana is working with financial and education institutions to customize the app for their customer base. Combining a video game interface with analytics, Transformana's platform technology helps people better understand complex problems and enhance critical thinking for better decision making, productivity and creativity. Transformana is working on several new products, including one for corporate productivity.

COMPANY: Transformana Inc., www.transformana.com, 9 employees, founded 2012, Early Revenue Stage, bootstrap funded, new product release 2013, pre-orders and customization started 2012, corporate productivity product available Fall 2013, Unit 87, 4940 - 87 Street, Edmonton, Alberta T6E 5W3, 780.432.5779

PRODUCT: Video game interfaced apps for improving understanding, productivity and decisions

GROWTH STRATEGIES: Seek more partnerships with financial and educational institutions, technology partners for corporate productivity

CONTACT: Debra Greig, Co-Founder, hello@transformana.com, 780.432.5779



Wireless Dynamics / iCarte

Mobile electronic wallet innovation leader is putting an end to traditional wallets

Many new credit cards now have a chip with a pin code password. What's next? It's a secure electronic wallet, a device that enables your smartphone to act as your credit card so you can leave your wallet at home. Already being used in many countries, Wireless Dynamics has pioneered the mobile payment and electronic wallet.

Wireless Dynamics' iCarte is an electronic wallet that enables your smartphone to quickly and securely make transactions using a store's point of sale system. It can also carry multiple credit cards, makes managing receipts easy and paperless through electronic tracking and frees you from ever having to physically carry another loyalty club card again. Interestingly, Wireless Dynamics' iCarte can also be used as a smartkey for secure access to doors, and to read electronic tags.

COMPANY: Wireless Dynamics Inc., www.wdi.ca, 12 employees, founded 2003, Early Growth Stage, 90% exports to US, Asia, EU and Australia, revenue/investor funded, #220, 1925 - 18th Avenue NE, Calgary, Alberta T2E 7T8, 403.250.1818

PRODUCTS: Electronic wallet for smartphone

GROWTH STRATEGIES: Seek partners including distributor, card issuers, technology partners and developers

CONTACT: Ambrose Tam, CEO & Founder, info@wdi.ca, 403.250.1818. Ambrose was a Co-Founder and former President of Calgary's **Novatel Wireless** (p.94). See the chapter on *Successful Exits*.



Fluik Entertainment

Fun games that entertain

Have you ever seen a butt crack and wish you could just drop something into it? That's the naughty pleasure fulfilled by Fluik's entertainment game **Plumber Crack**. Fluik Entertainment has fun putting you in the role of a social deviant with its mobile games for Apple and Android smart phones and tablets. Fluik's most famous game so far is **Office Jerk** (photo), with more than 25 million downloads. Allowing players to throw office supplies (and more) at a virtual jerk in the office, **Office Jerk** climbed to the #1 Top Free App spot in iTunes in more than 50 countries in July of 2011. Fluik's games have a freemium business model: you can download them for free and then buy upgrades and game enhancers within the game. With **Office Jerk**, the players could download the game with a few free objects to throw, and then buy more items to get more hilarious reactions from the jerk. In 2012, Fluik released **Streaker**: an endless runner game that starts the player jumping out of a second-story window, hitting the ground and running to avoid obstacles while being chased by a big tough guy.



COMPANY: Fluik Entertainment Inc., www.fluik.com, 25 employees, founded 2009, High Growth Stage, revenue funded, 90% exports worldwide, Suite 300, 10256 - 112 Street, Edmonton Alberta T5K 1M4, 780.481.3323

PRODUCTS: Funny mobile app games

GROWTH STRATEGIES: Seek investors and partnerships

CONTACT: Victor Rubba, President & Founder, victor@fluik.com, 780.481.3323

Games Cafe

Successful video game developer launched 3 new freemium games for mobile and Facebook

Sally's Salon, **Sally's Spa** and **Sally's Studio** (Gym) are part of Games Cafe's flagship video game franchise. In **Sally's Spa**, players help Sally perform spa services, customize equipment and hire employees in a virtual spa where a variety of personalities that includes blushing brides, demanding fashionistas and calm couples feel relaxed and refreshed. Played equally by men and women, it has been a bestselling #1 app worldwide in the Action/Strategy category in the Apple store. In Fall 2012, Games Cafe launched 3 new franchises. These are freemium games where players can play for free and extra content is monetized. Since players can play together with their friends, these new games extend Games Cafe further into social gaming.

COMPANY: Games Cafe Inc., www.gamescafe.com, 25 employees, founded 2006, High Growth Stage, 95% exports worldwide, revenue funded, #102, 885 - 42nd Avenue SE, Calgary, Alberta T2G 1Y8, 403.258.3367

PRODUCTS: Mobile social casual games

GROWTH STRATEGIES: Seek more highly skilled individuals to join its development team for future products and platforms

CONTACT: Steve Shatford, President, CEO & Founder, visit www.gamescafe.com for email contact request, 403.258.3367 x30



Neojac Entertainment

Innovation leader in massively multiplayer online role-playing games Neojac makes freemium massively multiplayer online (MMO) videogames. **Smoo Online** is its successful kids franchise where kids compete with each other in classic mini games that have a modern twist like **Capture the Flag** or arcade games. Your Smoo (pictured) is your character. Neojac also has a role playing game titled **Islands Of War** with combat skill features found in other popular fantasy multiplayer role playing games (MMORPGs), but with the innovative capability of allowing players to play the game at their own pace and completely immerse themselves into the storyline by creating near real time quests that add onto the story and can be played by other players as well. These unique game features are powered by Neojac's innovative MMO game technology platform, **Atavism Online**, that can be licensed by other video game developers for a wide variety of MMOs that support thousands of players on the same server.

COMPANY: Neojac Entertainment Inc., www.smooonline.com / www.islandsofwar.com, 6 employees, founded 2007, Early Growth Stage, 70% exports worldwide, revenue/investor funded, Suite 5, 4404 - 12 Street NE, Calgary, Alberta T2E 6K9, 403.277.2752

PRODUCTS: Massively multiplayer online videogames and developer software

GROWTH STRATEGIES: Seek collaborators, marketing partners and investors

CONTACT: Jacques Rossouw, CEO & Founder, jacques@neojac.com, 403.277.2752



Overhaul Games / Beamdog

Players love Overhaul's remake and improvements to the legendary **Baldur's Gate** videogame Overhaul's newest game is a role-playing adventure called **Baldur's Gate: Enhanced Edition**. The original **Baldur's Gate** was **BioWare's** (p.91) first massively successful game that entertained millions of fans around the world and won multiple *Game of the Year* awards. **Baldur's Gate** defined the standard for *Dungeons & Dragon* computer role playing games (RPG), which is a game in which players assume roles of the characters in a story and play through an epic adventure. Instead of racing to move from one conversation or encounter to the next, **Baldur's Gate** is a huge experience where the player must unravel a series of mysteries on their adventure. The enhanced edition of **Baldur's Gate** contains an improved version of the original game plus 400 improvements that include new characters, places and story lines. Overhaul founder, **Trent Oster**, was the **3D Art Director** at **BioWare** when the game was originally developed and released in 1998, and after directed **BioWare's** *Best RPG of the Year* **Neverwinter Nights**. Overhaul Games also runs the PC game distribution store **Beamdog** (www.beamdog.com).

COMPANY: Overhaul Games Inc., www.overhaulgames.com, 15 employees, founded 2009, Early Revenue Stage, 95% exports worldwide, revenue funded/ bootstrapped, #200, 10143 - 82 Avenue, Edmonton, Alberta T6H 1Z5, 780.760.1625

PRODUCTS: Role playing videogames, digital distribution service

GROWTH STRATEGIES: Seek more players, international partners and investors

CONTACT: Trent Oster, President & Co-Founder, trent@beamdog.com, 780.760.1625. Trent was part of the *Successful Exit* **BioWare** (p.91). See more art p.90-91.



Robots & Pencils

Innovation leader in iPhone and iPad consumer and enterprise mobile apps

Robots & Pencils' remake of **Spy vs Spy** the wordless black and white **MAD Magazine** comic strip and successful 1980s videogame, was the #1 downloaded game on the iTunes App Store for both iPhone and iPad in 11 countries. In addition to making its own games, Robots & Pencils establishes partnerships to create games and apps that compliment TV and media. Examples of this include the TV science fiction series, **Primeval**, involving dinosaurs and time travel. Robots & Pencils also makes enterprise apps for corporations around the world such as the airline **WestJet**. For WestJet, Robots & Pencils developed an iPad game with the reward of a travel voucher that was played at WestJet booths at festivals around Canada.

COMPANY: Robots & Pencils Inc., www.robotsandpencils.com, 80 employees in Canada and US, founded 2008, High Growth Stage, 20% exports to US and EU, revenue funded, Suite 1100, 940 - 6th Avenue SW, Calgary, Alberta T2P 3T1, 403.453.0053

PRODUCTS & SERVICES: iPhone and iPad applications for business and media

GROWTH STRATEGIES: Seek more clients

CONTACT: Michael Sikorsky, CEO & Founder, hello@robotsandpencils.com, 1.888.740.0967. Michael was co-Founder of the *Successful Exit Servidium* (p.99).



XGen Studios

Successful developer of innovative video games for casual entertainment

Defend Your Castle was XGen Studios' first console release. Reaching the #1 spot on Nintendo's WiiWare service, it garnered the praise "five bucks worth of awesome" from **Wired Magazine**. With a castle made of construction paper and enemies made of crayon and buttons who attempt to knock it down, the player uses their Wii Remote to pick up the enemies and fling them away or drop them from a height great enough to finish the job. XGen is also known for their award winning game **Motherload**, in which the player is a miner on Mars who mines and sells minerals in a quest to acquire untold wealth as they encounter hidden dangers and surprises along the way. Leveraging its large fanbase of over 50 million plays of **Motherload**, XGen has extended this franchise with **Super Motherload**, an updated and expanded game with new features and content available on multiple platforms, including PC, Mac and console.

COMPANY: XGen Studios Inc., www.xgenstudios.com, 10 employees, founded 2003, Early Growth Stage, 85% exports worldwide, Super Motherload game available early 2013, revenue funded, #385, 11215 Jasper Avenue, Edmonton, Alberta T5K 0L5, 1.888.808.9436

PRODUCTS: Innovative and fun casual entertainment games

GROWTH STRATEGIES: Seek new markets and channel distributors

CONTACT: Skye Boyes, President & Founder, skye@xgenstudios.com, 1.888.808.9436 x101





Health Technology

PHOTO CREDIT: Calgary Scientific (p.29)



This *Cool Companies* chapter contains profiles of 18 companies with innovative, world-class health technologies. This is just a sample of the health technology companies in Alberta, Canada. The province has a vibrant and growing health and medical devices cluster, that includes global technology leaders. The profiled companies fall into 3 categories: medical imaging, medical devices, and analytics & productivity (or clinical or medical informatics). The scope of technology application and development that is possible in each of these groupings is fascinating.

MEDICAL IMAGING: Medical imaging involves taking an image, with special properties, of a part of the body, and using this information to improve the application of healthcare. For example, **XSENSOR's** (p.32) technology maps the pressure points the body feels against a bed, to

give nurses better information on a patient's trouble spots, enabling the prevention of serious life-threatening bed sores. While XSENSOR is already an established leader,



we have also found some very new-to-the-world imaging systems which include **Orpyx** to prevent diabetic foot issues (p.31) and **Preciseley Health** (p.31) for non-invasive just-below-the-surface tissue imaging that could put an end to the need for traditional tissue samples.

MEDICAL DEVICES: Another innovative new product is the wireless health monitoring system from **Vital Signals** (p.34). It monitors a person's health by collecting data such as blood pressure, physical activity and medication adherence and can communicate this data, plus provide automatic alerts for deviations, to family or doctors. This system enables the elderly and chronically ill to live independently at home as long as possible.

ANALYTICS & PRODUCTIVITY: Alberta has long been a leader in the use of electronic medical records. We have profiled some companies that have taken this to the next level by finding clinical intelligence in medical data. For example, **Clinisys'** (p.36) software can produce reports that can tell a doctor how a patient's medications correlate with their medical test results. Another company, **Darkhorse Analytics** (p.36) uses analytics to help optimize the deployment of fire and ambulance stations, vehicles and personnel.

Calgary Scientific

World's leading innovator of advanced medical imaging visualization

Calgary Scientific has made it possible for physicians to view medical images of data collected by MRI, CT, X-ray and even advanced 3D visualization, on their iPhone or any other device that has web browser access, anytime and anywhere—at home, at the mall or on the golf course. Physicians use this medical imaging data to diagnose, treat and monitor diseases such as heart disease, stroke and cancer, as well as for acute care scenarios when time is critical. Using their mobile device, there is no compromise to the speed, functionality or performance of the data compared to traditional dedicated hospital workstations. Since the data is only a virtualized image and never physically copied or downloaded, it is always kept safe. Through its new division, **PureWeb** (p.56), the company is expanding its technology into other industries to get traditional enterprise server and workstation based software quickly transformed to web, cloud and mobilized apps.



COMPANY: Calgary Scientific Inc., www.calgaryscientific.com, 80 employees, founded 2004, High Growth Stage, 95+% exports worldwide, revenue/investor/grant funded, Suite 208, 1210 – 20 Avenue SE, Calgary, Alberta T2G 1M8, 403.270.7159

PRODUCT: Visualization platform for medical imaging software

GROWTH STRATEGIES: Seek worldwide distribution and OEM licensing opportunities

CONTACT: Dr. Byron Osing, CEO & Co-Founder, byron.osing@calgaryscientific.com, 403.270.7159. Previously Byron was Co-Founder of the *Successful Exit Telebackup* (p.96).

Circle Cardiovascular Imaging

World leader in quantitative analysis tools for cardiac MRI images

MRI is a non-invasive medical imaging technique that captures pictures of soft body tissue. Cardiologists use cardiac MRI (pictured) to learn more about the condition of a patient's heart. The software technology created by Circle Cardiovascular Imaging provides cardiologists with automatically-generated detailed *quantitative*

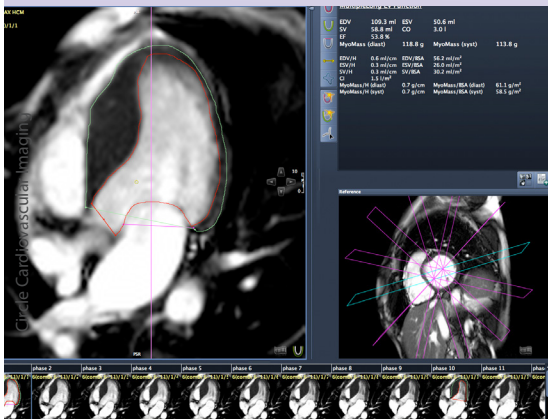
measurements of the heart's properties. These measurements include: tissue characterization, inflammation, perfusion (amount of blood in the heart muscle), and blood flow through each heart artery. Access to these new measurements provide cardiologists and radiologists with important insights which help them quickly and accurately diagnose heart conditions. It is vendor independent.

COMPANY: Circle Cardiovascular Imaging Inc., www.circlecvi.com, 25 employees, founded 2007, Market Leader, 90% exports worldwide, revenue/investor funded, Suite 250, 815 - 8th Avenue SW, Calgary, Alberta T2P 3P2, 403.338.1870

PRODUCT: Quantitative analysis tools for cardiac MRI images

GROWTH STRATEGIES: Seek investors and more collaborative partners for new product applications

CONTACT: Greg Ogrodnick, CEO & Co-Founder, info@circlecvi.com, 403.338.1870



Imaging Dynamics (IDC)

Innovation leader in digital high resolution X-ray imaging

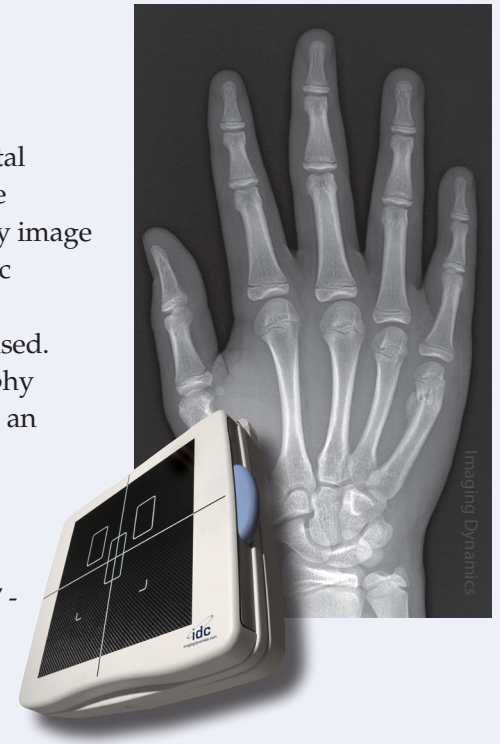
Just as digital cameras have replaced film-based cameras, digital X-rays (digital radiography) have created a similar revolution in the healthcare industry. The advantages of digital X-rays are: significantly less waiting time to see an X-ray image (which translates into seeing more patients per day), higher quality diagnostic images (for enhanced patient care) and electronic image storage and transfer. Without using film, there are also no environmentally unfriendly chemicals used. Imaging Dynamics (IDC) has been an innovation pioneer in digital radiography since its infancy and, with 3000 installations in 50 countries, it has grown into an international market leader. In 2011, IDC's revenue was \$7.9 million, up 46% from 2010.

COMPANY: Imaging Dynamics Company Ltd. (IDC), www.imagingdynamics.com, 27 employees, founded 1995, Market Leader, 98% exports worldwide, publicly traded on TSX as IDL, offices in Hong Kong and Beijing, Headquarters: Suite 1157 - 40th Avenue NE, Calgary, Alberta T2E 6M9, 403.251.9939, 1.866.975.6737

PRODUCT: High-resolution, affordable digital X-ray imaging

GROWTH STRATEGIES: Seek expansion in international markets

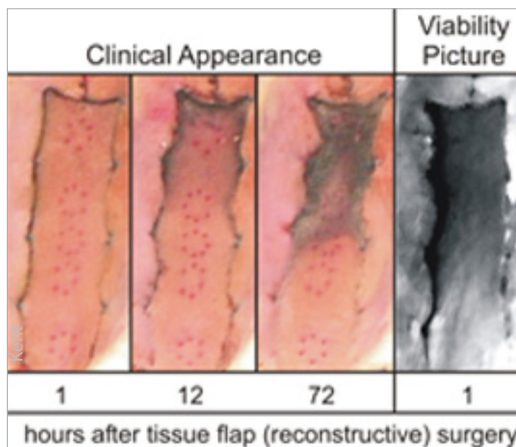
CONTACT: Michelle Brown, Director of Global Marketing & Business Development, mbrown@imagingdynamics.com, 403.251.9939



Kent Imaging

Innovative imaging camera gives clinicians new insight

Visual inspection doesn't always give clinicians the whole story regarding the health of tissue and its ability to survive following an operation or trauma. Kent's imaging technology displays additional information on the tissue's blood and oxygen, providing surgeons and clinicians the data they need to produce better outcomes. This technology



is based on a multispectral camera using near infrared light to analyze and display measurements of oxygen absorbed by the tissue (tissue oxygen saturation). Images can be viewed in colour or black and white where darker areas indicate the potential of tissue failure (as pictured). Kent is considering clinical studies to explore the camera's value proposition in other medical areas such as diabetes, pressure ulcers, transplant surgery, burn depth and coronary bypass surgery.

COMPANY: Kent Imaging Inc., www.kentimaging.com, 10 employees/contractors, founded 2006, Early Growth Stage, FDA clearance received August 2012 and started exporting, investor/revenue funded, Suite 1440, 720 - 13th Avenue SW, Calgary, Alberta T2R 1M5, 403.455.7610

PRODUCT: Tissue viability imaging

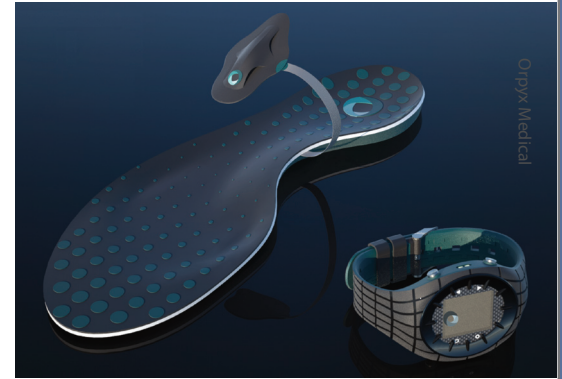
GROWTH STRATEGIES: Seek opportunities with large international corporations with complementary products and/or distribution

CONTACT: Don Chapman, CEO, President and Co-Founder, don@kentimaging.com, 403.455.7610

Orpyx Medical Technologies

World's first sensor-based technology to prevent complications from loss of sensation in feet

Half of the 350 million diabetics worldwide will develop **peripheral neuropathy**—a loss of feeling and sensory feedback in their feet. It can cause tissue damage, infection, ulceration and even amputation. To prevent this, Orpyx has developed an innovative sensor-based technology that enables patients to feel their feet again. It is an insole (pictured) that fits into a shoe and is embedded with pressure sensors. Enabled with ANT+ wireless technology, patients are alerted if they put too much pressure on one part of their foot. Orpyx's first product wirelessly transmits feedback to a wristwatch display. Its second product will transmit data from their feet to a stimulus pad worn on the lower back. The patient will essentially feel as though they are 'walking' on their lower back, and the brain will begin to rewire itself to accept the sensory stimulus from the lower back. Orpyx technology can also be used for rehab with stroke, spinal cord, nerve or traumatic leg injuries.



COMPANY: Orpyx Medical Technologies Inc., www.orpyx.com, 5 employees, founded 2010, Early Growth Stage, investor funded, wristwatch product available end 2012, back stimulus product clinical trials 2013, Suite 307, 1235 - 26th Avenue SE, Calgary, Alberta T2G 1R7, 403.709.0129

PRODUCT: Sensor-based products to improve medical and athletic self-monitoring

GROWTH STRATEGIES: Seek investors and strategic distribution partners around the world

CONTACT: Dr. Breanne Everett, CEO & Founder, info@orpyx.com, 403.709.0129. ANT+ wireless technology was developed in Alberta by *Successful Exit Dynastream* (p.92) and is used around the world.

Preciseley Health

New tool for non-invasive subsurface imaging made ultra fast and tiny

Taking tissue samples will soon be history. Without cutting or damaging the tissue, an emerging technology called **optical coherence tomography (OCT)** allows us to "see" in real time behind the surface of any biological tissue at a

depth of about 1 mm. Acting as an optical biopsy, OCT can map out this landscape in high resolution so the whole 3D subsurface is visible. At the moment, the most active medical uses of OCT have been to examine the retinal substructure of the eye, and under skin and nails. Preciseley Health's new micro device would be the front-end imaging mirror component of an OCT instrument, and is set to open fresh new possibilities for OCT. Preciseley's device makes OCT ultra tiny (so it can get to new places inside the body to image internal organs and even teeth) and extremely fast (no blurry images, no waiting). Since OCT can also penetrate most materials, it can be used for other applications including looking inside pearls, seeds, finger prints (it is much more accurate), paper, old paintings and artifacts.

COMPANY: Preciseley Health, a division of **Preciseley Microtechnology** (p.19), www.preciseley.com, 5 employees, founded 2006, Early Revenue Stage, 40% exports worldwide, revenue/bootstrap funded, 11421 Saskatchewan Drive, Edmonton, Alberta T6G 2M9, 780.492.4475

PRODUCT: Device to make OCT ultra tiny and ultra fast

GROWTH STRATEGIES: Seek instrument/equipment designers in health and other fields

CONTACT: Dr. Tiansheng (Tian) Zhou, President & Founder, info@preciseley.com, 780.902.4137



VibeDx Diagnostic

Using tiny vibrations, revolutionary technology can diagnosis back problems

Lower back pain is a common problem for almost 90 million people who are experiencing it at any one time in the US alone. Presently, magnetic resonance imaging (MRI) is the leading tool to assess back pain problems



today, but since MRI can only produce a static image, its effectiveness is limited to 10% of cases. With eye-opening accuracy of over 99% in preliminary trials, VibeDx's technology is about to revolutionize how back problems are assessed. Using non-invasive tiny vibrations to gently move the back, the developers of VibeDx have discovered that different types of back injuries have distinct movement patterns that VibeDx can detect, using pattern recognition technology. In addition to determining the presence of an injury and the type of injury, VibeDx can also measure exactly where the injury is located and its severity. Compared to MRI, VibeDx is up to 6x faster, at 10% of the cost, and can be installed in any examination room.

COMPANY: VibeDx Diagnostic Corp., www.vibedx.ca, 3 employees, founded 2010, Pre-Revenue Startup, first trials successful, large-scale human trials started Fall 2012, expect product market ready 2014, self/grant funded, 4224 Enterprise Square, 10230 Jasper Ave, Edmonton, Alberta T5J 4P6, 780.492.7312

PRODUCT: Diagnosis of how the spine functions

GROWTH STRATEGIES: Seek investors and marketing partners

CONTACT: Cameron Schuler, CEO & Co-Founder, cameron@vibedx.com, 780.238.6740

XSENSOR Technology

A world leader in pressure imaging technology

To avoid getting "pins and needles", people unconsciously re-adjust their bodies. For patients confined to a bed, this can be more difficult, and the pressure of the body against a firm surface such as a bed can result in bed sores, which can be a serious life-threatening medical problem. To avoid it, nurses manually turn patients every 2 hours. However, to give nurses better information on trouble spots, XSENSOR has developed a thin flexible mattress cover with pressure sensors designed to monitor, record and analyze the interface between the patient and their hospital bed. Using pressure imaging (pictured), it gives very accurate real-time pressure readings and can continue to give accurate readings indefinitely, which is a breakthrough in pressure sensor products. Since it also tracks pressure readings over time, XSENSOR's product can alert a nurse if pressure areas have been above a safe threshold level and for how long.



COMPANY: XSENSOR Technology Corp., www.xsensor.com, 35 employees, founded 1988, Market Leader, 75% exports around the world, revenue funded, 133 - 12th Avenue SE, Calgary, Alberta T2P 0C5, 403.266.6612

PRODUCT: Pressure imaging solutions for medical, retail and automotive industries

GROWTH STRATEGIES: Seek R&D partnerships in medical applications

CONTACT: Bruce Malkinson, COO, sales@xsensor.com, 403.266.6612

Cleankeys

World's easiest-to-clean wireless computer keyboard

Computer keyboards are a big culprit in the spread of infection among humans. But cleaning a regular keyboard isn't easy. Cleankeys is different. It has a smooth flat glass surface and a touch sensitive keyboard with an integrated mouse pad. You can have a clean and disinfected keyboard in 10 seconds. Just spray it with a cleaner and wipe it off. It even has built-in intelligence to let you know when to clean the keyboard, and on-line monitoring software that lets facilities track the clean status of all its keyboards.

It is used around the world in (1) medical facilities like dental offices, nursing stations, and hospitals, (2) publicly-used computers in schools and internet cafes, and (3) manufacturing plants, especially those preparing food.

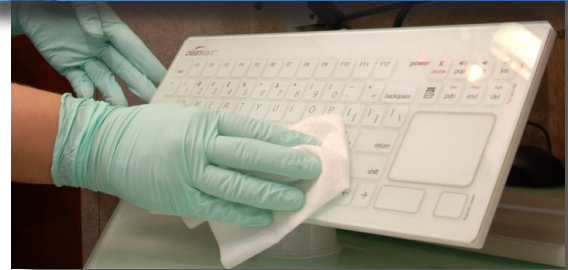
Cleankeys sells for \$299 to \$349 CDN.

COMPANY: Cleankeys Inc., www.cleankeys.com, 18 employees, founded 2008, Market Leader, 93% exports worldwide, revenue/investor funded, 4423 – 97 Street NW, Edmonton, Alberta T6E 6W6, 780.702.1473, 1.800.661.8406

PRODUCT: Easy-to-clean keyboards

GROWTH STRATEGIES: Seek investors and distribution partners globally

CONTACT: Randy Marsden, CEO & Founder, randym@cleankeys.com, 780.450.8926



Cleankeys



Mechatroniq HomeCare

Intelligent robotic homecare assistant

Mechatroniq's customizable robotic platform with wheels can help the elderly and chronically ill with their homecare. It can automatically detect if the person has fallen and it can help them stand up again, or send a distress signal to 911. It can carry wireless health monitors and medication, and come on voice or remote control command to the person's location. It can be equipped with voice or video conferencing technology to allow communication with relatives or doctors. It can even read, find a radio station, dial the phone, or make and bring a glass of water or a cup of tea (pictured).

COMPANY: Mechatroniq HomeCare is a division of **Mechatroniq Systems** (p.61), www.mechatroniq.com, 4 employees, founded 2006, Early Growth Stage, 25% exports to US and EU, revenue/grant funded, #5, 3916 - 64 Avenue SE, Calgary, Alberta T2C 2B4, 403.287.6567

PRODUCTS: Robotic homecare assistant

GROWTH STRATEGIES: Seek more clients, distributors and technology partners around the world

CONTACT: Andras Gyorffy, CEO & Founder, andras@mechatroniq.com, 403.287.6567

Rehabtronics

World leader in at-home stroke rehabilitation and recovery

Over 3 million people in North America have partially paralyzed hands, arms and shoulders as a result of stroke or other neurological injury. In many cases, such paralysis makes performing daily life tasks extremely difficult. Daily rehabilitation exercise can lead to significant improvement, but with ever tighter healthcare budgets, standard hospital-based therapy durations are becoming shorter and shorter. To fill this important gap, Rehabtronics has commercialized a remote rehabilitation workstation (pictured) that patients can use at home for rehab therapy. Using Rehabtronics' secure video chat, a patient logs onto the **hometelemed.com** website at a set schedule to perform progressive levels of exercise using game-based therapies, while a therapist at a different location monitors their exercise and obtains a real-time analytical measure of their progress. There are no travel costs and it is convenient enough to use every day.

COMPANY: Rehabtronics Inc., www.rehabtronics.com, 12 employees, founded 2005, Early Growth Stage, 30% exports in North America, Australia, Europe and Asia, revenue/bootstrap funded, 10230 Jasper Avenue, Edmonton, Alberta T5J 5A3, 780.638.2520, 1.866.896.7277

PRODUCT: At home rehab through the internet

GROWTH STRATEGIES: Seek marketing and distribution partners globally

CONTACT: Andy Prochazka, CEO & Co-Founder, andy@rehabtronics.com, 780.965.1884



VitalSignals

Helping the at-home elderly and chronically ill to live healthy independent lives

For the elderly and chronically ill who want to live independently at home as long as they can, VitalSignals has created a system that monitors a person's health by capturing data from interconnected wireless devices. The devices collect data on blood pressure, physical activity, weight, blood glucose, oxygen saturation and medication adherence.

The pill box (pictured) can alert patients when to take vital sign readings and medications. All the data can be used to assess medication effectiveness and the ability of a patient to manage their health. A missed medication or other deviation from the normal range can be sent as voice call, text message or email alerts to family members. The data can also be sent to specialists to monitor their patients and alert them to patients at risk, which is especially useful for people just released from the hospital after surgery. VitalSignal's devices are dual language in English and Spanish, with more languages coming.

COMPANY: VitalSignals Enterprises Inc., www.vitalsignals.ca, 9 employees, founded 2009, Early Growth Stage, device clinical trials completed, product ready end 2012, exports started to US and Europe, investor/revenue/grant funded, 101-2200 Woodview Drive SW, Calgary, Alberta T2W 3N6, 403.879.2653

PRODUCTS: Wireless health monitoring and automatic alerts

GROWTH STRATEGIES: Seek medical device distributors and clients such as government institutions, insurance and telecommunications companies, and individuals

CONTACT: Jerome Hahn, CEO, CTO & Founder, jhahn@vitalsignals.ca, 403.879.2653



Brightsquid Dental Link

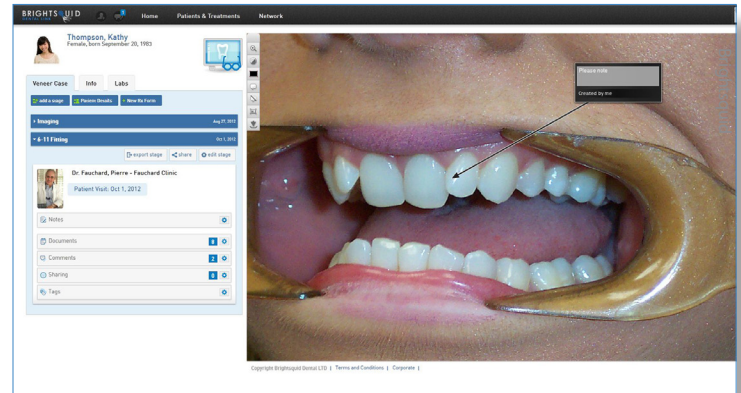
Increased collaboration for the dental community improves patient care, efficiencies and profits. Brightsquid Dental Link is a dental collaboration platform that centralizes communication between dentists, specialists and dental labs. In Brightsquid, all dental medical records and digital images related to a patient are centralized in a cloud-based location which is privacy compliant, and easily accessible by the care providers working on a patient's treatment plan. The secure software ensures everyone can stay informed and reduce errors by working with the same data. Increased collaboration for the dental community improves patient care, efficiencies and profits. Brightsquid can be viewed on PC, Mac, iPhone and iPad.

COMPANY: Brightsquid Dental Link Ltd., www.brightsquid.com, 15 employees, founded 2010, Early Revenue Stage, 85% exports to US, EU, Australia and Japan, investor/revenue funded, Suite 507, 3553 - 31 Street NW, Calgary, Alberta T2L 2K7, 403.617.3798, 1.800.238.6503

PRODUCT: Dental collaboration software

GROWTH STRATEGIES: Clients, strategic partners and investors in dental manufacturing

CONTACT: Rohit Joshi, CEO & Co-Founder, contact@brightsquid.com, 1.800.238.6503



Business Infusions

Veterinarian-designed medical records increases business intelligence and profitability. Frustrated with existing software, Canada's largest equine veterinary clinic, Calgary-based **Moore Equine Veterinary Services**, asked Business Infusions to build a vet-focused medical records software from the ground up where the medical record automatically generates billing and allocates and invoices inventory at time of service. The result was a significant increase in profitability that 'pulled' the software into the veterinary market. It is now used by some of the largest equine practices in the world, including customers in Texas, Kentucky, Florida, the UK and Dubai. The software has the unique ability to track and report on business metrics and trend analysis. It is a subscription service at \$150/month per revenue generating veterinarian and is configured to the clinic's unique needs. In addition to this horse/bovine product, the company has a cat/dog product for animal care clinics and one for stables/kennels.

COMPANY: Business Infusions, Inc., www.businessinfusions.com, 8 employees, founded 2006, High Growth Stage, 90% exports to US, EU and Dubai, revenue/investor/grant funded, Suite 317, 612 - 500 Country Hills Boulevard NE, Calgary, Alberta T3K 5K3, 1.877.207.3335

PRODUCT: Veterinarian-built end-to-end clinical practice software

GROWTH STRATEGIES: Seek more distribution to veterinarian, equine and animal care clinics, kennels

CONTACT: Scott Pickard, CEO, info@businessinfusions.com, 1.877.207.3335



Clinisys

An innovation leader in finding clinical intelligence in medical records

The core focus of Clinisys is medical analytics—finding clinical intelligence in medical data. For example, Clinisys' software can produce an analytics report that shows how a patient's medications correlate with their medical test results, giving physicians decision support insight to help them determine the next course of action. Using the data in medical records prepared to the International HL7 healthcare standards, Clinisys' clinical intelligence engine and user-friendly interface is compatible with most of the modern medical records systems. Being a web-based platform, it also gives physicians mobile access to the information they need.

COMPANY: Clinisys EMR Inc., www.clinisys.ca, 5 employees, founded 2010, Early Growth Stage, tested in North America and Europe Summer 2012, available since September 2012, investor funded, Suite 119, 9650 - 20 Avenue, Edmonton, Alberta T6N 1G1, 780.257.4497

PRODUCT: Innovative analytics for healthcare industry

GROWTH STRATEGIES: Seek strategic distribution partners and more clients (mid-sized clinics, hospitals and medical trial facilities involving patients)

CONTACT: Mehadi Sayed, President, CEO & Co-Founder, mehadi@clinisys.ca, 780.257.4497



Darkhorse Analytics

Leader in increasing the efficiency of emergency services vehicles and personnel

Some cities and towns have lots of ambulance and fire fighting vehicles but not enough stations, and the opposite is true in other places. Using the data that emergency vehicles automatically collect with every call that comes in, Darkhorse Analytics has developed a way to find the best locations for fire and ambulance stations, as well as the optimal number of vehicles each should support, and the number of staff that should be scheduled for each hour. Darkhorse has developed tools for other complex problems including accurately predicting sales in the heavy equipment industry, forecasting the time required

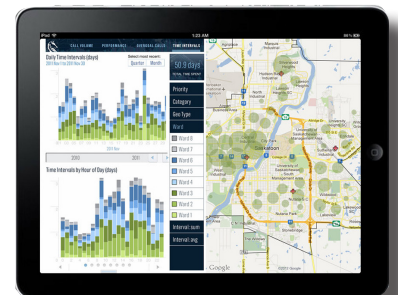
for directional drilling projects, and identifying undervalued players for a national hockey team.

COMPANY: Darkhorse Analytics Inc., www.darkhorseanalytics.com, 12 employees, founded 2008, Early Growth Stage, 25% exports primarily to US and expanding to Europe and Asia, revenue/grant funded, 9007 - 112 Street NW, Edmonton, Alberta T6G 2C5, 1.800.261.1832

PRODUCT: Emergency response analytics iPad app

GROWTH STRATEGIES: Seek channel partners and distributors

CONTACT: Daniel Haight, CEO & Co-Founder, dan@darkhorseanalytics.com, 780.952.6794



ORMED

Leader in healthcare information management for better efficiencies, reporting and decision making

ORMED software helps hospitals, long-term care facilities and healthcare systems understand their expenses in detail so they can see operational efficiencies, reduce costs and improve decision making. ORMED offers applications for finance, cost accounting, supply chain, human resources and payroll, and can provide insight into the origin of the expense with its deep drill down capability to the transaction and account source level of a cost. While each application can stand alone, ORMED applications also work well together to give an integrated view. ORMED has more than 2,700 applications installed in over 340 healthcare facilities throughout the United States and Canada.

COMPANY: ORMED Information Systems Ltd., www.ormed.com, 45 employees, founded 1986, High Growth Stage, 80% exports in North America and South America, revenue funded, 1453 - 91 Street SW, Edmonton, Alberta T6X 0W8, 780.482.7200, 1.888.464.3172 (Canada), 1.888.468.3519 (US)

PRODUCTS: Fully integrated management information system for healthcare

GROWTH STRATEGIES: Seek more system integrator partners in the Spanish speaking world

CONTACT: Neill Orr, Director of Marketing, info@ormed.com, 780.482.7200



Wairever

Faster, high-quality, evidence-based and best-practice clinical content

Researchers are constantly finding new evidence about which medical diagnoses and treatments work better in different situations and types of patients. To improve their patient care, healthcare professionals are collaboratively incorporating this new evidence into their medical decision making through the development of standardized workflows for medical diagnoses and treatments. This body of knowledge is called clinical content and its development is a rigorous process that can take years. Wairever has developed innovative software to make the development process for clinical content easier and faster. The software also helps deploy the clinical content across hospital-wide information systems. As an example of its impact on development time, most hospitals in North America strive to develop standards for 300 or so clinical situations a year. Using Wairever's software, clients have created and maintain well over 3,000 clinical situations in a year.

COMPANY: Wairever Inc., www.wairever.com, 11 employees, founded 2005, High Growth Stage, 25% exports sold around the world, investor/revenue funded, Suite 305, 1240 Kensington Road NW, Calgary, Alberta T2N 3P7, 1.855.288.4888

PRODUCT: Software to create and manage clinical content

GROWTH STRATEGIES: Seek to work with more hospitals, clinical content publishers, and health networks

CONTACT: Basil Baluta, CEO, CTO & Co-Founder, info@wairever.com, 1.855.288.4888



Enterprise Solutions Companies

PHOTO CREDIT: ShirWin Knowledge (p.43)

Enterprise solutions help companies and organizations improve their business operations, helping them work smarter and be more productive. In this *Cool Companies* industry guide we have found and profiled 38 companies in Canada's province of Alberta with



innovative, world-class enterprise solutions. We have grouped these products into customer interactions, training & education, productivity, and connectivity & networking.

One of the most famous of these companies is **SMART Technologies** (p.44, pictured left) that designs and produces interactive whiteboards

that are found in many schools and businesses. An interactive whiteboard is like a giant touch-sensitive computer screen that combines the functionality of a whiteboard, projector and computer. SMART launched the world's first interactive whiteboard in 1991 and has grown to be a market leader with 900 employees in Calgary and 90% exports worldwide.

We have also identified many companies with products and services that are still relatively new to the world:



- **Hookflash** (p.48, pictured right) that allows people to share high definition video conference, voice calls and texting with people in their **LinkedIn** network.
- **PureWeb** (p.56) has found a way to convert business software into web, cloud and mobile applications, without sacrificing performance or security, through a process that takes days instead of years.
- **Userful** (p.57) is helping businesses, which include Fortune 500 companies, make huge cost cuts in desktop hardware, computer management and electricity.
- **Inkdit** (p.49) enables a business' clients to electronically sign simple everyday non-negotiated contracts like waivers, NDAs and leases, which makes this paperwork easier to manage.
- **Mover** (p.55) has made it very simple and easy to transfer big volumes of data to and from cloud service providers.

BlackSquare

Revolutionizing the way wine is sold online

Selling wine directly to consumers is the most profitable way for wineries to make money. Based on their first-hand experience starting and growing **winecollective.ca** into one of the largest wine clubs in Canada, Blacksquare developed a wine-specific e-commerce platform called **Blackboxx** to fuel their operations. Now used around the world by global wineries, regional wineries, retail stores, wine clubs and wholesale distributors as well, Blackboxx helps them profitably sell their wine online, and simplifies both the back-end and front-end of their business. For example, it engages customers about their wine experience, which encourages a relationship, and leads to increased repeat business and customer insights. Blackboxx helps its clients mine this information for marketing trends. Blackboxx is quick to set up, adaptable, requires zero upfront costs and is sold as a service with a small per transaction flat cost, starting at \$1.49.

COMPANY: BlackSquare, www.blacksquare.ca and www.blackboxx.biz, 11 employees, founded 2010, 75% exports to Australia, China and Hong Kong, Early Revenue Stage, revenue/investor funded, #303, 605-11th Ave SW, Calgary, Alberta T2R 0E1, 403.648.9094, 1.855.77.BLACK

SERVICE: Cloud-based, turn-key e-commerce platform for wine & spirits

GROWTH STRATEGIES: Seek expansion into existing and new markets: US, Germany, New Zealand, Europe, Russia, Argentina, Chile, Brazil

CONTACT: Matthew Protti, CEO & Co-Founder, info@blacksquare.ca, 403.648.9094



Chaordix

Global leader in crowdsourced market intelligence

Crowdsourcing harnesses the wisdom of a digital community (the crowd) to elicit insights which can make significant advances in the design of new products or services—such as shortening time to launch and increasing the market success of innovations. Using an advanced social software platform and deep knowledge of crowd behaviour, Chaordix manages and engages a focused crowd—which might be a brand's fans, customers, prospects, supply chain or employees. Not-for-profit organizations can also engage their affinity groups and communities of interest. The crowd's ideas are collected, evolved, rated and ranked to reveal the strongest ones and best contributors. A crowdsourcing pioneer, Chaordix has become the market leader with clients that include **Procter & Gamble, IBM, FutureBrand, Reckitt Benckiser** and **American Airlines**. Chaordix has also teamed up with **KPMG** in the UK to offer crowdsourcing services to KPMG's clients.

COMPANY: Chaordix inc, www.chaordix.com, 22 employees, founded 2009, 90% exports primarily to EU and US, Early Growth Stage, investor/revenue funded, offices in London, New York and Boston, Headquarters: Suite 313, 1240 - 20th Avenue SE, Calgary, Alberta T2G 1M8, 403.263.2655, 1.877.263.7775

SERVICE: Crowdsourcing platform & services to drive market research, brand loyalty and innovation

GROWTH STRATEGIES: Seek more clients and strategic marketing partnerships

CONTACT: Shelley Kuipers, CEO & Founder, press@chaordix.com, 403.263.2655. Shelley was part of the *Successful Exit Stormworks* (p.95).



eThor Media

Linking the online-to-offline world for retailers and customers

Most purchases are still made in physical stores. This means there is still a huge gap between the online world and the world of local retailers. For example, lots of restaurants have websites but don't have online menus that allow you to order food online or through a mobile phone.

Using an innovative and integrated approach, eThor is making this connection, not just for restaurants, but any retailer. eThor's platform allows retailers to create and manage online promotions and content that drive purchase transactions which are directly linked to the retailers point of sale (cash register, aka POS) so they can keep track of everything. As an example of the impact of engaging and communicating directly with customers online, in just 9 months, the 30 store pizza chain **Garlic Jim's**, increased online sales by 76% (\$1.37 million) and doubled its online customer base.

COMPANY: eThor Inc., www.ethorlink.com, 20 employees, founded 2010, Early Revenue Stage, 95% exports to US, Central America and EU, investor/revenue/grant funded, 1528 - 16th Avenue SW, Calgary, Alberta T3C 0Z8, 403.668.9931

PRODUCT: Online ordering and marketing tool for retailers

GROWTH STRATEGIES: Seek to work with more retailers, distributors and other companies that can contribute in the value chain

CONTACT: Kevin Dahl, Director of Business Development, kdahl@ethor.com, 403.978.2840



Granify

Innovation leader in big data analytics for e-commerce

Online retailers spend vast amounts of money driving traffic to their stores from Google and other sources. Yet less than 3% of these visitors purchase anything. Granify has found a way to dramatically increase this number by using cutting edge machine learning and data mining technology. Online stores install software that enables



Granify to collect data on the behaviour of the on-line stores' shoppers. Granify analyzes this data in real time to predict when a shopper is at risk of not purchasing, and how to best motivate the shopper to make a purchase. Granify then automatically takes action to close the sale. For example, if a shopper is at risk of abandoning their shopping cart due to shipping costs, Granify may show an offer of free shipping if the shopper increases their order size slightly. Granify licenses its software on a monthly subscription basis.

COMPANY: Granify Inc., www.granify.com, 7 employees, founded 2011, Early Growth Stage, 90% exports primarily to US, investor/revenue funded, Suite 303, 10509 - 81 Avenue, Edmonton, Alberta T6E 1X7, 780.953.3338, 1.888.340.8429

SERVICE: Platform for customer behavioural data analytics for e-commerce

GROWTH STRATEGIES: Seek to work with more online stores, developers and investors

CONTACT: Jeff Lawrence, CEO & Co-Founder, jeff@granify.com, 780.953.3338. Granify's Co-Founder & Big Data Engineer, Shawn Wang, was the Big Data Research Engineer at *Successful Exit Tynt* p.97

SPLICE Software

Innovation leader in personalized human voice messaging

As an alternative to talking to a human being or to a machine with a robotic voice, SPLICE is a pioneer in humanizing digital interactions. SPLICE technology gives companies the ability to digitally message their customers, while making those interactions personalized to the customer, relevant, able to take voice input and pleasant to hear through linguistically optimized human voice audio. It makes it a lot closer to a real conversation, except it's not as expensive as a live person and it gives a significantly more impressive image about a company's brand than a robot or human word library slammed together. Clients currently using SPLICE are financial institutions, insurance companies and retailers, however it is applicable to any company with a large volume of customers. With cars and touchscreens where you can interact already by voice, there is also great potential for new types of smart conversations between humans to machines as well.

COMPANY: SPLICE Software Incorporated, www.splicesoftware.com, 18 employees, founded 2006, over 50% exports to US and UK, High Growth Stage, revenue/bootstrapped funded, #220, 6125 - 11 Street SE, Calgary, Alberta T2H 2L6, 403.720.8326, 1.855.677.5423



Phone



Email



Video



Website



Call Centres

SERVICE: Cloud-based, personalized conversation with data-driven dialogue

GROWTH STRATEGIES: Seek more clients and reseller partnerships worldwide

CONTACT: Tara Kelly, President, CEO & Founder, tara@SPLICEsoftware.com, 403.720.8326

Touch Metric

Pioneering leader in making it easy to collect data in person via a mobile device

Touch Metric has made in-person surveys done by paper and clipboard history. Now using a mobile device instead for data collection, you can see data results in real-time. The activities of waiting for data to be transferred from paper or paying for data input are eliminated as are additional input errors. Used by forward-thinking Fortune 500 companies and startups around the world, Touch Metric is used for market research studies, all types of inspections, and consumer experience interviews at tradeshows and events. The technology also has the ability to capture a picture associated with a survey, a GPS location and time stamp and reporting. The service starts at \$25 per month.

COMPANY: Touch Metric, www.touchmetric.com, 2 employees, founded 2009, 80% exports worldwide, Early Revenue Startup, bootstrapped/revenue funded, 10363-104 Street, Building B, 3rd Floor, Edmonton, Alberta T5J 1B9, 1.877.494.0827

SERVICE: In-person data collection via mobile device

GROWTH STRATEGIES: Seek more customers and partnerships with big market research and inspection companies

CONTACT: Cam Linke, CEO, or Sean Healy, President & Founder, hello@touchmetric.com, 1.800.494.0827

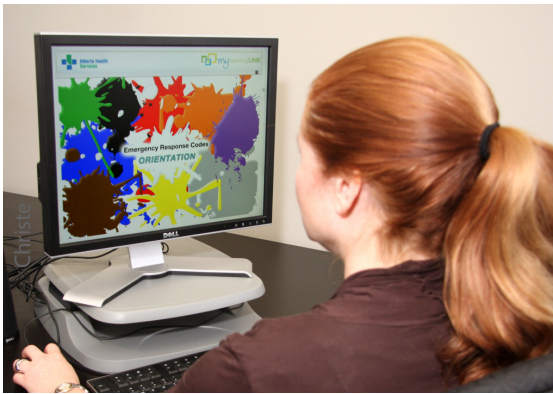


Christie Communications

Canadian leader in custom interactive media and eLearning

Christie Communications designs and produces custom education and training materials on a wide range of content for business applications. For example, Christie Communications has developed an animated, interactive on-line course (pictured) to train over 100,000 Alberta Health Services' staff and physicians on how to respond to emergency response codes. Christie Communications has also developed security eLearning for World Vision International, the largest non-governmental organization in the world.

This program is delivered in English, French, and Spanish, and the Christie Communications' team has



also produced materials in Chinese (Mandarin), Russian, and Arabic. The company has an understanding of the complexities of providing eLearning for learners whose first language is not English, and is also known for their ability to work with gender equality and cultural diversity issues.

COMPANY: Christie Communications Ltd., www.christie.ab.ca, 16 employees, founded 1980, 25% exports with clients located around the world, Market Leader, revenue funded, Suite 530, 10909 Jasper Avenue, Edmonton, Alberta T5J 3L9, 780.424.4433

SERVICE: Custom interactive media and eLearning

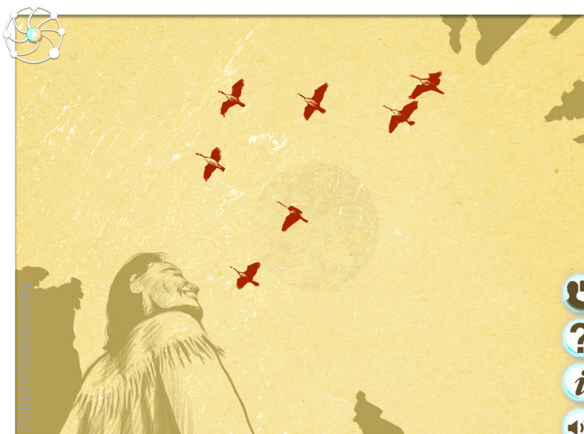
GROWTH STRATEGIES: Seek more clients around the world

CONTACT: Alexis MacMillan, President, info@christie.ab.ca, 780.424.4433

Culture Connectivity

Videogame-based cultural development for a more worldly view and better results

What does it take to have a global perspective? Understanding and respecting cultures different from your own are a big part of it. Values, beliefs, attitudes and conventions form the basis of all cultures, and being aware of one's own culture as just one of many allows us to communicate on the global stage. Culture Connectivity is a pioneer in creating meaningful environments that demonstrate the cultural differences that exist, and that might impact workplace productivity and results. Culture Connectivity allows learners to safely explore common misunderstandings and helps them develop the necessary attitudes and behaviours to interact and build trust with those of other cultures. Culture Connectivity's first product makes it easier for teachers and government representatives raised with western perspectives to live in Canada's



north, and to respectfully engage with the First Nations Dene culture.

This product platform can be customized to other indigenous cultures around the world. The company is also working on a product to help expats understand how to work with and lead people of other cultures. Its products are delivered as a cloud-based web service.

COMPANY: CultureConnectivity Inc., www.culturegenius.com, 3 employees, founded 2012, self/revenue funded, Early Revenue Stage, 4940 - 87 Street, Edmonton, Alberta T6E 5W3, 780. 432.5779

PRODUCTS: Cultural awareness training to increase productivity and results

GROWTH STRATEGIES: Seek more clients and opportunities to develop new products

CONTACT: Rodney Reid, Co-CTO, rodney@cultureconnectivity.com, 780. 432.5779 x 202

Kudos

New recognition system helps nurture employee engagement

Companies with highly engaged employees are more profitable. Employee engagement translates to team members that are more productive, innovative and collaborative which translates to better products, service and customer satisfaction. The resulting lower absenteeism, improved retention, and reduced recruitment costs also impact the bottom line. Kudos is a new tool to enhance employee engagement. It allows leadership and peers to send Kudos, which is recognition and feedback, to other team members for a kind gesture, job well done or major accomplishment. The recognition can be public or private, and a company can select to link the kudos to points, making it a game or a reward program. Kudos is also a corporate social network. Like Facebook, leadership and peers can use Kudos to share information and enhance communication that supports the organization's goals and values. Kudos is free for companies with less than 10 employees. For larger companies, it starts at \$49 per month plus \$1 per user. Kudos' clients are from a wide range of industries.

COMPANY: Kudos Inc., www.kudosnow.com, 9 employees, founded 2010, product sold worldwide, 70% exports, Early Revenue Startup, investor/revenue funded, Suite 431, 3553 - 31st Street, Calgary, Alberta T2L 2K7, 403.351.1701

PRODUCT: Recognition system for employee engagement

GROWTH STRATEGIES: Seek investors, marketing partners and resellers

CONTACT: Tom Short, President and Co-Founder, tom.short@kudosnow.com, 403.351.1701 x 101



ShirWin Knowledge

North American expert in building tools to improve learning experiences

How often do you go to a training course and never use what you have learnt? It happens frequently. What one knows from the classroom rarely translates directly into daily life. ShirWin works with corporations and educational institutions to develop immersive virtual environments that support learners across this knowing-doing gap. ShirWin's virtual experiences use the latest research evidence and proven instructional methods to promote greater understanding and integration of learning and practice. ShirWin is also developing its first platform for other developers of e-learning and training courses. It is one of the world's first serious game engines that integrates skills-based training and professional development, and that emphasizes the interpersonal aspects of workplace interactions.

COMPANY: ShirWin Knowledge & Learning Systems Inc., www.shirwin.com, 10 employees, founded 2000, revenue funded, high growth stage, 4940 - 87 Street, Edmonton, Alberta T6E 5W3, 780.432.5779

PRODUCTS & SERVICE: Custom learning applications

GROWTH STRATEGIES: Seek more clients and partners

CONTACT: Debra Greig, President & Founder, dialog@shirwin.com, 780.432.5779



SMART Technologies

World leader in interactive whiteboards for inspired collaboration

Like a giant, touch-sensitive computer screen, an interactive whiteboard combines the functionality of a whiteboard, projector and computer. SMART Technologies created the world's first interactive whiteboard in 1991 and has become a market leader in interactive display technologies, with a variety of products to suit different room



dynamics and audiences. SMART products are well-known in schools, which is the source of about 80% of the company's revenue. Less known is that the other 20% comes from business and government users, and these users are expanding rapidly. Business users are particularly interested in SMART's collaborative software that enables teams to have richer meeting experiences that inspire better decision making, greater participation and more efficient meetings and faster outcomes. SMART products work seamlessly together and some products can also be used with iPads and smartphones, so users have the convenience of using their own devices. SMART's 2011 revenue was \$754.8 million.

COMPANY: SMART Technologies Inc., www.smarttech.com, 900 employees in Calgary (1,500 total worldwide), founded 1987, Market Leader, 90% exports worldwide, publicly traded (NASDAQ:SMT, TSX: SMA), offices around the world, headquarters: 3636 Research Road NW, Calgary, Alberta T2L 1Y1, 403.245.0333

PRODUCT: Interactive displays with collaboration enabling software

GROWTH STRATEGIES: Seek more business customers and continued penetration in classrooms around the world

CONTACT: Marina Geronazzo, Manager of Public Relations, pr@smarttech.com, 403.407.5088

Xpan Interactive

Canada's leader in elearning for technical subjects

Xpan develops online training courses and apps that are technical in nature for middle to large size companies and organizations in public transportation, oil and gas and healthcare. For example, Xpan developed several online course series on the maintenance, operation and safety of light rail systems for numerous transit agencies across North America (pictured). For the oil and gas industry, Xpan developed a full 3D course to help engineers at **Husky Energy** understand the geological

story of how gas and oil were created in Alberta starting 120 million years ago. Xpan has also develop eLearning for well operations, corporate policies and ethics for oil and gas clients. For healthcare, Xpan worked with **Vecova** and **WorkSafe Alberta** to develop front line courses for medication administration, fall protection and hazard assessment.

COMPANY: Xpan Interactive Ltd., www.xpan.ca, 18 employees, founded 2001, High Growth Stage, 55% exports primarily to US, revenue funded, #475, 3553 - 31st Street NW, Calgary, Alberta T2L 2K7, 403.208.3848, 1.877.700.9726

SERVICE: Online training courses and apps

GROWTH STRATEGIES: Seek more clients and partners

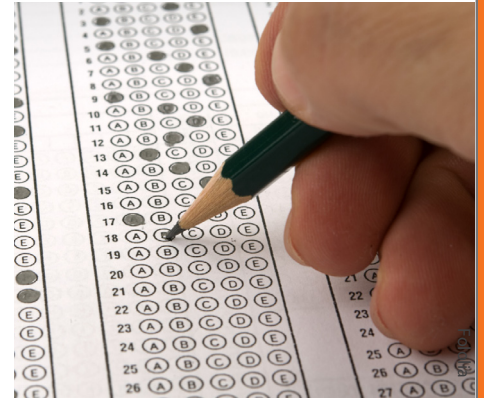
CONTACT: Ron Thiele, President & Founder, ron@xpan.ca, 1.877.700.9726



Yardstick Software

Canada's leader in fair and defensible online testing and training

Creating a good quality test is a challenge. There is even a science to it (psychometrics). A good quality test with psychometric foundation must properly cover the material, be fair so that any individual who takes the test does not feel discriminated against and be legally defensible. Yardstick Software helps its clients create quality tests that are fair, sound, and defensible, and its technology platform serves to administer all aspects of online testing and training for a reliable, convenient and hassle-free experience. Yardstick's clients are licensing and certification bodies that administer exams for professions such as pharmacists, nurses, dental hygienists, real estate agents, and financial regulatory organizations. In this case, designing a quality test also means protecting public interest. Corporations, governments and associations also do testing and training using Yardstick's robust delivery system. With 2011 revenue of \$5.9 million and 643% five-year growth, Yardstick was #73 on **PROFITs CANADA'S FASTEST-GROWING COMPANIES** list and ranked #176 on **Deloitte & Touche Technology Fast 500** list.



COMPANY: Yardstick Software Inc., www.getyardstick.com, 27 employees, founded 2005, High Growth Stage, 35% exports to US and EU, revenue funded, second office in Toronto, Headquarters: Suite 200, 8616 51 Avenue, Edmonton, Alberta T6E 6E6, 780.409.5606, 1.866.793.4820

SERVICE: Online testing and training software, and psychometric services

GROWTH STRATEGIES: Seek more clients and partners in regulated industries worldwide

CONTACT: Chris LaBossiere, Co-CEO & Co-Founder, chris@getyardstick.com, 780.409.5606

AwareBase

Helping engineers find files they need anytime, anywhere, any device

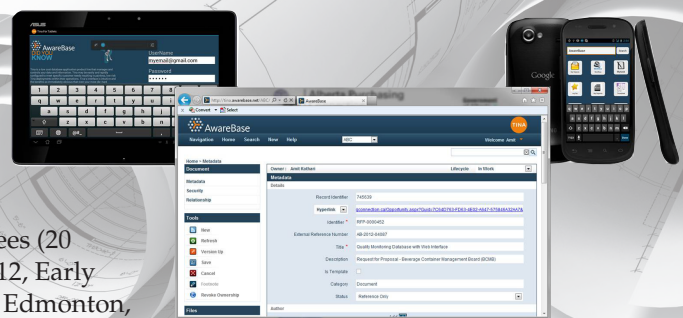
All engineers across all market sectors rely on massive amounts of documents and files—like drawings, CAD files, reports, standards and specifications—to do their work. AwareBase makes it simple for engineers to find the files they need, manage file versions and control access in a collaborative global team environment. AwareBase's secure and scalable engineering electronic document management system is used by engineers in small and midsize businesses to find the files they need on their desktop, laptop, tablet and smart phone in the office, on the road or at the job site! AwareBase's file management solutions are used by engineers across a range of industries including architecture, engineering, construction, aerospace & defence and oil & gas.

COMPANY: AwareBase Corp., www.awarebase.net, 80 employees (20 in Canada/60 in India), founded 2004, exports started late 2012, Early Growth Stage, revenue/bootstrapped funded, 4118-93 Street, Edmonton, Alberta T6E 5P5, 780.988.8862

PRODUCTS: Affordable file management for engineers

GROWTH STRATEGIES: Seek direct and channel sales through partners with complementary services or product offerings for engineers

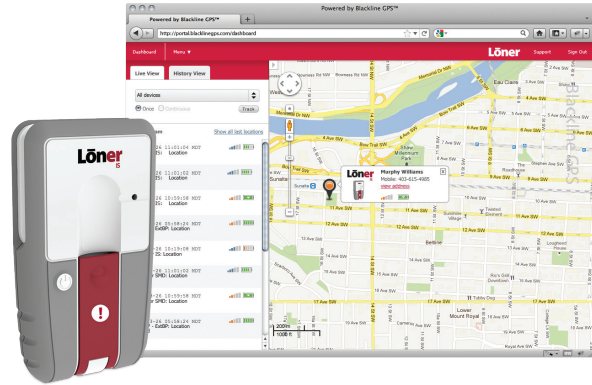
CONTACT: Steven Gentles, CEO & Co-Founder, info@awarebase.net, 780.988.8862



Blackline GPS

North American leader in wireless employee safety monitoring, surveillance and security

Combining GPS with wireless technology, Blackline's products enable real-time tracking of people and assets. When needed, alerts are automatically generated and delivered through web, phone or email. Blackline's leading safety monitoring products are used by companies with a mobile workforce such as industrial, construction, transportation, homecare, real estate and utilities—enabling workers' safety and location to be constantly monitored. Law enforcement, government agency, and professional investigators use Blackline solutions for surveillance of targeted individuals, to monitor their driving activities and location. Companies also use Blackline products to monitor the security and location of their assets, either as the assets are being delivered or to prevent inventory loss. It is even used to allow surgical teams to track the shipment of a donated kidney, plus monitor its temperature and fluid circulation required to maximize kidney health during transport.



COMPANY: Blackline GPS Corp., www.blacklinegps.com, 34 employees, founded 2004, products sold worldwide, 50% exports, Early Growth Stage, publicly traded on TSX VENTURE as BLN, 101 1215 - 13th Street SE, Calgary, Alberta T2G 3J4, 403.451.0327, 1.877.869.7211

PRODUCTS: Real-time tracking of people and assets

GROWTH STRATEGIES: Seek expansion opportunities including safety monitoring and covert & security solutions

CONTACT: Brendon Cook, CTO & Co-Founder, bcook@blacklinegps.com, 403.451.0327. More information in *Successful Exits* p. 92.

CodeExcellence

Protection from poor practices and bad habits in software development that could harm a business

Many large companies manage their business data using complex software from vendors like **SAP**, **Oracle** and **Microsoft**. This software most often than not requires teams of developers to enhance aspects of the code to suit the company's needs. Under pressure to deliver on time and budget, sometimes developers will take shortcuts to make things work—but this technical debt (future costs of today's poor code) will come back to harm the business. To control this problem, CodeExcellence has developed an easy to use software solution that automatically and precisely pinpoints any deviation from best practices that will cause problems down the road. By pointing out issues as soon as they are introduced into the development process, programmers and managers can remove them early when it is cheapest and most convenient rather than waiting until customers complain. CodeExcellence is one of Canada's **Profit50** fastest growing companies with \$758,000 revenue in 2011 and 284% growth in 3 years.

COMPANY: CodeExcellence Inc., www.codeexcellence.com, 7 employees, founded 2009, export sales just started, 30% exports, Early Growth Stage, investor/revenue/grant funded, offices in Singapore, Ontario, India, headquarters: 3553 - 31 Street NW, Calgary, Alberta T2L 2K7, 403.875.0809

PRODUCT: Continuous code quality management

GROWTH STRATEGIES: Seeking to expand market share globally

CONTACT: Roy Masrani, CEO & Co-Founder, rmasrani@codeexcellence.com, 403.875.080



iStock

eSchedule

Easy and accurate employee scheduling and juggling of work shifts through the web

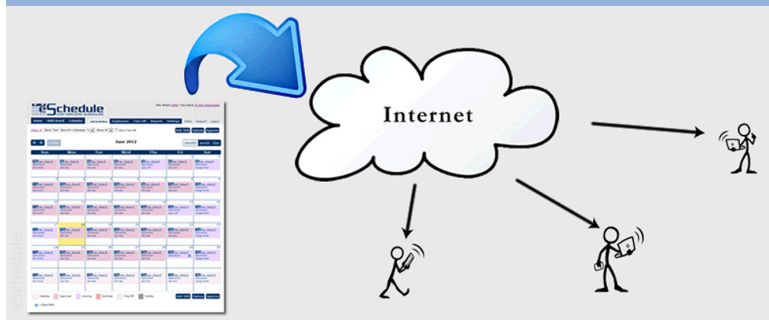
Planning work schedules is time consuming, and even more so when it includes shift work. eSchedule's online easy-to-learn and use software makes this schedule planning and communication process significantly faster and simpler. eSchedule's software is used by large organizations with heavy shift work scheduling demands such as healthcare, retail and hospitality. The software gives all employees access to schedules through the web anytime from anywhere so that they can switch or fill shifts without needing a call from management. Schedules always have real-time accuracy. The software allows for schedule creation by visible business rules and constraints, vacation tracking and scheduling by special needs such as traffic trends and patient loads.

COMPANY: eSchedule Inc., www.eschedule.ca, 5 employees, founded 2005, Early Revenue Stage, 80% exports primarily to US, revenue/bootstrap funded, #200, 1212 - 9th Avenue SE, Calgary, Alberta T2G 0T1, 780.990.4142, 1.800.718.3754

SERVICE: Web-accessible, cloud-based employee scheduling software

GROWTH STRATEGIES: Seek more clients and partners with complementary products for international expansion

CONTACT: Cale White, VP of Business Development, cale@eschedule.ca, 1.800.276.5167 x704



FAN PLM

Easier and more efficient approach to product lifecycle management for manufacturers

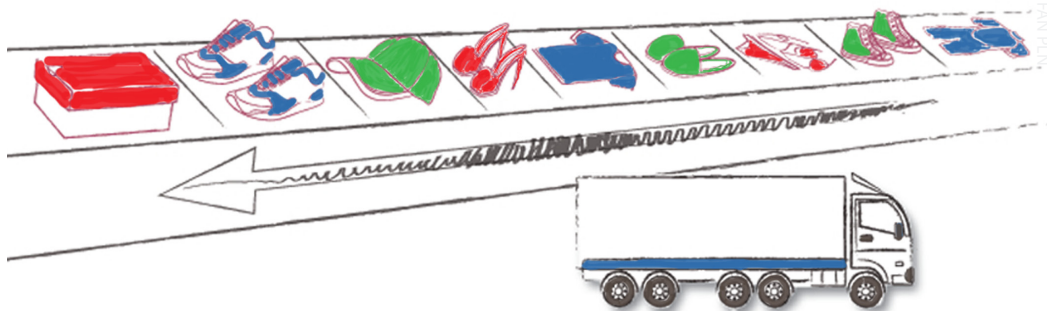
What do global sports footwear and apparel industry manufacturers of global brands have in common? What you likely don't know, is their product development is managed by workflow software from FAN PLM. Using this web-based software system, everyone involved in developing a new product can see the workflow and participate in the multi-time zone and multilingual communication from research and development in the US and Europe to manufacturing and even the shipping status in Asia. It also provides information on delivery to retailers and real-time sales. With this greater communication, transparency and easy access to information, FAN PLM has given product manufacturers a new level of control to their reliability, efficiency and profitably.

COMPANY: FAN PLM Inc., www.fanplm.com, 15 employees, founded 2012, Early Revenue Stage, 90% exports primary to US, operations in Europe, North America and Asia, investor/revenue funded, Suite 211, 9650-20 Avenue, Edmonton, Alberta T6N 1G1, 780.990.4142, 1.800.718.3754

PRODUCT: Web-based integrated task flow management for manufacturers

GROWTH STRATEGIES: Seek more clients, international expansion and partners

CONTACT: Boris Djordjevic, CEO & Founder, info@frontech.ca, 780.990.4142



Group RfX

Revolutionizing the purchasing process to save significant time and effort

There is a lot of work involved for both buyers and suppliers when an organization asks potential suppliers to bid on products or services, which is called a request-for-proposal (RFP). The organization might pay a consultant to prepare the RFP and then spends time comparing proposals to select a supplier. The potential suppliers spend time preparing the proposals. Since RFPs are not standardized, each one is different and potential suppliers spend a



lot of time filling out similar information instead of concentrating on specific questions that can make the difference. With its FREE software for buyers and suppliers that automates the purchasing process, Group RfX is revolutionizing the RFP process. Instead of spending \$20,000 worth of time preparing a proposal, a supplier can have it ready at a fraction of their time. Group RfX makes the RFP and evaluation process faster and less costly for buyers as well. It even has RFP templates created by certified consultants available for sophisticated purchases.

COMPANY: Group RfX Inc., www.groupRfX.com, 5 employees, founded 2010, 65% exports worldwide, Early Growth Stage, self/revenue funded, 1453 - 91 Street SW, Edmonton, Alberta T6X 0W8, 780.482.7200

PRODUCT: Electronic strategic sourcing infrastructure

GROWTH STRATEGIES: Seek more users, consultants to the supply chain and purchasing consortiums

CONTACT: Dale Gregg, CTO & Founder, dale.gregg@grouprfx.com, 780.482.7200 or 512.900.2361. Dale is also a Co-Founder of **ORMED** p.37.

Hookflash

Video conference or call anyone in your **LinkedIn** network for free

With over 160 million users globally, **LinkedIn** has become the business person's rolodex. Hookflash's new technology enables you to have instant, FREE, real time, high definition voice and high definition (HD) video conversations, and do text messaging with people in your **LinkedIn** network without any connections to traditional phone networks. This means there is no more searching for contact details or paying expensive long distance and roaming fees. Hookflash for iPad is FREE to download on the Apple App store. Hookflash's technology is based on its own new peer-to-peer communications technology **Open Peer**, which Hookflash has made available for developers, businesses and carriers to create their own communications applications.

COMPANY: Hookflash Inc., www.hookflash.com, 17 employees, founded 2010, Early Revenue Stage, Hookflash for iPad available FREE worldwide, Open Peer technology available Spring 2013, self/revenue funded, Suite 436, 3553 - 31 Street NW, Calgary, Alberta T2L 2K7, 403.615.6898

PRODUCT: Social mobile video conferencing

GROWTH STRATEGIES: Seek more users and technology partnerships

CONTACT: Trent Johnsen, CEO & Co-Founder, trent@hookflash.com, 403.615.6898



Inkdit

Making executing everyday contracts faster and easier

Most people think of “contracts” as big deals, like the sale of a house. In most businesses, these types of deals don’t happen that often, but there are lots of non-negotiated deals that need to be signed like sales agreements, job orders, waivers, leases and NDAs. These are the ones that take up time and paper. Inkdit wants to make it fast and easy for you to deal with these everyday business contracts. Using Inkdit, you send an email about the contract to the other

party, they accept it and sign it electronically, then Inkdit encrypts the contract so no one can change it later and stores it in the cloud for easy access and shares it with the appropriate parties. Inkdit can also handle multiple signatures. It is free for individuals.

COMPANY: Inkdit Corp., www.inkdit.com, 3 employees, founded 2010, 35% exports worldwide, Early Growth Stage, bootstrap funded, Suite 221, 10113 - 104 Street, Edmonton, Alberta T5J 1A1, 780.441.3585

PRODUCT: Online contract management

GROWTH STRATEGIES: Seek more clients and marketing partners

CONTACT: Gregg Oldring, President, CEO and Founder, gregg@inkdit.com, 780.441.3585



Jobber

Modern software to help small service-based companies manage their operations

Many field service companies with 1 to 25 employees including painters, lawn maintenance companies, landscapers, maid services, renovators, snow removers, window cleaners and others struggle to run and grow their businesses without proper software support. Jobber’s web-based software tool solves many of the problems experienced by these businesses. Built using modern software technologies and ideas, companies using Jobber get help with contact management, job scheduling and tracking, task and calendar management, automated quoting, invoicing and time tracking. Jobber is also fully mobile, so employees and managers can access all of the functionality from their mobile phones or tablets in the field. Jobber starts at \$29/month with a 30 day free trial that does not require a credit card.

COMPANY: Jobber Inc., www.getjobber.com, 5 employees, founded 2010, Early Growth Stage, 90% exports to US, EU and Australia, revenue/investor funded, #200, 10318 - 82 Avenue, Edmonton, Alberta T6E 1Z8, 780.436.2822

PRODUCT: Web-based management software for field service companies

GROWTH STRATEGIES: Customer base growth and more opportunities to expand globally

CONTACT: Sam Pillar, Co-Founder & CEO, sam@getjobber.com, 780.436.2822



Kiribatu Labs

A world leader in better predictive models for insurance data

What are the characteristics of a person most likely to make an insurance claim? The better an insurance company can predict the answer to this question, the better they can predict their expected insurance claim costs and produce a more accurate insurance quote for the policyholder. While leading insurance companies have started to answer this question by analyzing their data with advanced analytical techniques to develop predictive models, the majority of insurers have not. With its machine learning technology, Kiribatu Labs has the technology to help all insurance companies make this transition and significantly impact their profitability. For example, in a pilot project with a prominent western Canadian property and casualty insurance company, Kiribatu was able to generate an 80% increase in the client's underwriting profits—a direct addition to the client's bottom line.



COMPANY: Kiribatu Labs Ltd., www.kiribatulabs.com, 7 employees, founded 2009, Early Revenue Stage, product sold in Canada, no exports yet, self/revenue funded, 4217 Enterprise Square, 10230 Jasper Avenue, Edmonton, Alberta T5J 4P6, 780.232.2634

PRODUCTS: Analytics-based predictive risk assessments for property and casualty insurance data

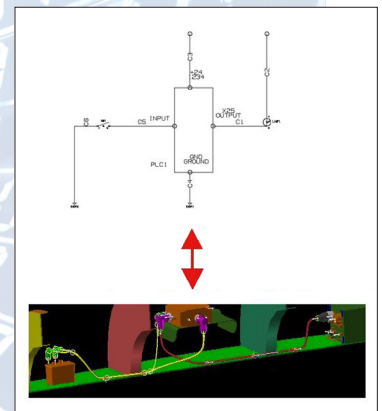
GROWTH STRATEGIES: Seek more clients around the world and access to insurance data sets

CONTACT: Pawel Brzeminski, CEO & Founder, pawel@kiribatulabs.com, 780.232.2634

LTX Software

Enhance the design process of complex new products

Engineers use Computer-Aided Design (CAD) tools to create 3D models and drawings for new products. CAD focuses on helping engineers map out the mechanical parts of the product. But often the new product requires electrical wiring, such as headlights in a car that would need a wire to run to a power source and a control system. Some products can have hundreds or even thousands of wires! LTX develops an add-on application used inside CAD that lets engineers design the wiring system at the same time they design the mechanical components of the new product. This gives engineers a way to leave room in the mechanical design for wires and to specify the type of connectors needed. Since it allows all designers to see the complete design of the new product as well as people in manufacturing and later by maintenance, it is a communication tool that can also speed up the time to market and identifying errors early in the process, all of which saves money. LTX is used in the aerospace, automotive, telecommunications, and consumer electronics industries.



COMPANY: LTX Software Inc., www.ltxsi.com, 5 employees, founded 1993, High Growth Stage, Stage, 99% exports worldwide, revenue funded, Suite A, 1700 Varsity Estates Dr., Calgary, Alberta T3B 2W9, 403.247.8994

PRODUCT: Electrical and mechanical design integration solutions

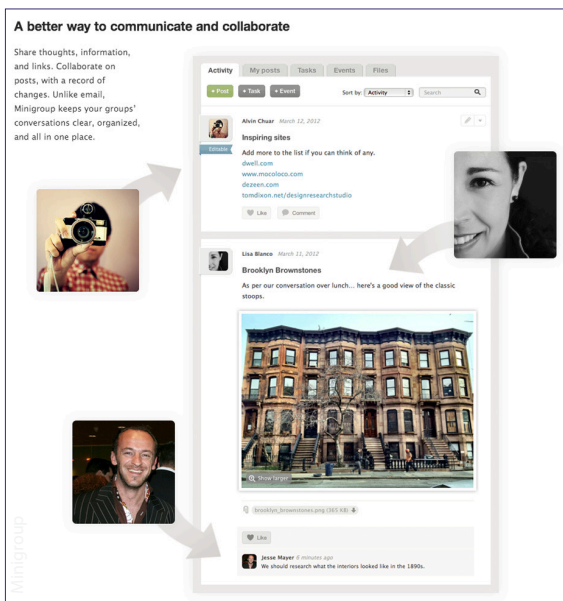
GROWTH STRATEGIES: Seek more partners for new product development process innovation

CONTACT: Keith Anderson, President & Co-Founder, kanderso@ltxsi.com, 403.247.8994. Previously Keith worked at the *Successful Exit NovAtel* (p.94).

Minigroup

Simple communication, sharing and collaboration tool for groups

Minigroup lets you put all the files and online conversations revolving around a group in one place so everyone in the group can see, add and comment on the files and add new comments and ideas. This helps keep the focus



on what the group is thinking and helps the synergy of social collaboration go much further than if the same information is scattered in your inbox and folders on your hard drives. File sharing between group members is done with a blog interface and for capturing commentary from all group members. Combined together, Minigroup is a social collaboration and sharing tool. It is designed to be very simple to learn and easy to use. It can be used for personal groups, businesses, and non-profits. All content on Minigroup is secure and private. Pricing starts at \$3 per year.

COMPANY: Minigroup Inc., www.minigroup.com, 4-8 employees, founded 2010, Early Revenue Stage, 46% exports around the world, revenue/investor funded, Suite 400, 119 14th St. NW, Calgary, Alberta T2N 1Z6, 403.450.4131

PRODUCTS: Tool for groups to share, communicate and collaborate

GROWTH STRATEGIES: Seek more users and investors

CONTACT: Ghyslaine Leroy, Marketing, feedback@minigroup.com, 403.450.4131. Several co-founders and employees are from the *Successful Exit Veer* (p.97)

PPM 2000

Global leader in end to end incident management for corporate security

Larger organizations, including multi-nationals, hospitals and universities, have corporate security departments for the physical protection of their employees, resources and property. When an incident such as workplace violence or theft happens, there is a whole string of activities that follow. PPM 2000 developed the world's first software system to help security department's manage incident information across their organization. These activities include collecting all the data needed to prepare a report of the incident (who, what, when and where) and to conduct follow up investigations. From there, PPM 2000's software helps the organization see trends and insights into incidents and losses that help them be more proactive in preventing similar events and provide a built-in defense against accusations of negligence or inadequate security. Today, PPM 2000's software is used by thousands of organizations, across all industries and including many of the Fortune 500.



COMPANY: PPM 2000 Inc., www.ppm2000.com, 55 employees, founded 1988, High Growth Stage, 80% exports primarily to US, revenue funded, Suite 1307, 10088-102 Avenue, Edmonton, Alberta T5J 2Z1, 780.448.0616, 1.888.776.9776

PRODUCTS: Tool for incident management, corporate security and loss prevention

GROWTH STRATEGIES: Seek more international clients and technology partners

CONTACT: Elaine O'Sullivan, President & Co-CEO, information@ppm2000.com, 780.448.0616

Replicon

Market leader in providing hassle-free time and expense management

Typically employees do not record how they spent their day. When they do complete a timesheet, they need to recall how they spent their time for a whole week or longer. It becomes a big burden that leaves lots of room for error. With Replicon's flagship timesheet product, an employee receives an email near the end of the work day asking for the clients and projects they spent their time on. It takes only a few minutes to complete. This gives companies much better visibility into a project's cost and time, insight that allows them to better achieve their financial goals. In addition to making it easier to control projects, it also makes billing clients more accurate and faster. Replicon has created products to make it easier to do expense reimbursement and timeoff scheduling as well and also has a cloud-based punch clock integrating with its attendance software. Replicon has more than 1.5 million users worldwide from small to very large companies such as **HP, Ernst & Young, Shell, Ferrari and Amazon**. 95% of its customers find them via the Internet. Its 2011 revenue was \$20.4 million, up 25% from 2010.

COMPANY: Replicon Inc., www.replicon.com, 320 employees (80 in Calgary, 200 in India), founded 1996, products sold worldwide, 80+% exports worldwide, Market Leader, revenue funded, offices in Silicon Valley, Toronto and India, Canadian Headquarters: Suite 800, 910 - 7th Avenue SW, Calgary, Alberta T2P 3N8, 403.262.6519, 1.877.662.2519

PRODUCTS: Cloud-based time tracking software

GROWTH STRATEGIES: Seek more clients

CONTACT: Lakshmi Raj, Co-CEO & Co-Founder, info@replicon.com, 403.262.6519



Solium

Global leader in stock plan administration

Having stock option and stock purchase plans can be complicated. Companies that offer equity compensation (e.g. stock options) to their staff need to jump over many regulatory hurdles. All companies must comply with securities and tax laws, while public companies must disclose equity compensation in their financial reporting. Travelling employees pose another challenge, because many countries demand a share of the taxes on equity compensation. Solium makes this work easier for CFOs. Through their range of web-based software and value-added service, Solium offers solutions for any stage of a company's growth. Solium enables companies to track and report their equity plan data, while allowing their employees to transact online in real time. Solium's revenue in fiscal year

2011 was \$46 million, up 71% from 2010. It has more than 2,800 clients that have employees in more than 80 countries.

COMPANY: Solium Capital Inc., www.solium.com, 300 employees worldwide, founded 1999, Market Leader, 50% exports worldwide, publicly traded on TSX:SUM, regional offices in Toronto, Montreal, London UK, Arizona US, Connecticut US, Headquarters: Suite 1500, 800 6th Avenue SW, Calgary, Alberta T2P 3G3, 403.515.3910, 1.877.380.7793

SERVICE: Cloud-enabled stock plan administration technology and services

GROWTH STRATEGIES: Grow business globally, seek strategic partners

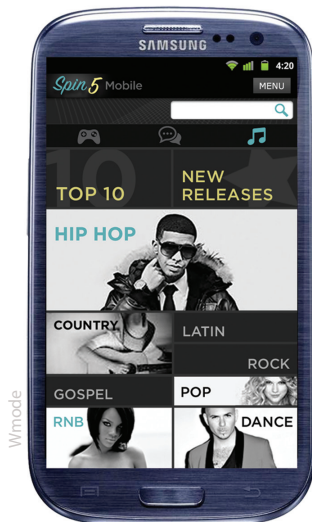
CONTACT: Scott Valentine, VP Marketing & Communications, scott.valentine@solium.com, 403.450.6033



Wmode

World leader in app interface and content integration for mobile operators, brands and enterprises

Wmode makes it easy for mobile operators (aka cell phone carriers) to deliver the latest wireless internet media and apps to their subscribers' mobile phones. Through Wmode's scalable, reliable and secure delivery platform, mobile operators have access to a wide range of content from apps and games to ringtones and wallpapers from a large variety of content providers. This enhanced user experience significantly increases subscribers' satisfaction with their phone and produces an increase in new service adoption and plan renewals which directly impacts a mobile operator's



revenue and profits. On the backend, Wmode provides subscriber management, billing and analytics-based marketing support to create marketing campaigns for mobile operators with new and popular content. Wmode also has a San Francisco based subsidiary called AppCarousel that bring apps and content to smart TV's and other connected devices in a dynamic and brand-focused way that's both relevant to consumers and content providers. Wmode also distributes Velocity software from Calgary-based Kryos that provides enterprise customers with the ability to rapidly mobilize information from enterprise-based software systems onto smartphones and tablets.

COMPANY: Wmode Inc., www.wmode.com, 66 employees, founded 2000, Market Leader, 80% exports primarily to the US, revenue/investor funded, offices in Toronto, San Francisco, and Bern Switzerland, Headquarters: 3553 – 31 Street NW, Calgary, Alberta T2L 2K7, 403.260.8690, 1.866.366.0663

PRODUCTS: Mobile content distribution and integration

GROWTH STRATEGIES: Seek more partnerships: content providers, mobile carriers, brands, enterprises

CONTACT: Emanuel (Bert) Bertolin, CEO, marketing@wmode.com, 403.260.8690

Axia

Leader in bringing high speed internet to rural towns the neutral way

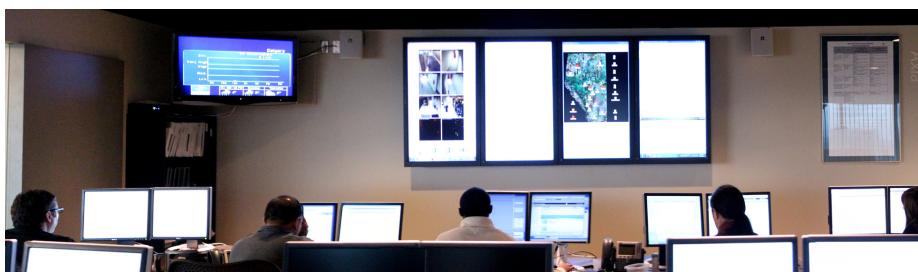
Axia changed the way telecommunications companies and service providers offered high speed internet services to rural towns. Before Axia, a company had to pay for the fibre infrastructure to be built from a city to the rural town, and because this was expensive many towns did not have high speed Internet services. Axia's innovation was to partner with the government: The government paid to build the fibre infrastructure to the rural towns, and Axia became the neutral vender that managed the infrastructure and sold bandwidth at a wholesale price to any service provider. This model ensures that all service providers, large and small, pay the same price for bandwidth. Axia also ensures that the bandwidth is not shared, so that each service provider has reliable access. As a result, the government now has high speed Internet access to all its offices, schools, health centres, libraries and courts, independent of a single provider, and rural consumers have more choice in service providers. Axia's fiscal year 2012 revenue was \$72.8 million.

COMPANY: Axia NetMedia Corporation, www.axia.com, 150 employees, founded 1995, Early Revenue Startup, 35% exports, doing business in several other countries, new projects in Massachusetts, Spain and Singapore soon to be operational, publicly traded on TSE:AAX, offices and installations in US, EU, Singapore, Headquarters: Suite 3300, 450-1st Street SW, Calgary, Alberta T2P 5H1, 403.538.4000, 866.773.3348

SERVICE: Wholesale bandwidth with neutral management of infrastructure

GROWTH STRATEGIES: Seek more international partnerships to establish similar services

CONTACT: Murray Sigler, President, Axia North America, info@axia.com, 403.538.4000



CoolIT Systems

World leader in direct contact liquid cooling for desktop computers, servers and data centres

When computers heat up, their processing speed slows down. Today's IT demands are pushing traditional air cooling to its limits and as processing demands increase, this solution is no longer enough. CoolIT's direct contact liquid cooling technology cools electronics significantly faster than air. This is similar to how liquid cooling works in car radiators and takes advantage of the fact that water absorbs heat 3,500 faster. In addition to being much more efficient, CoolIT's products also make financial as well as environmental sense. Reducing the reliance on air cooling, which includes computer room air conditioning units, can reduce the power required to operate the same number of servers by up to 50%. World leading high performance computer companies such as **MAINGEAR** and **CIARA** are also integrating CoolIT technology into their desktop computers and servers. Consumers can purchase CoolIT products directly under the brand name **Corsair**, a leader in high performance components for PC gaming.



COMPANY: CoolIT Systems Inc., www.coolitsystems.com, 28 employees, founded 2001, 95% exports, products sold worldwide, Market Leader, revenue/investor/grant funded, 3920 - 29 Street NE, Calgary, Alberta T1Y 6B6, 403.235.4895, 1.866.621.2665

PRODUCT: High performance liquid cooling for desktop computers, servers and data centres

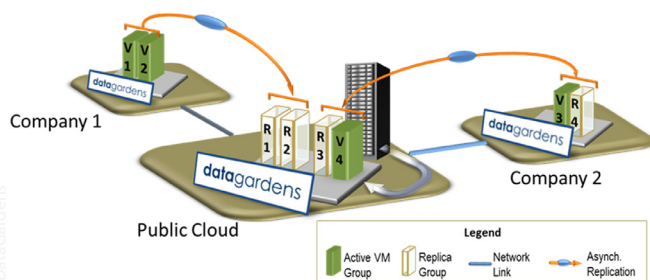
GROWTH STRATEGIES: Seek more clients, partners and investors

CONTACT: Geoff Lyon, CEO & CTO, marketing@coolitsystems.com, 403.235.4895

DataGardens

Innovation leader in disaster recovery and reducing IT downtime

Currently in large companies, if the main computer systems fail, the typical disaster recovery plan is to re-launch IT services on identical standby computers in a dedicated remote recovery site. Having this extra IT infrastructure ready to go at a moment's notice is very costly but has been seen as a necessity, until now. DataGardens offers a new solution that revolutionizes the whole cost structure of data centre protection. Its technology creates a secure replica data centre in the cloud that only gets fired up if the company actually needs it. In other words, DataGardens' software allows companies to switch their internal private data centres into a shared public cloud without compromising IT security. Using DataGardens' software, companies can restore full data centre operations in the cloud within a few minutes while paying no more than they would for off-site tape backup, from which it would take days to recover. In addition to drastically reducing costs and downtime, DataGardens software also provides a much richer set of data centre protection services than competitive products.



COMPANY: DataGardens Inc., www.datagardens.com, 7 employees, founded 2007, Early Revenue Stage, 35% exports to US, EU and Asia, revenue/investor funded, 14956 - 121A Avenue, Edmonton, Alberta T5V 1A3, 780.784.5004

PRODUCT: Data disaster recovery as a service from the public cloud

GROWTH STRATEGIES: Seek more clients, partners offering cloud storage services, and investors

CONTACT: Geoff Hayward, CEO & Founder, ghayward@datagardens.com, 780.784.5004

Mob4Hire

Crowd-sourced mobile quality assurance testing

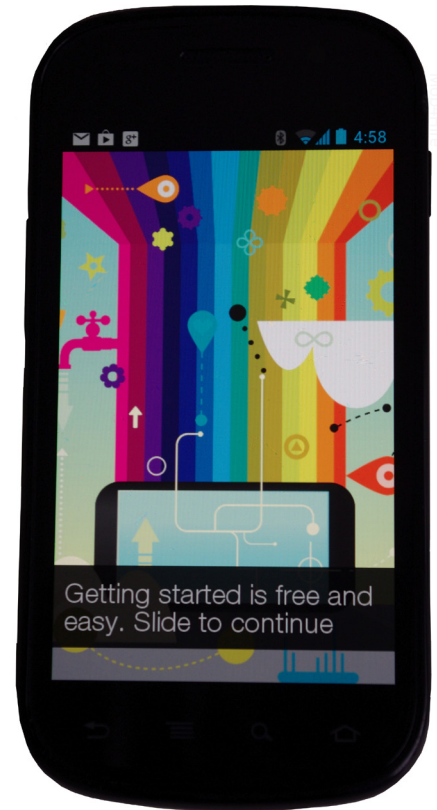
Mobile apps and websites can look and run differently on the countless devices, operating systems and networks, and mobile software development teams are overwhelmed with the nightmare associated with testing data-rich applications on different hardware and on different service networks around the world. Mob4Hire has developed an innovative new way to do this quality assurance. It enlists the help and devices of its mob of 60,000 mobile enthusiasts, making it the world's largest mobile testing, usability and market research crowd-sourced community for on-demand real world testing. Mob4Hire's clients include brands, mobile and tablet app developers, mobile market researchers, mobile advertisers and telecoms. In its first two years of operations, Mob4Hire completed 28,000 tester projects. Its new product, Mob4Hire Labs is the first automated on-demand crowd-device testing system, and SMS confirmation testing began in early 2013.

COMPANY: Mob4Hire Inc., www.mob4hire.com, 10 employees and a mob of 60,000 testers, founded 2007, Early Growth Stage, 99% primarily to EU, US and Israel, revenue/investor funded, Suite 502, 3553 - 31st Street NW, Calgary, Alberta T2L 2K7, 403.797.8517

SERVICE: Quality assurance solutions for mobile apps and websites

GROWTH STRATEGIES: Seek more clients, strategic partnerships (to build out tools for additional labs) and investors

CONTACT: Laura Sullivan, President, info@mob4hire.com, 403.797.8517



Mover

Experts at simple and quick big data moving to and from cloud storage

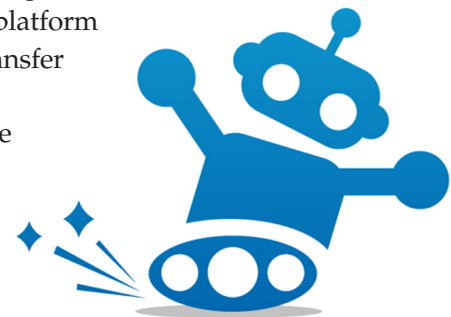
Normally passing large volumes of data with cloud service providers such as **Box**, **Dropbox**, **SkyDrive**, **Amazon S3**, and **Google Drive** is very difficult, time consuming and expensive for software developers to setup. Mover wants to do for data moving what **FedEx** did for shipping—create a one-stop, quick and easy-to-use system to get data files from point A to point B without having to sweat the details. It is off to a good start. Mover has created a software platform (Application programming interface (API)) that streamlines the data transfer process and has pre-negotiated all the transport. Mover will also allow developers to build their own tools for integration in their existing office backends and data management systems. As of end 2012, it has moved over 60 million files for clients.

COMPANY: Mover, www.mover.io, 10 employees, founded 2012, Early Revenue Stage, 95% exports worldwide, investor/bootstrapped/revenue funded, #203, 10363-104 Street, Edmonton, Alberta T5J 1B9, 780.643.2371

PRODUCTS & SERVICES: Experts in moving files

GROWTH STRATEGIES: Seek more clients (software developers), partners offering cloud storage services and investors

CONTACT: Co-Founders Eric Warnke, CEO, eric@mover.io or Mark Fossen, CIO, mark@mover.io, 780.643.2371



PureWeb

Fast and easy transformations of server-based software to web, cloud and mobile based apps

PureWeb has found the holy grail to one of the most daunting, resource intensive and expensive challenges software developers face: How to convert software (server, workstation or desktop) into web, cloud and mobile applications quickly and easily. Instead of taking years, PureWeb's technology can produce these apps days (!),

without sacrificing performance, responsiveness or functionality of the original server version! PureWeb has sorted out the data security issue as well. Initially developed and proven in healthcare with mega-size medical images, PureWeb gives the user only a virtual image of the data. The data stays on the server at all times and is never downloaded, giving the new apps a very small bandwidth footprint as well. Major clients of PureWeb's products are gaming companies, healthcare centres, oil & gas companies, and the military for simulation-based training.

COMPANY: PureWeb, a division of **Calgary Scientific** (p.29), www.getpureweb.com, 80 employees, founded 2004, High Growth Stage, investor/revenue/grant funded, 95% exports worldwide, Suite 208, 1210 – 20 Avenue SE, Calgary, Alberta T2G 1M8, 403.270.7159

PRODUCT: Software transformation into cloud ready, web-based and mobile apps

GROWTH STRATEGIES: Seek new partnerships and more clients worldwide

CONTACT: Dan Pigat, Director of Product Management, dan.pigat@calgaryscientific.com, 403.767.7959

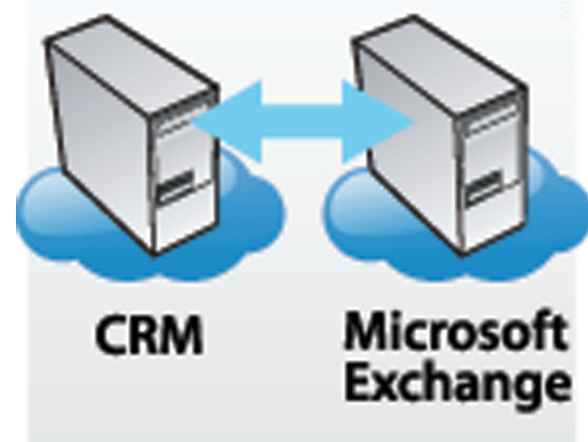
PureWeb



Riva CRM Integration

Easy way to sync CRM and email systems

Customer relationship management (CRM) software helps organizations manage interactions with customers and sales prospects. Sales reps and support staff use CRM software to track meetings, phone calls, tasks, email, sales opportunities and support cases to increase sales and improve customer service. **Microsoft Outlook** and mobile devices are also used to track this type of information, but keeping this information uploaded to the CRM and email systems so it all contains the latest data has been a challenge. Getting CRM and email systems in sync has involved the time-consuming task of installing Outlook plug-ins and mobile applications onto each employee's computer and mobile devices. Riva's technology makes this problem significantly easier. It requires only one software installation for a continuous and reliable sync of CRM and email systems across the whole organization. Riva's clients are Fortune 500 companies, governments, and small to medium-sized businesses.



COMPANY: Riva CRM Integration, a subsidiary of **Omni Technology Solutions**, www.rivacrmintegration.com, founded 1999, 20 employees, High Growth Stage, 95% exports worldwide, revenue funded, offices in Silicon Valley (US), Germany and Chile, Headquarters: #103, 10301 - 109 Street, Edmonton, Alberta T5J 14N

PRODUCTS: Sync solution for CRM and email systems

GROWTH STRATEGIES: Seek more clients and partners deploying CRM systems

CONTACT: Aldo Zaroni, CEO & Co-Founder, aldo@rivacrmintegration.com, 408.675.5015 x 232

Useful

Global leader in cloud-managed desktop virtualization, green computing and saving lots of money

What if you could use a simple cloud-based webpage to manage all your desktops and get all the software you need for free (using Linux)? You would save the cost of employing computer specialists to manage and maintain your computers. What if you could replace all your PCs with a \$99 device that gives you a full high-performance desktop experience but lasts for 8 years and consumes just 3W of power? You would save significant money in desktop hardware and greatly reduce electricity consumption and future electronic waste. This was the vision on which Useful Corporation was founded, and today it's a reality, being used by millions of people daily in over 100 countries by companies, governments and schools of all sizes including Fortune 500 companies in North America. Useful's technology works with devices and hardware from a range of vendors so clients can make their own equipment choices. Useful software also opens new opportunities in digital signage, kiosks and interactive touch displays, cloud computing, in-flight and in-room entertainment systems and casino gaming systems.

COMPANY: Useful Corporation, www.userful.com, 45 employees, founded 1999, Early Revenue Stage, 90% exports to over 100 countries, revenue funded, regional offices in Victoria, US, India, Mexico, Israel, Headquarters: Suite 200, 709 - 11th Avenue SW, Calgary, Alberta T2R 0E3, 403.289.2177, 1.866.873.9126

PRODUCTS: Software to replace computer hardware and computer staff

GROWTH STRATEGIES: Seek more clients, resellers, partners and investors worldwide

CONTACT: Timothy Griffin, CTO & Founder, partner@userful.com, 403.289.2177



Wedge Networks

Global innovation leader in fast and accurate network-level content security

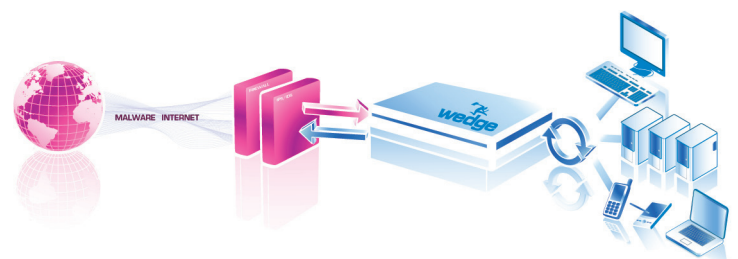
Wedge Networks creates a plug-and-play software platform to protect networks in Fortune 500 companies, government agencies, telecoms and internet service providers (ISP) against malicious malware, spam and data leakage from the internet. Typical network level anti-malware software products are either slow or inaccurate. Wedge Networks' innovative software platform is the first to achieve both high accuracy and high performance at the same time. Its deep content inspection technology can analyze all Internet content in real time, very accurately and with significantly faster processing time. This allows protection of endpoint devices as well such as mobile phones, tablets and laptops, without requiring cumbersome software to be installed on these devices. Another unique benefit of Wedge Network's software platform is that it can work with any off-the-shelf hardware. Thus, as hardware technology gets faster and replaces the old, Wedge Networks gets faster too. Today, Wedge Networks protects over 1,000 networks in 14+ countries, enabling clean internet services for more than 12 million end users.

COMPANY: Wedge Networks Inc., www.wedgenetworks.com, 50 employees, founded 2008, High Growth Stage, 85% exports worldwide, investor/revenue/grant funded, offices in California and China, Headquarters: 238, 3553-31 Street NW, Calgary, Alberta T2L 2K7, 403.276.5356, 1.888.276.5356

PRODUCTS: Network content security to protect against viruses and other bad things on the Internet

GROWTH STRATEGIES: Seek more clients, partners for integration on software platforms, and investors

CONTACT: Dr. Hongwen Zhang, CEO & Co-Founder, info@wedgenetworks.com, 403.276.5356. Hongwen was Co-Founder of the *Successful Exit Servidium* (p.99).



Industrial Applications



PHOTO CREDIT: 3DInternet (p.65)



In addition to its beauty, people and many strengths, Alberta is very fortunate to have an abundance of natural resources—oil, natural gas, coal—that have made it an energy world leader. This industrial engine has fueled Alberta’s economy, and made it the province with the strongest economy in Canada for the past 20 years. Alberta has many innovative companies in the energy sector. In our last *Cool Companies* industry guide (pictured) we also found that Alberta has an



impressive and healthy collection of world-class innovators in clean technology as well. Together they are proof that Alberta has embraced the challenges of the Cleantech Revolution and is carving out a new definition of itself as a modern energy innovation leader.

Since this *Cool Companies* industry guide is focused on companies enabled by software, hardware and wireless communications, we have discovered and profiled 34 of Alberta’s innovation leaders using these technologies to deliver unique and significant value to clients in

industrial applications. Many readers, including those living in Alberta, will likely not have heard of some of these market leaders such as **CDL Systems** (p.59), **FLYHT** (p.60), **Intelligent Imaging/DriveWyze** (p.60), **Optessa** (p.61), **Evoco** (p.73), **Willowglen** (p.75) and **Zedi** (p.75). Companies in this chapter have been grouped into transportation, environment & agriculture, infrastructure & security, wireless, and energy & construction sections.

KEY CONCEPTS:

- Machine to machine (**M2M**) is just what it sounds like: two machines that exchange data without human intervention. An example is a special thermometer that sends temperature data to another machine that controls a heater and knows at what temperature to turn up the heat.
- GPS (global positioning system) is a navigation system that provides location and time information based on data from 4 or more GPS satellites. GPS information is based on data from the set of US satellites. But there are many other sets of satellites covering different parts of the world, and the collection of all the world’s satellites is called **GNSS** (global navigation satellite system).

Absolute Trac

Leader in monitoring moving assets in remote locations

Absolute Trac's single powerful platform can integrate radio, cellular, wireless and satellite communications (multi-mode) to deliver reliable, real time monitoring of critical events for assets that are either mobile or remotely deployed. These portable mobile assets could be a helicopter fighting fires in the mountains, or vehicles in the energy and agriculture industry conducting remote services (pictured). Absolute Trac's machine to machine (M2M) platform can communicate not just vehicle location and events, but also advise the driver when non-compliant on important safety procedures such as speed and seatbelt usage.

Absolute Trac's technology can also be used to monitor theft prevention of tanker trucks and to manage its liquid assets for near real time delivery logging and invoicing. In locations where communications are inconsistent or variable, Absolute Trac's technology can also be used to monitor personnel safety.

COMPANY: Absolute Tracking Solutions Inc., www.absolutetrac.com, 15 employees, founded 2008, Early Growth Stage, 50% exports to US and Australia, investor/revenue funded, 613 – 71st Avenue SE, Calgary, Alberta T2H 0S7, 403.252.8522

PRODUCTS & SERVICES: Mobile asset monitoring

GROWTH STRATEGIES: Seek more distributors all over the world

CONTACT: Steve Matthews, President & Founder, info@absolutetrac.com, 403.252.8522



CDL Systems

International leader in control software for unmanned vehicles

An unmanned aerial vehicle (aka UAV or drone) is an aircraft without a human pilot on board. CDL Systems makes software that allows an operator to sit at a command centre and control an UAV by a keyboard and mouse. Leveraging automation, CDL's vehicle control software allows operators to focus on the mission versus focusing on the flying of the UAV. UAV's often carry payloads such as weapons or an additional camera for surveillance, which can be controlled by another operator and these might be used to see the road ahead for mines or to gather intelligence about persons of interest. CDL's various software products are used by the Canadian, US, UK and other militaries. CDL Systems' software is typically used on larger UAVs but can control any size UAV as well as other unmanned vehicles for land and water.

COMPANY: CDL Systems Ltd., www.cdlsystems.com, 80 employees, founded 1992, Market Leader, 60% exports to US and EU, revenue funded, office in Alabama US, Headquarters: 301 - 96 Avenue NE, Calgary, Alberta T2K 0S3, 403.289.1733

PRODUCTS: Control software for unmanned vehicles

GROWTH STRATEGIES: Seek more clients and partnerships with hardware manufacturers worldwide

CONTACT: Sundeep Kharey, Business Development Manager, sales@cdlsystems.com, 403.289.1733

FLYHT Aeromechanical

World's leading provider of real time blackbox communications for the aerospace industry

Since the 1960s, aircraft are equipped with a crash-survivable electronic device known as a **black box** that records flight data, cockpit conversations and ambient sounds and is used to identify the cause of a crash to prevent future, avoidable accidents of the same type. Today, FLYHT's technology provides the airline industry with real time data monitoring of aircraft inflight operations anywhere and anytime. Not only can this data be used to immediately help an aircraft if it encounters an emergency, but it has made significant improvements to safety, engine performance, fuel efficiency, preventative maintenance, decision making and reduced down time and costs. For example on a flight to the Middle East, pilots noticed an abnormal sound from an engine, and maintenance personnel used engine data from FLYHT's technology to advise the pilots to land immediately in Frankfurt. Landing the plane as soon as possible prevented serious consequences and unreparable damage to the engine. FLYHT's 2011 revenue was \$5.5 million.



COMPANY: FLYHT Aerospace Solutions Ltd., www.flyht.com, 45 employees, founded 1998, High Growth Stage, publicly traded on TSX.V: FLY, 85% exports around worldwide, 200W, 1144 - 29 Avenue NE, Calgary, Alberta T2E 7P1, 403.250.9956, 1.866.250.9956

PRODUCT: Real-time data aircraft data and communications

GROWTH STRATEGIES: Seek more relationships with large airlines and aircraft manufacturers

CONTACT: Bill Tempany, President & CEO, info@flyht.com, 403.250.9956

Intelligent Imaging / Drivewyze

Leader in road safety for law enforcement, public security and transportation agencies

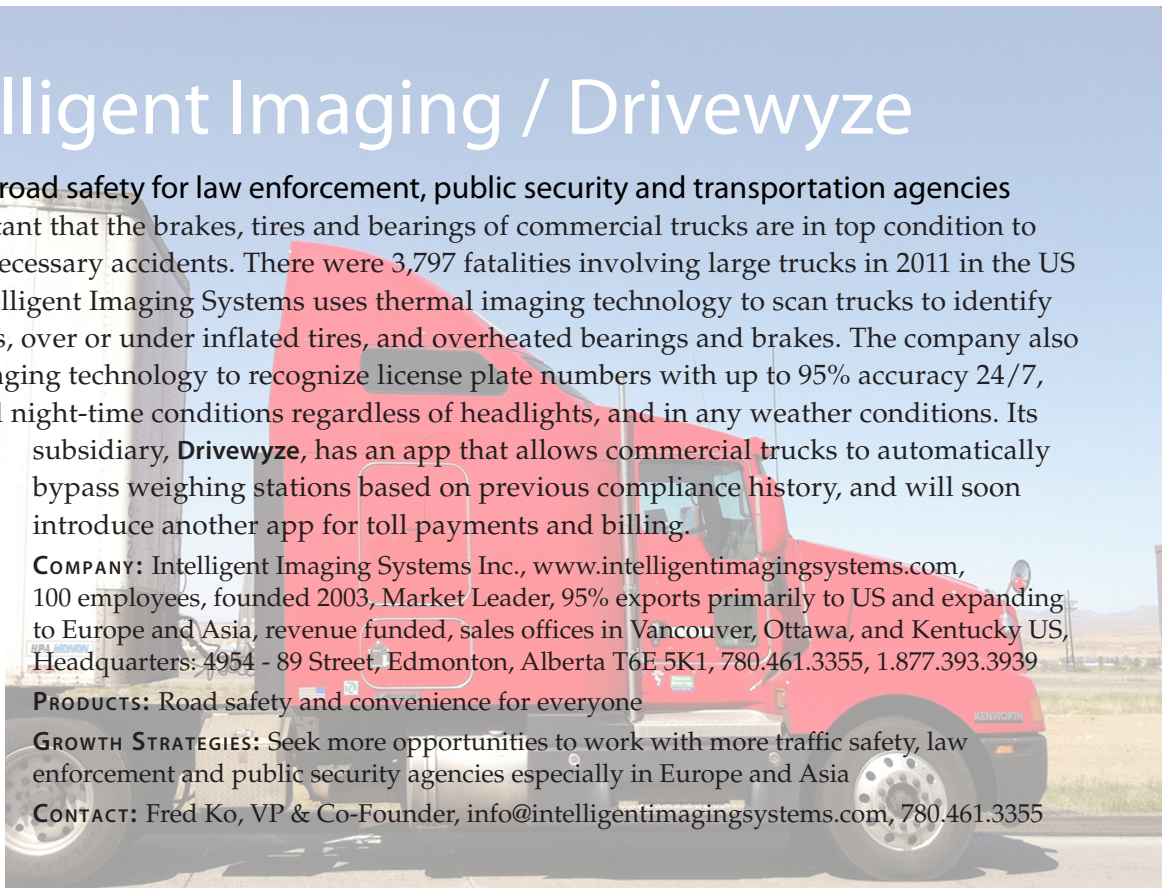
It's important that the brakes, tires and bearings of commercial trucks are in top condition to avoid unnecessary accidents. There were 3,797 fatalities involving large trucks in 2011 in the US alone. Intelligent Imaging Systems uses thermal imaging technology to scan trucks to identify bad brakes, over or under inflated tires, and overheated bearings and brakes. The company also makes imaging technology to recognize license plate numbers with up to 95% accuracy 24/7, in day and night-time conditions regardless of headlights, and in any weather conditions. Its subsidiary, **Drivewyze**, has an app that allows commercial trucks to automatically bypass weighing stations based on previous compliance history, and will soon introduce another app for toll payments and billing.

COMPANY: Intelligent Imaging Systems Inc., www.intelligentimaging.com, 100 employees, founded 2003, Market Leader, 95% exports primarily to US and expanding to Europe and Asia, revenue funded, sales offices in Vancouver, Ottawa, and Kentucky US, Headquarters: 4954 - 89 Street, Edmonton, Alberta T6E 5K1, 780.461.3355, 1.877.393.3939

PRODUCTS: Road safety and convenience for everyone

GROWTH STRATEGIES: Seek more opportunities to work with more traffic safety, law enforcement and public security agencies especially in Europe and Asia

CONTACT: Fred Ko, VP & Co-Founder, info@intelligentimaging.com, 780.461.3355



Mechatroniq

Intelligent ground-based robot has many applications

Mechatroniq's technology is an intelligent robotic platform for unmanned ground vehicles that can be used in a variety of custom applications. Since it can travel well on a variety of outdoor surfaces and can mimic human behavior by stopping when hit, and running for cover when another robot is hit, Mechatroniq's robots are used with replaceable human-like mannequins as weapon target practice (pictured) by law enforcement and military personnel. As another example, with web-based remote control and cameras (including underground radar), the robots can be used to investigate problems in a variety of industries including the integrity of oil and gas pipelines. With a different payload again, it is used as a robotic homecare assistant (See **Mechatroniq HomeCare** p.33). Programming of Mechatroniq's robots is done through a graphical interface allowing easy robot programming by symbols instead of software code.

COMPANY: Mechatroniq Systems Inc., www.mechatroniq.com, 4 employees, founded 2006, Early Growth Stage, 25% exports to US and EU, revenue/grant funded, #5, 3916 - 64 Avenue SE, Calgary, Alberta T2C 2B4, 403.287.6567

PRODUCTS: Advanced target systems, environmental monitoring

GROWTH STRATEGIES: Seek more clients, distributors and technology partners around the world

CONTACT: Andras Gyorffy, CEO & Founder, andras@mechatroniq.com, 403.287.6567



Optessa

Optimized, near real time planning and scheduling software for manufacturers

Optessa's planning and scheduling software is used by the world's largest auto manufacturers and their suppliers. Thousands of new vehicle orders, with thousands of possible options, are collected from the dealers and fed into Optessa's software where it is matched against capacities, rules and constraints. A manufacturing constraint could be that black cars need to be painted before white cars, because the change in paint requires a special setup. Suppliers also

have constraints, for example being able to produce 100 leather seats a day. In a matter of minutes, Optessa's technology then computes an optimum schedule and sequence of orders for the production. Being able to produce this schedule quickly makes it possible for manufacturers to be flexible to changes—for example, if they find out that a supplier has a problem and can't supply parts. Increased flexibility means less inventory needs to be held, which is a big cost savings. Optessa is also interested in entering the electronics and semiconductor manufacturing industries.



COMPANY: Optessa Inc., www.optessa.com, 15 employees, founded 2001, High Growth Stage, 85% exports to US, EU and India, revenue funded, offices in US and India, Headquarters: #1040 Weber Centre, 5555 Calgary Trail NW, Edmonton, Alberta T6H 5P9, 780.431.8426

PRODUCTS: Just in time planning and scheduling for manufacturers

GROWTH STRATEGIES: Seek more manufacturing clients globally and partners for distribution and implementation

CONTACT: Srinivas (Vasu) Netrakanti, CEO & Founder, info@optessa.com, 780.431.8426

Titan Logix

Canadian leader in advanced mobile-tank fluid level measurement instruments

When crude oil production occurs in remote locations, large mobile tankers are needed to transport the oil to pipeline or railway facilities for processing. Titan Logix designs and manufactures the gauge (pictured) on these trucks that gives an accurate and reliable digital reading on the liquid level in the tank. This gives tanker truck drivers inventory control, so they know if there is room to take on additional crude oil before making their delivery run. The gauge can also include alarms and shutdowns during the loading process, preventing overfills and spills. Unlike the dipstick method, the liquid level is displayed at eye-level, keeping drivers safely off the top of the tank. Tank levels can also be monitored remotely



by a dispatch centre. Titan Logix is unique in that its radar gauge has no moving parts, making it easy to service and less likely to require maintenance. It has been designed to be reliable in a wide range of temperatures, from cold winters in Canada to hot Texas summers, and is also used by other industries such as aircraft refueling and de-icing, and waste oil transport. Named a **TSX Venture 50 Company** in 2012, Titan Logix's 2011 revenue was \$11.1 million, up 67% from 2010.

COMPANY: Titan Logix Corp., www.titanlogix.com, 50 employees, founded 1979, Market Leader, 54% exports to several countries, publicly traded on TSX: TLA, branch offices in Saskatchewan, Missouri (US), Headquarters: 4130 – 93 Street Edmonton, Alberta T6E 5P5, 780.462.4085

PRODUCTS: High performance liquid level gauges for trucks and trailers

GROWTH STRATEGIES: Seek more dealers around the world

CONTACT: Greg McGillis, President & CEO, info@titanlogix.com, 780.462.4085

AgVance

More efficient and lower cost distribution of agricultural ammonia fertilizer

Ammonia is an agricultural fertilizer that is a pressurized and controlled hazardous gas. When farmers inject it into the soil, it gives their crops a high yield. In the spring and fall fertilizer seasons, the agri-business retailers have a short period of time (4 weeks) to distribute a high volume of product over farmers' fields before spring planting

and autumn frosts. This creates a complex equipment scheduling and inventory management problem involving mobile nurse wagons (pictured in white) which injects the ammonia into the soil, specialized delivery trucks to deliver the ammonia, and fixed storage tanks. Ideally, a delivery truck with more ammonia should be waiting at the exact location in a field where a farmer is just emptying his nurse wagon. This is exactly the insight AgVance's technology delivers. Using machine-to-machine (M2M) data communication technology and software-as-a-service (SaaS), AgVance monitors an agri-business retailer's ammonia assets in real time. AgVance's solution optimizes the use of equipment, reduces the cost of transporting the ammonia, and improves profits and customer service. It can also be used for industrial propane distribution.



COMPANY: AgVance Inc., www.agvance.ca, 7 employees, founded 2009, Early Revenue Stage, 10% exports to US, product launched in 2012, bootstrapped/revenue/grant funded, 2815B - 12 Street NE, Calgary, Alberta T2E 7J2, 403.291.1118

PRODUCTS: Asset efficiencies and cost reduction for agri-business retailers and industrial propane distributors

GROWTH STRATEGIES: Seek more fertilizer equipment rental companies and investors

CONTACT: John Barry, President & Co-Founder, enquiries@agvance.ca, 403.291.1118

Boreal Laser

World leader in measuring gas emissions from multiple sources

Measuring greenhouse gas emissions from a single point, like a smoke stack, is relatively simple. It's a lot more complicated to monitor and quantify gas emissions in large spaces like gas plants, landfill sites and agricultural operations, where the emissions can come from multiple sources. Boreal Laser's robust, state-of-the-art, laser-based detection technology (pictured) can do this for critical hazardous gas or toxic gas detection applications, which includes greenhouse gas emissions. If a critical gas level is reached, an alert can be sent to alarms and cell phones with situation specific details available on a website.

COMPANY: Boreal Laser Inc., www.boreal-laser.com, 15 employees, founded 1996, revenue funded, products sold in 40 countries, 80% exports, Early Growth Stage, 12846 – 146 Street NW, Edmonton, Alberta T5L 2H7, 780.488.5173

PRODUCT: Large area sources greenhouse gas monitors

GROWTH STRATEGIES: Seek market development partners

CONTACT: Hamish Adam, President & CEO, info@boreal-laser.com, 403.271.2007



Hemisphere GPS

GPS solutions for guided tractor steering, construction excavation and snow grooming

Hemisphere GPS designs and manufactures plug-and-play GPS products for positioning, guidance, and machine control applications for several industries. One of these applications is helping farmers reduce waste from skips, or overlaps, with an automatic steering system that enables them to drive their tractors in very straight lines within 1 cm accuracy. Hemisphere GPS' product for construction has GPS sensors attached to the shovel of an excavator so that the operator can monitor, through a touchscreen in the cockpit, the depth of the excavation progress within 2 cm accuracy and the flatness of the new surface being created. Combining both ideas, Hemisphere also makes a GPS product to guide snow grooming machines, so there is little overlap of their path and they can easily tell the depth of the snow surface. Hemisphere also makes GPS products for marine navigation, surveying, GIS mapping and machine control. The company's 2011 revenue was \$67.8 million, up 21% from 2010.

COMPANY: Hemisphere GPS Inc., www.hemispheregps.com, 250 employees worldwide founded 1990, Market Leader, 82% exports worldwide, publicly traded on TSX:HEM, offices in US and Australia, Headquarters: 4110 – 9th Street SE, Calgary, Alberta T2G 3C4, 403.259.3311

PRODUCT: Plug-and-play GPS systems for agriculture, construction and snow grooming

GROWTH STRATEGIES: Seek more clients, dealers and integration partners

CONTACT: Gabriel Grenier-Baird, Marketing Specialist, ggrenier-baird@hemispheregps.com, 403.259.3311



OPIsystems

Global leader in optimizing grain quality for higher returns and improved safety

OPIsystems' sensor-based technology measures the temperature and moisture content of stored grain, and through processing algorithms and aeration fans, it automatically controls the condition of the grain to prevent shrinkage and spoilage. This technology works on all types of grain including wheat, corn, oats, rice and canola. Since grain is sold by weight, grain with higher moisture content has greater value and OPIsystems' technology keeps the grain at a constant moisture level. If a hot spot is detected, which would indicate that the grain is beginning to spoil, the system automatically turns on the fans to cool the area to eliminate the problem, and then turns the fans off when the job is done to prevent the grain from drying out and to save energy costs for the farmer. Having this control over grain drastically increases the length of time the grain can be stored, which gives farmers control over when they want to sell it. OPIsystems' technology also eliminates the need to enter the bin to manipulate the grain by hand, which can be very dangerous.



OPIsystems

COMPANY: OPIsystems Inc., www.advancedgrainmanagement.com, 75 employees worldwide, founded 1984, High Growth Stage, 70% exports worldwide, revenue funded, 1216 - 36th Avenue NE Calgary, Alberta T2E 6M8, 403.219.3177

PRODUCT: Grain temperature and moisture monitoring

GROWTH STRATEGIES: Seek more clients, dealers and large agricultural grain marketing companies

CONTACT: R.J. (Justin) Zinke, Chief Operating Officer, justinz@opisystems.com, 403.736.5238

PIVOT Research

Going beyond costs and energy use, a pioneer in regenerative design evaluations

Buildings and homes are more than just shelters. They, along with our neighbourhoods, affect our physical and emotional health as well as economic, ecological and social outcomes locally, regionally and globally. Considering the interaction of all these elements to create whole communities is called **regenerative design**. However, quantifying these parameters and using them in design decisions has been almost impossible, until now. PIVOT has developed a revolutionary body of knowledge that it has embodied into a comparative

software-based evaluation tool to give designers, planners and developers an understanding of a development's holistic potential that goes well beyond assessment of costs, material selection and energy use.

COMPANY: PIVOT Inc., www.thinkpivot.ca, 5 employees, founded 2008, investor/grant funded, beta testing complete, exports just starting, Early Revenue Stage, 10415 Princess Elizabeth Avenue, Edmonton, Alberta T5G 0Y5, 780.452.2544

SERVICE: Regenerative design building, site and community evaluations

GROWTH STRATEGIES: Seek strategic partners to design and create integrated whole communities

CONTACT: Paul Schaefer, Director of Applied Research & Design and Co-Founder, pschaefer@thinkpivot.ca, 780.452.2544



Synodon

Breakthrough remote sensing technology detects methane, ethane and ammonia leaks

Based on technologies developed under the **Canadian Space Program** and by Synodon scientists, Synodon has developed and demonstrated a remote sensing technology that can measure very small ground level concentrations of gas. Mounting this technology to an aircraft flying at 1,000 ft, Synodon's initial application helps natural gas pipeline operators accurately and efficiently find pipeline leaks. This information helps improve the pipeline

operators' energy efficiency, safety and regulatory compliance, as well as reduce their environmental footprint and save them money. Synodon is also piloting a program to measure greenhouse gas emissions from landfills. Synodon's 2011 revenue was \$1 million.

COMPANY: Synodon Inc., www.synodon.com, 12 employees, founded 2000, 35% exports to US with distributors in China, Nigeria, Argentina, Mexico, Brazil and the Middle East, publicly traded on TSXV as SYD.V, 6916 Roper Road, Edmonton, Alberta T6B 3H9, 780.468.9568

SERVICE: Gas emissions monitoring and quantification

GROWTH STRATEGIES: Seek investors, distributors, joint venture manufacturers and licensees

CONTACT: Adrian Banica, President, CEO and Founder, info@synodon.com, 780.468.9568



3DInternet

International leader in 3D visualization and training

3DInternet turns 2D blueprints into interactive 3D worlds that allow designers of power utilities and oil & gas plants to better visualize what it will be like working in the new plant. Being able to walk around these plants virtually, looking from floor to ceiling, and even seeing the ground outside the building, makes it much easier to identify problems and find new efficiencies before they cost a lot of money and time to fix. In addition to custom virtual worlds for facilities, 3DInternet also creates 3D virtual training simulators that help train people on how to use equipment and to practice procedures (picture). This has made a significant impact on reducing injuries for people doing dangerous jobs. In addition to power utilities and oil & gas companies around the world, 3DInternet clients include the military and first responder groups (fire, police, emergency medical services). 3DInternet won first prize for collaborative training in the US Army's 2010 **Federal Virtual Worlds Challenge** competition.

COMPANY: 3DInternet Inc., www.3dinternet.com, 50 employees, founded 1986, Market Leader, 70% exports worldwide, revenue funded, office in Los Angeles, Headquarters: #4, 3510 - 27th Street NE, Calgary, Alberta T1Y 5E2, 403.250.5813

SERVICE: 3D visualization and virtual training simulators

GROWTH STRATEGIES: Seek more clients and resellers

CONTACT: Allan Doubinin, President & Founder, allan@3dinternet.com, 403.250.5813



ASAT Solutions

Leading vendor-independent smart grid integrator

In our expanding digital world, demand for electricity is growing and is expected to double in the next 20 years. To minimize environmental impact, how we use electricity today needs to improve and more renewable energy, such as solar and wind, needs to be integrated into the power grid. This is the vision of the **smart grid**. To bring intelligence to the smart grid, detailed data is needed. ASAT has found a way to collect electricity related data from the critical assets in electric utility substations, no matter how old it is, or who made it (vendor independent).

ASAT then pulls all the data together in one unified smart grid interface so it can all be read at the same time, and can be used to monitor and control critical operating assets, as well as to improve efficiencies of all types. For example, using a smart grid, equipment maintenance can shift to condition based maintenance, where the equipment's data gives insight to a potential problem.

COMPANY: ASAT Solutions Inc., www.asatsolutions.com, (employee size undisclosed), founded 2000, High Growth Stage, 90% exports to Asia, US and Latin America, revenue funded, #8, 2121 - 29th Street NE, Calgary, Alberta T1Y 7H8, 403.569.1680

PRODUCTS: Smart substation technologies and integration for electric utilities

GROWTH STRATEGIES: Seek more utilities as clients, and more investors

CONTACT: Manford Kwan, CEO & Founder, info@asatsolutions.com, 403.569.1680



C4i Consultants

World leader in disaster and military planning simulations

In the days of kings and castles, battles were planned using a table-top war game where you moved small figures representing armies and equipment around a map. Today, C4i Consultants' simulation software offers much more sophisticated strategic thinking for military and emergency situations. It lets users try things out, validate plans,



work together across the different groups involved and train people to make good decisions in these high stress situations. Simulations allow many variations in events and outcomes, but even the basics of learning to manage time and distance requirements are always a challenge. C4i's military clients include **NATO**, the **US Army** and the **Canadian Forces**, as well as public safety, energy industries and municipalities. Examples of emergency events these groups will train for include emergency response to a tornado, a train derailment, or a major gas leak. C4i also produces command and control tools for real-life situations where planning that usually takes 8 hours, can be reduced to as little as 5 minutes.

COMPANY: C4i Consultants Inc., www.c4ic.com, 22 employees in Canada/40 employees in US, founded 2003, Market Leader, revenue funded, 70% exports worldwide, #240, 4311 - 12 Street NE, Calgary, Alberta T2E 4P9, 403.241.3264

PRODUCT: Large scale emergency, disaster and military planning simulations and control solutions

GROWTH STRATEGIES: Seek more clients in military, public safety and energy markets

CONTACT: Bruce Gilkes, President & Co-Founder, bgilkes@c4ic.com, 403.241.3264

dTechs

World leader in real-time wireless detection of electrical losses for utilities

For electrical utilities, the “last mile” is where the electricity runs from the substation to individual homes and businesses. Since it is a web of cables, it is difficult to know when something goes wrong. dTechs’ product is a set of highly accurate sensors and software that address this problem by wirelessly monitoring the electrical system to pinpoint technical and non-technical energy losses. When an anomaly is detected, dTechs’ product automatically notifies the utility company with GPS specific location details. dTechs product reconciles with both analog and smart meter endpoints for highly accurate line loss estimates.

COMPANY: dTechs epm Ltd, www.dtechsepm.com, 15 employees, founded 2006, Early Growth Stage, 40% exports to US, Caribbean, EU, investor/revenue funded, 55 Skyline Crescent NE, Calgary, Alberta, 403.930.3200

SERVICE: Low-cost, high-resolution tool to detect electrical grid inefficiencies

GROWTH STRATEGIES: Seek channel sales partners and investors

CONTACT: Roger Morrison, CEO & Founder, info@dtechs.ca, 403.930.3201



dTechs (front), last mile (back)

IntelliView Technologies

Immediate detection of critical events and access to decision making information

The days of security guards watching walls of video monitors for unusual activity are disappearing. Analytical video technology from IntelliView Technologies’ has automated the process. If an unusual event happens, such as a potential intruder or theft of equipment, its technology automatically and immediately sends an alert and video of the event to the right person for decision making or to a machine for action, such as blowing a horn when birds are near an area that could harm them. Using thermal imaging, IntelliView’s technology can also watch for more unusual types of events such as fluid leaks near pipelines and oil pumping stations, and even very early signs of a wild fire. Since IntelliView is one of the few video analytics companies in the world that writes and owns its own video analytics algorithms, it can ensure that the video equipment it uses is customized to the unique needs of the environment such as adjustments for trees, wind and changing light.

COMPANY: IntelliView Technologies Inc., www.intelliview.ca, 15 employees, founded 2003, Early Growth Stage, exports started 2012, revenue/investor/grant funded, 327 - 41st Avenue NE, Calgary, Alberta T2E 2N3, 403.338.0001, 1.888.922.9235

PRODUCTS & SERVICE: Intelligent video-based critical event detection

GROWTH STRATEGIES: Seek more clients in oil & gas, forest and asset management, more international partners, investors

CONTACT: Christopher Beadle, VP Sales, sales@intelliview.ca, 403.338.0001



IntelliView

Alta Industrial Automation

Easy plug and play M2M connectivity

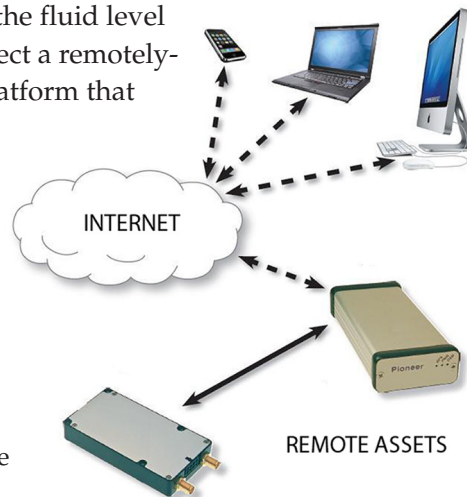
Alta Industrial Automation (AIA) has simplified the process needed to create a machine to machine (M2M) system. M2M provides companies in the manufacturing, agriculture, mining, environmental monitoring and oil & gas industries with automated real-time access to data from their remotely-located critical assets, such as pipelines, irrigation systems, chemical tanks and automotive fleets. For example, a sensor can tell the owner the fluid level or security status of a remote storage tank. AIA's M2M solutions connect a remotely-located sensor wirelessly (via cellular communications) to a control platform that both collects data from the sensor and gives dashboard access through the web to a decision maker. As a result, AIA enables its clients to quickly benefit from M2M connectivity at minimum technical risk, investment, time and installation demands.

COMPANY: Alta Industrial Automation Ltd., www.aialtd.com, 5 employees, founded 1991, 25% exports, Early Growth Stage, revenue/grant funded, #659, 3553 - 31 Street NW, Calgary, Alberta T2L 2K7, 403.717.0310

PRODUCTS: Cellular data modems, and machine-to-machine communication solutions

GROWTH STRATEGIES: Seek more clients, distributors and investors worldwide

CONTACT: Gary Allbee, CEO & Founder, gary@aialtd.com, 403.717.0310



EMSCAN

Global leader in real time instruments to test circuit boards (PCB) and antennas on the lab bench

Manufacturers of wireless devices, such as cell phones, aim to optimize the antenna in order to avoid dropped calls, and extend the battery life. To do this, electronic devices are designed and tested to emit low levels of electromagnetic (EM) energy. Engineers need to know how much, and exactly where, EM energy is emitted. In the past, a probe with a sensor has been used to take point-by-point measurements in a test room (anechoic chamber). These traditional processes took a very long time and were tedious. Fortunately, EMSCAN has a better way. Instead of just one sensor, EMSCAN's measurement instrument is a bed of thousands of sensors on top of which the circuit board or wireless device is placed; a graph immediately tells the engineer where the EM energy is coming from, or how well the antenna is performing. EMSCAN enables engineers to focus on fixing the issues so they can get their new product to market faster, and reduce the risk of failing expensive regulatory approval tests, or having product performance issues.

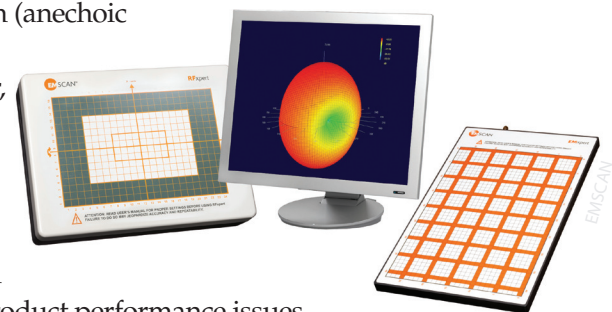
EMSCAN's instruments are used by the world's leading manufacturers of cell phones, electronics, WiFi devices, RFIDs, semiconductors, as well as devices for the automotive, military and medical industries.

COMPANY: EMSCAN Inc., www.emscan.com, (employee size withheld), founded 2010 (restructured), High Growth Stage, 90% exports worldwide, revenue/investor funded, #1, 1715-27th Avenue NE, Calgary, Alberta T2E 7E1, 403.291.0313, 1.877.367.2261

PRODUCTS: Real time testing of electromagnetic energy in circuit boards and wireless devices

GROWTH STRATEGIES: Seek more clients, distributors and partners for new applications

CONTACT: Erkan T. Ickam, Director of Marketing, info@emscan.com, 403.2910313 x270



Nexteq Navigation

An innovation leader of affordable and accurate satellite-based positioning

Nexteq Navigation develops leading edge technologies to improve GPS accuracy. Its technologies "correct" errors in GPS satellite-based signals to produce positioning readings that are accurate to within 2 centimeters. Nexteq offers both correction data services and products. Its correction data services allow users of a wide variety of GPS equipment to obtain improved positioning accuracies anywhere in the world. Nexteq also makes a line of rugged GPS handhelds (pictured) with Nexteq's technologies built-in. These handhelds have excellent accuracy that make them ideally suited for applications such as oil and gas surveys, geological mapping, forestry and urban planning, where errors of even a few centimetres can be costly. Compared with its competitors, Nexteq's technologies allow it to offer its data services and products at 30% lower cost for the same accuracy.

COMPANY: Nexteq Navigation Inc., www.nexteqnav.com, 20 employees, founded 2008, Early Revenue Stage, 90% exports to several countries, revenue/grant funded, Suite 204, 3016 - 19th Street NE, Calgary, Alberta T2E 6Y9, 403.250.8186

PRODUCTS & SERVICES: GPS hardware and position correction services

GROWTH STRATEGIES: Seek more dealers, marketing partners and end users worldwide

CONTACT: Jessica Ji, Sales and Marketing Manager, sales@nexteqnav.com, 403.250.8186



TEKTELIC Communications

Better data performance on mobile devices in areas with lots of wireless users

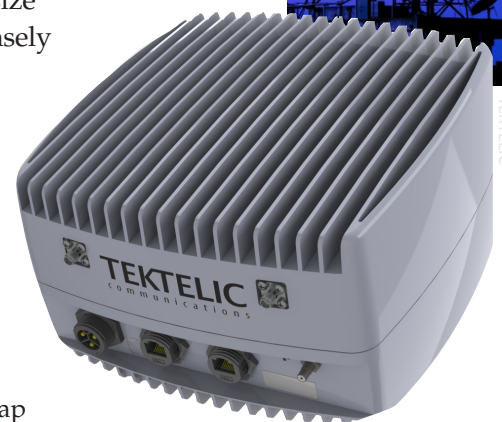
Have you ever been to a mall, business office, stadium or airport where wireless data access was poor or non-existent? That's because of the high density of wireless data users from that area overloading the shared available wireless bandwidth at the nearby cellular tower. To fix this problem, TEKTELIC has developed a small base station (only about the size of a shoebox, pictured) that increases the available wireless bandwidth in densely populated areas. Instead of a single large base station, service providers can deploy many small base stations which allow for wireless bandwidth reuse and for the increased capacity needed to handle the wireless demand. The result is significantly better data performance on mobile devices. Since the small base stations radiate very low energy compared to traditional cellular towers, they can even be installed in a home, apartment building or business campus improving performance and enabling access for more service provider offerings.

COMPANY: TEKTELIC Communications Inc., www.tektelic.com, 37 employees, founded 2009, Early Growth Stage, 95% exports primarily to US, revenue/bootstrap funded, 7657 - 10th Street NE, Calgary, Alberta T2E 8X2, 403.338.6900

PRODUCT: High efficiency, low energy small cell substations

GROWTH STRATEGIES: Seek partnerships with telecommunications equipment manufacturers all over the world

CONTACT: Roman Nemish, CEO & Co-Founder, info@tektelic.com, 403.338.6900



Teletics

Innovation leader in enabling legacy dial-up modems to talk over the internet

Modems enable a computer to send and receive electronic data through a regular copper wire telephone line. Even though it's old technology, there are still millions of modems in use today, such as credit card modems that dial out a small set of numbers to be verified, metering modems used to send electrical data from utility substations and industrial machines sending data from remote locations. As the world becomes more digital, communication is shifting to the internet (IP networks that include digital, cellular, private WAN, LAN, WiFi, WiMAX and public internet). At \$5/month compared to \$50/month for regular phone lines, the internet offers interesting cost savings. However, instead of making the conversion by trashing current analog data equipment and modems, Teletics has developed a significantly less expensive alternative technology that allows the legacy analog technology to stay. Teletics' Modem over IP (MoIP) technology acts as a bridge that enables the old legacy analog modem to talk with the newer internet based infrastructure. Its technology is as simple to install as plug and play.

COMPANY: Teletics Inc., www.teletics.com, 12 employees, founded 2003, Early Growth Stage, 80% exports primarily to US, revenue/investor/grant funded, 54 Discovery Ridge Gardens SW, Calgary, Alberta T3H 5L6, 403.681.6380

PRODUCT: Allows legacy dial-up systems to communicate over the internet

GROWTH STRATEGIES: Seek distributors selling M2M communications worldwide

CONTACT: Eric Larson, VP of Sales, ericlarson@teletics.com, 403.681.6380



Times Three Wireless

Innovation leader in low cost, long range, large deployments of machine-to-machine communication
Times Three has developed a wireless technology to receive data from a large volume of sensors, meters and machines at a significantly lower ongoing operational cost compared to other wireless technologies. Such communications are required in smart grids by electrical utilities, as well as gas and water utility metering, and municipal infrastructure and building security applications. Times Three's technology was originally developed for and has been very effective in Brazil's stolen vehicle recovery market, where it is important to have low operating costs, support for a large volume of vehicles and to be resistant to interference and intentional jamming. To achieve this, Times Three perfected communication using the unlicensed frequency band (2.4GHz). The combination of operating in an unlicensed frequency band, at long range and at a low bit rate allow for quick and low cost deployment. Times Three Wireless' 2011 revenue was \$553,000.

COMPANY: Times Three Wireless Inc. (previously **Cell-Loc Inc.**), www.timesthree.com, 6 employees, founded 1998, Early Growth Stage, 95% exports in North and South America, publicly traded on TSX-VE as TTW, Suite 208, 1600 - 37 Street W, Calgary, Alberta T3C 3P1, 403.569.5700

PRODUCT: Very low cost monitoring of large volumes of machine to machine sensors

GROWTH STRATEGIES: Seek more clients and strategic partnerships around the world

CONTACT: Bruce Fielding, VP of Network Operations, bruce.fielding@timesthree.com, 403.569.5700



Times Three Wireless Photo

Trusted Positioning

Enabling navigation everywhere

Traditional navigation using GPS needs a direct line of sight to four or more satellites to function. This means GPS will not work well inside buildings, underground, underwater, under trees or downtown in cities where high buildings obstruct satellite signals. These are the conditions where Trusted Positioning's robust positioning software excels.

It provides continuous, accurate and affordable navigation in these challenging environments for both consumer and enterprise markets. By integrating Trusted Positioning's software into smartphones, users can navigate through malls, airports or underground subway systems. The software works with the phone's pre-existing GPS and inertial sensors to measure a user's position, orientation and speed. The software platform can also be used to position vehicles and machines. Trusted Positioning's core technology was developed by experts at the **University of Calgary's** Department of Geomatics Engineering.

COMPANY: Trusted Positioning Inc., www.trustedpositioning.com, 25 employees, founded 2009, Early Growth Stage, 75% exports to US, Asia and EU, investor/revenue/grant funded, Suite 311, 3553 - 31 Street NW, Calgary, Alberta T2L 2K7, 403.210.6651

PRODUCT: Core navigation technology for GPS challenged environments

GROWTH STRATEGIES: Seek more clients, investors and strategic partnerships

CONTACT: Sarah Carmichael, Marketing & Communications Coordinator, scarmichael@trustedpositioning.com, 403.210.6651



3D Interactive (3DI)

World leader in industrial training simulations

Flight simulators train pilots to fly airplanes so that mistakes can be made in a safe environment without harming people or planes. 3D Interactive (3DI) uses similar technology to train operators of oil and gas, mining and construction equipment. 3DI is currently developing a new simulator for the oil and gas industry that will

enable well drillers to practise drilling on simulated or estimated parameters of a well site. Through this experience, the driller will develop an optimized drill plan that can hopefully avoid costly mistakes in the field. The new simulator can also handle complex geological formations and horizontal drilling scenarios.

COMPANY: 3D Interactive Inc., www.3di.ca, 32 employees, founded 2005, Market Leader, 90% exports worldwide, new drilling guidance product available early 2013, revenue/investor funded, Suite 202, 7718 - 104 Street, Edmonton, Alberta T6E 4C5, 780.440.1128

PRODUCTS: Interactive simulation-based training systems

GROWTH STRATEGIES: Seek strategic partnerships in oil and gas, mining and construction

CONTACT: Wade Carson, Business Development, wadec@3di.ca, 780.554.7709

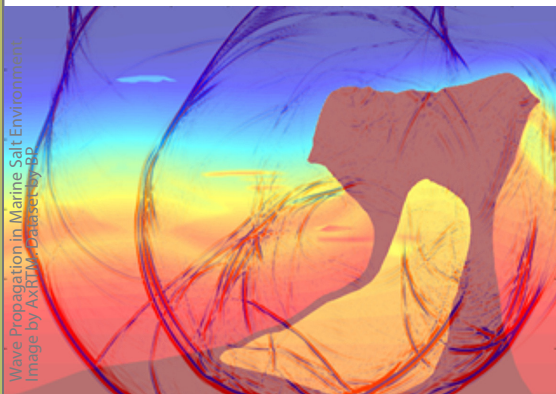


Acceleware

High performance computing for advanced software used to discover hard-to-find oil

It used to be that GPU cards (Graphics Processing Unit) were mainly used in high end gaming computers to drive high quality graphic displays. Realizing the GPUs highly parallel architecture could process data significantly

faster than the average CPU, Acceleware pioneered applying GPUs to business applications and has now become a market leader in this space. One application requiring this intense computing power is seismic exploration in the oil and gas industry. Not too long ago, finding oil underground was simpler—but today the easy oil is gone and future oil reserves are buried deep beneath the surface in complex geological structures. Acceleware offers a sophisticated approach that can meet this challenge. Using GPUs and its software library to power advanced algorithms that were previously too computer-intensive, Acceleware helps oil companies process seismic data into high definition maps of the subsurface geology of potential oil fields. Acceleware's 2011 revenue was \$2.76 million.



COMPANY: Acceleware Ltd., www.acceleware.com, 25 employees, founded 2004, Market Leader, 95% exports worldwide, publicly traded on TSX-V:AXE, 435 - 10th Avenue SE, Calgary, Alberta T2G 0W3, 403.249.9099

PRODUCTS: High performance software for complex algorithms

GROWTH STRATEGIES: Seek more clients worldwide

CONTACT: Robert Miller, Chief Marketing & Sales Officer, robert.miller@acceleware.com, 403.249.9099

DRAXware

New possibilities in cost and productivity management for large construction companies

Traditionally, the construction industry accepted that capturing field data—labour, equipment and materials—was a slow and manual, inefficient process. But recent technology advancements have automated field data collection, and this can eliminate paperwork bottlenecks and create simple new efficiencies. DRAXware's software for the construction industry is designed from the business perspective to deliver process and cost data based on updated field data and to enable and enhance faster and more accurate decision-making. DRAXware allows its clients to have the software configured to their specific business processes without the need for additional source code changes, which translates to very fast return on investment. There are modules for managing subcontractors, quality

control, document management and payroll that are all interoperable so companies can access their information through a single user experience. DRAXware also incorporates leading edge technology developed by Dr. Jianfei Xu, of the Civil and Environmental Engineering faculty at the **University of Alberta**.

COMPANY: DRAXware Solutions Inc. (DXi), www.draxwaresolutions.com, 22 employees, founded 2007, High Growth Stage, 20% exports primarily to US, revenue/grant funded, Suite 4-122, 10230 Jasper Avenue, Edmonton, Alberta 4P6, 780.487.9668

PRODUCT: Large scale project cost and productivity management

GROWTH STRATEGIES: Seek more clients, resellers and partners in construction industry

CONTACT: Scott Cuthbert, President & Co-Founder, scuthbert@draxware.com, 780.221.6737



Evoco

Leader in helping high volume retailers build new locations quickly, accurately and on budget

Evoco's software helps large multi-location businesses that rollout at least 30 new store locations a year to manage their construction related work, process and paper flow. Evoco provides clients with a dashboard view of building



projects that includes construction progress and sign-offs so they can better manage their costs, see potential problems and control project delivery timeframes across multiple projects. The software also helps ensure each location is compliant with building codes and branding demands. Since Evoco's software is cloud-based, it is accessible over the web from any device. Evoco currently has over 25,000 users among its clients who are retailers, restaurants, hospitality providers and builders of all sizes, including the world's largest retailers. Listed on the **Branham300** and **Profit100** lists, Evoco's 2012 revenue was \$10 million.

COMPANY: Evoco Inc., www.evoco.com, 80 employees, founded 1999, High Growth Stage, 85% exports, product sold worldwide, revenue funded, 4th Floor, 402 - 11 Avenue SE, Calgary, Alberta T2G 0W4, 403.232-6633, 1.800.274.5250

PRODUCTS: Construction project management software for high growth retailers

GROWTH STRATEGIES: Seek increased market visibility, product positioning for leadership and leverage of existing relationships

CONTACT: Alice Reimer, President & Co-Founder, info@evoco.com, 403.232.6633

InfoChip

Global leader in durable RFID based safety and asset management solutions

In the oil and gas, construction and mining industries, equipment safety inspections are done regularly, but due to abuse and the harsh environment, equipment becomes difficult to identify and track. An innovative paperless approach is to use an InfoChip RFID tag (Radio-Frequency IDentification, pictured) and a mobile computer. With over 2 million RFID tags in operation, InfoChip has developed an extremely durable RFID tag that gets embedded into tools, rigging, hose and many other types of industrial equipment. Using InfoChip's low cost, plug-and-play, weatherproof RFID reader, the unique ChipID is sent to any Bluetooth-enabled device such as a smartphone or laptop. Completed inspection and inventory details are uploaded to InfoChip's online database for future reference. This database is shared by equipment manufacturers, distributors and end users for cradle-to-grave asset management. As a result, asset managers now have a digital identification, inspection and reporting solution for safety and predictive maintenance to avoid equipment downtime and potential disasters.

COMPANY: InfoChip Systems Inc., www.infochip.com, 10 employees, founded 2002, High Growth Stage, 90% exports worldwide, revenue funded, 111 Northwood Crescent, Wetaskiwin, Alberta T9A 3L4, 403.720.2331, 1.877.747.2448

PRODUCTS: Better identification and tracking of industrial assets

GROWTH STRATEGIES: Seek more clients and distributors

CONTACT: Tom Bamford, VP Sales and Marketing, tom.bamford@infochip.com, 403.720.2331



Scanimetrics

Real-time equipment monitoring for reduced critical failures, downtime and lower repair costs

Unexpected failure of a machine or heavy equipment like a hauler (pictured) can cause large oil sands or mining operations to halt production and, at \$6 million a day in lost revenue, it can be expensive. Scanimetrics created an



integrated system of rugged wireless miniature sensors (inset pictured) that attach to the potential failure points of the metal parts on machines and equipment, and measure the strain and fatigue of the metal in real-time in actual operating conditions. The sensors wirelessly transmit this data and it is analyzed to produce an evaluation of the condition of the equipment, including an estimate of its remaining useful life. In addition to reduced critical failures and downtime, this technology also optimizes the maintenance cycle of the machinery which results in lower repair costs. Scanimetrics is currently also investigating using these strain sensors to measure the integrity of production facilities and infrastructure such as bridges.

COMPANY: Scanimetrics, www.scanimetrics.com, 15 employees, founded 2001, Early Revenue Stage, 15% exports primarily US and South

America, investor/revenue/grant funded, 5120 - 75 Street, Edmonton, Alberta T6E 6W2, 780.433.9441

PRODUCTS: Wireless automated real-time structural integrity monitoring

GROWTH STRATEGIES: Seek new distribution partners and more international clients

CONTACT: Dr. Chris Sellathamby, Vice President of Sales and Marketing, csellathamby@scanimetrics.com, 780.433.9441x 300

Seljax

Leading developer of estimating and 3D design software for retail lumber dealers

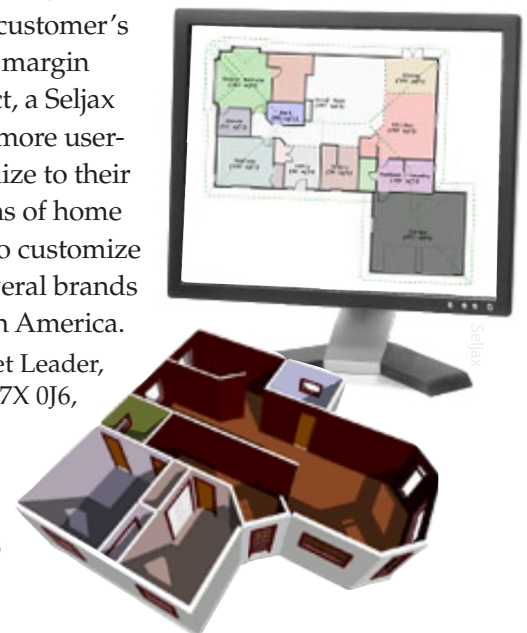
Seljax clients are lumber stores that sell wood and related products to consumers and contractors. Every day these stores receive a dozen requests to estimate the amount of material their customers need for a new deck or home improvement project. The result of an estimate is a shopping list of items, including the appropriate quantities and estimated price of materials. By hand these estimates take hours to do, but using Seljax software this process can take just a few minutes, which increases a customer's chances of making a purchase and getting everything they need. With only a 3% margin of error between the estimate and actual material required to complete the project, a Seljax quote is quite accurate, which increases customers' satisfaction. To make it even more user-friendly, Seljax's software has mockup models of projects that people can customize to their individual needs, which is a lot easier than starting from a blank page. 3D designs of home and cottage plans from **TIM-BR MART** integrated into Seljax software allow users to customize design features and understand the impact on cost. Seljax has also integrated several brands of building products into their software. Seljax is sold in 1,500 stores across North America.

COMPANY: Seljax Int'l Inc., www.seljax.com, 17 employees, founded 1992, Market Leader, 60% exports primarily to US, Suite 303, 314 McLeod Avenue, Spruce Grove, Alberta T7X 0J6, 780.960.9515, 1.800.651.7955

PRODUCTS: Estimating and 3D design software for lumber stores

GROWTH STRATEGIES: Seek more clients and distribution partners around the world

CONTACT: Braven Blackwell, President & Founder, [seljxinfo@seljax.com](mailto:seljaxinfo@seljax.com), 780.960.9515



Willowglen

Leader in human-centred smart dashboard system control of SCADA industrial environments

Vancouver's driverless SkyTrain monorail is loaded with all kinds of sensors that provide real-time data on the train's location, status, operating data, and many types of subsystems, that do everything from open/close doors, collect fare and even automatically modify message boards to convey information, such as train delays. Willowglen's products integrate the data from many of these sensors and subsystems into a single monitoring fault-tolerant control system (called a **SCADA** system) that coordinates all the interactions and interconnections between sensors and subsystems using leading human factors approaches, and putting the control in the hands of the decision maker. Not just for electric rail systems, Willowglen's products are used in many industries around the world including power stations and grids, airport control towers, wastewater collection and treatment, oil and gas pipelines, and electrical power transmission and distribution.

COMPANY: Willowglen Systems Inc., www.willowglensystems.com, (employee size undisclosed), founded 1971, High Growth Stage, 65% exports, products sold worldwide, revenue funded, 8522 Davies Road NW, Edmonton, Alberta, T6E 4Y5, 780.465.1530

PRODUCT: Smart dashboard monitoring and control of industrial processes

GROWTH STRATEGIES: Seek more clients and integration partners

CONTACT: Gail Powley, VP of Corporate Development, gail.powley@willowglensystems.com, 780.465.1530



Zedi

A global leader in oil and gas production operations management

There are over 100,000 conventional oil and natural gas well operations (pictured) in Alberta alone and most of them are in remote locations that are traditionally served by operators who visit each site on a regular basis.

Zedi's technology makes site monitoring easier by using hardware that remotely monitors well sites and cloud-based applications that allow operators to view and control their wells in real-time without travelling to the site. Using Zedi's technology, well operators have access to production data from anywhere, through their computer or smartphone. The data transmitted from Zedi's technology is then used to forecast production, identify areas that need improvement, and meet regulatory compliance. In addition to giving well operators the data to react immediately to emerging situations, it also provides economic, environmental, and safety benefits from reduced travel times to the wells.

COMPANY: Zedi Inc., www.zedi.ca, 250 employees in Canada, founded 1987, High Growth Stage, 30% exports to 25 countries, publicly traded on TSE as ZED, 20 offices worldwide, Headquarters: 902 - 11th Avenue SW, Calgary, Alberta T2R 0E7, 403.444.1100, 1.866.732.6967

PRODUCTS: Online oil and gas production data and management, field instruments and services

GROWTH STRATEGIES: Seek more clients, resellers, partners (measurement & monitoring devices) and acquisition targets

CONTACT: Larry Spagnolo, Senior VP Market & Customer Solutions, larry.spagnolo@zedi.ca, 403.802.7058



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The Government of Alberta is a proud supporter of Alberta's advanced technology industry, research ingenuity and innovation infrastructure.

Alberta International and Intergovernmental Relations works with its international offices and partners located around the world to help Alberta companies access international opportunities. We provide Alberta companies with market information, intelligence and key introductions for pursuing new international markets.



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Alberta 
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Innovation Support

PHOTO CREDIT: nanoFAB (p.80)

Canada's province of Alberta has a strong infrastructure to support research, education and help its companies with business development support. Here is a sample of the resources:

RESEARCH IN HIGHER EDUCATION

Alberta has 26 publicly-funded post-secondary institutions. Its large research-intensive, publicly funded institutions academic institutions are the **University of Alberta, University of Calgary, University of Lethbridge** and **Athabasca University**. In terms of the focus of this *Cool Companies* industry guide which looks at advanced technologies strongly dependent on software or hardware, the world-class research strengths of Alberta's universities include nanotechnology (**NINT** p.80), wireless, geomatics (GPS), engineering, machine learning (**AICML** p.78), artificial intelligence, quantum computing, computer games, engineering, bioinformatics, robotics, computer vision, remote sensing and simulation. Alberta also has two polytechnic institutions, **NAIT** and **SAIT**.

CONTACT: <http://eae.alberta.ca/post-secondary/institutions/public.aspx>

INDUSTRIAL RESEARCH SUPPORT

Alberta Centre for Advanced MNT Products (ACAMP)

Through ACAMP, companies have access to services for product & business development, prototype packaging and assembly, manufacturing, test & characterization and marketing of micro/nano technologies enabled devices. ACAMP is a government-sponsored initiative with many platform technologies and expertise that includes sensors for harsh environments, MEMS/NEMS, optics, inertial sensors, downhole electronics, microfluidics and biosensors.

CONTACT: www.acamp.ca, Ken Brizel, CEO, 780.468.2443

Alberta Innovates Centre for Machine Learning (AICML)

For business applications the AICML uses the power of advanced computing to find opportunities hidden in data that can be leveraged to optimize and enhance business operations. One of the top three machine learning centres in the world, the AICML is looking for project work with companies who want to uncover the business intelligence locked inside their data.

CONTACT: www.aicml.ca, Cameron Schuler, Executive Director, 780.492.4828

Alberta Innovates Technology Futures (AITF)

Part of **Alberta Innovates**, the provincial research and innovation system, Technology Futures provides research, development and funding for Alberta entrepreneurs and early-stage, knowledge-driven technology companies. Funding programs support a variety of business and technology development services, and management personnel for pre- and low-revenue Alberta companies.

- **Alberta Innovation Vouchers:** up to \$15,000 or up to \$50,000 vouchers to develop technology-based ideas into commercial products.
- **Industry R&D Associates Program:** \$55,000 per year for up to 2 years and a \$7,000 annual research allowance, to support hiring recently graduated MSc and PhD researchers.
- **nanoWorks:** A \$15 million initiative to develop market-driven nanotechnology products.

CONTACT: www.albertatechfutures.ca, 780.450.5111

Alberta/Jalisco Innovation & Commercialization

With 25% funding from the **Government of Alberta** and 25% from the **State of Jalisco**, Mexico, this program is an opportunity for an Alberta company and a Jalisco company to partner on a technology research, development, and commercialization project. Managed by **TRLabs** (p.81), it is intended to assist companies in establishing partnerships and market-based alliances between the two regions. **ShirWin Knowledge** (p.43) is participating in this program.

CONTACT: www.trlabs.ca, 780.441.3800

AMIF

AMIF at the **University of Calgary** is a \$10 million cleanroom facility equipped with equipment to support micro and nano technology fabrication, integration, packaging, and post-processing services along with expert consultation and training to both academic and industrial clients. In 2012, AMIF opened a unique laser fabrication centre, which can process standard and non-standard materials. In addition to being an open access facility for both academic researchers and private industry, AMIF can also do fee-for-service for companies.

CONTACT: www.amif.ca, 403.210.8421, CCIT Building at University of Calgary, Calgary, Dr. Colin Dalton, Facility Manager, cdalton@ucalgary.ca, 403.210.8464

AVAC

AVAC invests in promising early-stage businesses focused on value added agribusiness, renewable energy, environmental technologies, agricultural bio-products and nanotechnology. Companies who have received AVAC funding include **DataGardens** (p.54), **eThor Media** (p.40), , and **Wedge Networks** (p.57).

CONTACT: www.avactd.com Calgary:403.274.2774, Edmonton: 780.485.2411

Canadian Centre for Unmanned Vehicle Systems

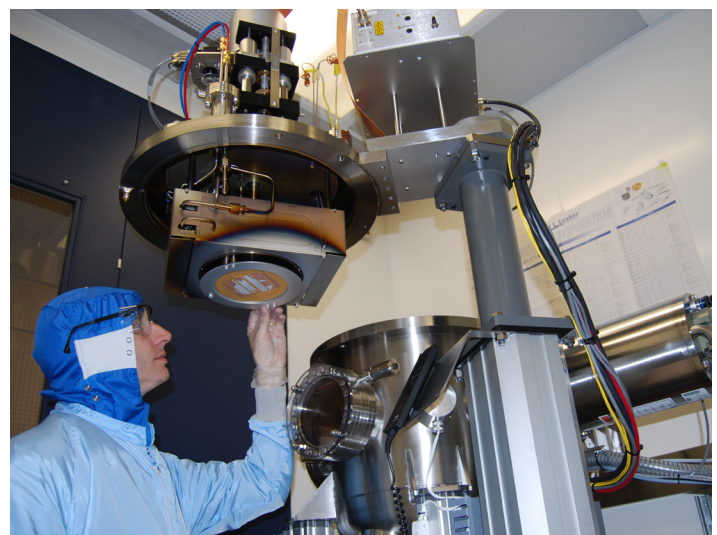
Robotic unmanned vehicles (for air, ground and underwater environments) are designed to do dull, dirty and dangerous work. For example, electric powered unmanned vehicles can do climate monitoring and inspect structures like pipelines and airport runways. Since they are lightweight, they also use little fuel compared to manned vehicles. With a strong research program and 50% of Canada's companies involved in unmanned vehicles, Canadian Centre for Unmanned Vehicle Systems (CCUVS) is helping to grow the industry in Canada.

CONTACT: www.ccuvs.com, Sterling Cripps, COO, 403.488.7208

Cybera

Called a cyberinfrastructure, Alberta has one of the most advanced internet infrastructures in the world and this which has become an essential foundation for innovation in the province. Cybera is a publicly funded agency with highly skilled expertise that operates this infrastructure and pilots emerging new internet technologies.

CONTACT: www.cybera.ca, 403.210.5333, 780.492.9940, Robin Winsor, President



The sputtering system at the AMIF deposits of very thin layers of materials on to silicon wafers used in electronics. (AMIF: Colin Dalton)

Microscopy & Imaging Facility (MIF)

With several advanced microscopes and trained operators, MIF can help companies get a microscopic view of electronics and other materials.

CONTACT: www.ucalgary.ca/mif, Calgary, Dr. Tobias Fürstehaupt, Manager, 403.220.3488

nanoBridge

A funding initiative supported by **Alberta Innovates Technology Futures** (p.79), nanoBridge supports the transition of innovations in micro/nano technology from idea to application and commercialization. This support includes early stage commercialization of technologies and products, and the entrepreneurial development and activities of highly trained recent graduates.

CONTACT: www.nanobridge.ca, 780.248.1621, Dr. Eric Flaim, Director, eflaim@nanobridge.ca

nanoFAB

The nanoFAB at the **University of Alberta** in Edmonton is a \$30 million cleanroom facility for supporting research and development in micro and nano technology fabrication. It is one of North America's premier open access academic

wafer processing research facilities, catering to micro and nano electromechanical systems (MEMS/NEMS), microfluidics, sensor development, utilizing over 100 specialized tools. As an open access facility, the nanoFAB supports the development and prototyping activities of both academic researchers and private industry to help bring new and innovative devices to market.

CONTACT: www.nanofab.ualberta.ca, 780.492.8357, E CERF Building, University of Alberta, Edmonton, Dr. Eric Flaim, Director, eflaim@ualberta.ca

National Institute for Nanotechnology (NINT)

NINT is an integrated, multi-disciplinary institution involving researchers in physics, chemistry, engineering, biology, informatics, pharmacy and medicine. Located at the **University of Alberta** campus, NINT's 20,000 square metre (215,280 ft²) building is one of the world's most technologically advanced research facilities and houses the quietest laboratory space in Canada. NINT can assist companies with nanotechnology or advance materials projects by providing access to research expertise and commercialization support. There are also funding sources available.

CONTACT: www.nint-innt.nrc-cnrc.gc.ca, 780.641.1600

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NRC Industrial Research Assistance (NRC-IRAP)

Through technical and business advisory and financial assistance, this Canada-wide program supports small and medium-sized companies in Canada in the development of technologies and their successful commercialization in a global marketplace. IRAP has supported **3D Interactive** (p.71), **Acceleware** (p.72), **Boreal Laser** (p.63), **CodeExcellence** (p.46), **Kent** (p.29), **Datagardens** (p.54), and **Userful** (p.57).

CONTACT: www.nrc-cnrc.gc.ca/eng/ibp/irap.html, 1.877.994.4727

TR Labs

TRLabs is Canada's largest information and communications technology (ICT) R&D consortium. Even the small technology companies can share in TRLab's ICT-based IP-sharing industry and academic collaborations.

CONTACT: www.trllabs.ca, 780.441.3800

BUSINESS SUPPORT

Alberta has a number of business incubators throughout the province, too many to list.

AITF Industrial Commercialization Associates

Alberta Innovates Technology Futures (AITF p.79) provides research, development and funding for Alberta entrepreneurs. The Industry Commercialization Associates Program is \$55,000 per year for up to 2 years (with a minimum required top up from the company) and a \$7,000 annual commercialization allowance, to support hiring experienced business professionals in Alberta businesses.

CONTACT: www.albertainnovatetechfutures.ca

Alberta Deal Generator (ADG)

ADG is a network of accredited investors actively pursuing opportunities in Alberta's young technology companies.

CONTACT: www.dealgenerator.com

Digital Technology Adoption Pilot Program (DTAPP)

NRC-IRAP's (p.79) DTAPP program provides advisory services and financial assistance for the adoption of digital technologies to increase the productivity growth of small and medium sized Canadian companies.

CONTACT: www.nrc-cnrc.gc.ca/eng/irap/dtapp/index.html

Enterprise and Advanced Education (EAE)

This Alberta Government ministry funds Alberta's 26 post-secondary institutions and Alberta's research and innovation system, including **Alberta Innovates** (p.79). It also develops programming and policy to support the commercialization of Alberta technology and to help pre-commercial companies prepare for market entry through key partner collaborations, such as the **German Canadian Centre for Research and Innovation**, and the **Alberta Jalisco Technology Partnership** (p.79).

CONTACT: www.eae.alberta.ca

ASTech Awards

Innovation and groundbreaking scientific and technological discoveries are made every day in Alberta. A not-for-profit collaboration between industry and government, Alberta Science and Technology (ASTech) awards are announced each year at the ASTech gala held each Fall to celebrate excellence in science and technology in Alberta.

CONTACT: www.astech.ab.ca, Bev Jones, Executive Director, 403.220.9130

Banff Venture Forum

The Banff Venture Forum is one of Canada's premier company financing events. Held each Fall in Banff, it showcases high tech companies across Canada pitching leading private equity and venture capital investors from across North America.

CONTACT: www.banffventureforum.com

BESTT Program

Finding exceptional science, engineering or technology professionals is always a challenge. When they don't have typical resumes or career paths, these high potential individuals can be easily overlooked. A new non-profit collaboration between industry, government, and academia, the BESTT Program (Bridge for Engineering Science and Technology Talent) connects Alberta's high tech companies with these innovative professionals.

It is designed specifically for those at a major life transition (such as being new to Alberta or re-entering the workforce from an extended leave), and advanced degree holders. BESTT bridges the gap between employers and prospective professional employees, working with agencies and volunteer networks to support candidates with networking, resume writing, local work opportunities and internships in Alberta.

CONTACT: www.ab-bestt.ca, Joy Cohen, Program Manager, info@ab-bestt.ca, 403.294.7324



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BioAlberta Association

With over 130 members, BioAlberta advocates, promotes and facilitates the growth of the life science sector. Member benefits include networking and education events as well as publications, industry reports, marketing campaigns and discount programs.
CONTACT: www.bioalberta.com, 780.425.3804

Clinexus

Clinexus, a division of **Alberta Innovates Technology Futures** (p.79), was created to accelerate the growth of early stage health technology companies across the province. Programs include helping companies demonstrate products in clinical settings, develop regulatory programs and access global markets.
CONTACT: www.clinexus.ca, Executive Director, Rob Beamish, 403.210.7544

Digital Alberta

Digital Alberta is an industry-led organization that promotes and connects the digital media community across Alberta, Canada. It offers professional development workshops, advocacy work, education, event and business development activity.
CONTACT: www.digitalalberta.com

GameCamp Edmonton

GameCamp Edmonton is run by a group of Edmonton game developers that has events that encourage networking among developers and game companies in Edmonton.
CONTACT: www.gamecampedmonton.com, Logan Foster

Global Game Jam

Global Game Jam is the world's largest game jam event occurring every January. It is a 48 hour marathon where people get together to build a video game. There are events in Calgary (www.creativecalgary.ca) and Edmonton (www.gamecampedmonton.com).
CONTACT: www.globalgamejam.org

MentorUP!

Quarterly networking events connect science, engineering, and technology professionals with Alberta companies, mentors and career information. Each event has a different theme, and are held in Calgary and in Edmonton.
CONTACT: www.awsn.com, mentorup11@gmail.com



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Part of the Alberta Innovates system, the Centre for Machine Learning is one of several commercialization partners helping Alberta businesses and entrepreneurs succeed. Whether enhancing your businesses productivity or getting your product to market – our services will help.

Find out more: albertainnovatetechfutures.ca



Productivity Alberta

Productivity Alberta is a private not-for-profit corporation that connects Alberta industry to the tools, resources, and services that will help improve their productivity and competitiveness. Productivity is about working smarter, not harder, and doing more with what you have. It's the secret to creating more profit and being more competitive, and every type of business can benefit.

CONTACT: www.productivityalberta.ca, 780.784.6000

Scientific Research & Experimental Development

SR&ED is a Canadian tax incentive program to encourage Canadian businesses to conduct research and development.

CONTACT: www.cra-arc.gc.ca/txcrdt/sred-rsde/menu-eng.html

Startup Calgary/Startup Edmonton

Startup Calgary and Startup Edmonton are non-profit organizations focused on cultivating the local tech start-up community in Alberta. Both offer programs and events such as **DemoCamp** and **ABAccelerator**. StartupEdmonton also offers downtown workspace.

CONTACT: Calgary: www.startupcalgary.ca, info@startupcalgary.ca
Edmonton: www.startupedmonton.com, info@startupedmonton.com

Technology Alberta Industry Association

Technology Alberta is an industry-led association formed by technology businesses, for technology businesses. Its initial priorities are to (1) Enhance the business success of high tech companies in Alberta by facilitating the support they need, (2) Grow public awareness of Alberta's high tech industry on its issues, stories and successes, and (3) Increase policy advocacy on behalf of the members at a local, provincial and national level.

CONTACT: www.technologyalberta.com, Randy Marsden, Chairman. Contact Drew McNaughton 403.829.0961

TECTERRA

Remote sensing, GPS and surveying are geomatics technologies that use geographic information or spatially referenced data to provide critical insights to improve productivity and decision-making in natural resources, disaster management, municipal services, health and education. TECTERRA helps companies in Alberta and Canada commercialize geomatics technologies. It offers a variety of programs including investments of \$100,000 to \$500,000 for prototyping and pilot projects and for the commercialization of innovative geomatics technology

CONTACT: www.tecterra.com

Wave Conference

Business networking is critical for growth. The Wave Conference is a special 3-day event enabling small to medium sized companies to network with large multinational corporations and government while discovering funding opportunities and evaluating their market. Every company that exhibits also presents to the entire audience along with one-on-one opportunities for speed networking. Wave is held every 2 years in the Spring.

CONTACT: www.wave2013.com

Wavefront

Wavefront is Canada's Centre of Excellence for Wireless Commercialization and Research. It accelerates the growth and success of wireless companies in Canada by connecting them with critical resources, partners and opportunities, and this in turn drives economic and social benefits for Canada. Wavefront products and services are available to wireless and non-wireless companies looking to leverage mobile technology. These include a comprehensive suite of accelerated commercialization and mentorship programs, international market linkages, state of the art wireless product development and testing infrastructure, and wireless training programs and events. Wavefront has locations in Vancouver, Toronto, Ottawa and Montreal.

CONTACT: www.wavefrontac.com

WISER

Focused on increasing collaborative research and innovation, the WISER Network is comprised of women from industry, academia, government, who are science, technology, engineering and mathematics professionals. With events run from the **University of Alberta**, WISER offers opportunities for networking, interactions with peers and mentors, information exchange, and professional development activities.

CONTACT: www.wisest.ualberta.ca/AboutWISEST.aspx

INTERNATIONAL EXPORTS

Alberta International & Intergovernmental Relations

This Alberta Government team helps international investors find and work with Alberta companies. It also help Alberta's export-ready companies access foreign markets in several ways: providing international market information and intelligence; showcasing Alberta's technologies, products and services internationally; facilitating networking events and programs; and making contact introductions in priority markets. Its services are offered **free of charge** to client companies and organizations. Staff are located both in Alberta and international offices located around the world.

CONTACT: www.international.alberta.ca / www.albertacanada.com

DFAIT

Department of Foreign Affairs & International Trade (DFAIT) is a department of the **Government of Canada** that is interested in encouraging Canada's international trade. It manages Canada's diplomatic relations and Canada's more than 150 consulates and embassies worldwide. DFAIT's **Trade Commissioner Service (TCS)** helps companies navigate the complexities of international markets and make better business decisions. The TCS is on the ground in more than 150 cities worldwide, gaining market intelligence, uncovering opportunities for Canadian companies and helping reduce business costs and risks. Its services are offered **free of charge** to client companies and organizations. One of its programs is the **Canadian Technology Accelerator** which helps Canadian technology companies grow their business in Silicon Valley. It includes introductions to key corporate partners and access to unique resources in Silicon Valley..

CONTACT: www.international.gc.ca / www.tradecommissioner.gc.ca

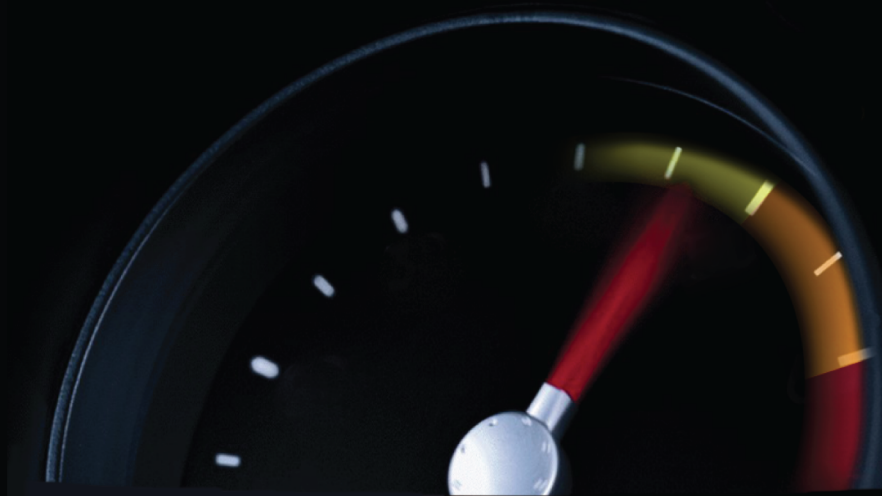
Export Development Canada (EDC)

EDE provides financing, insurance and bonding services as well as foreign market expertise to Canadian companies who are or want to export respond to international business opportunities. Self-financed, EDC Canada's export credit agency. It is a Canadian Crown corporation that operates at arm's length from the **Canadian Government**. Much of its business is done in partnership with other financial institutions and through collaboration with the government of Canada. EDE also supports Canadian direct investment abroad and investment into Canada.

CONTACT: www.edc.ca, 1.888.235.6148

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Electronics Design & Manufacturing

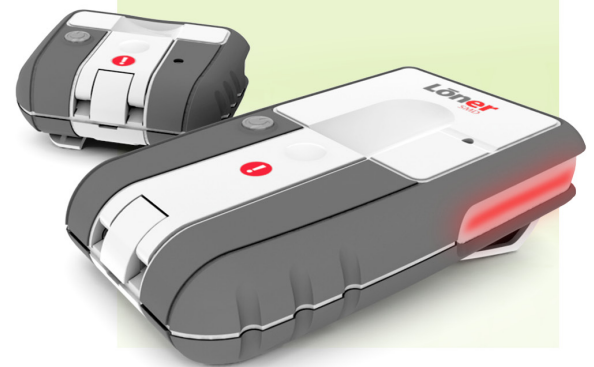
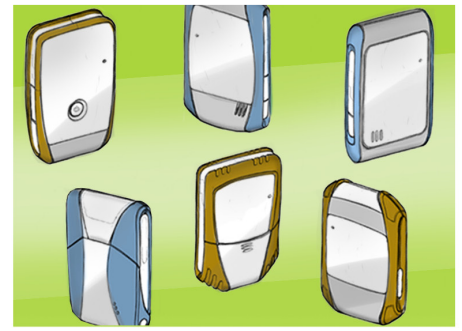


PHOTO CREDIT: PRODUCTS DESIGNED BY Advanta Design Group (p.86). Prologent Server by Avera (left). Loner products by Blackline GPS (p.46).

Alberta is home to some world-class companies that are experts in the design, engineering and manufacturing of electronic products. This chapter contains a sample of some of these companies.

EXPLANATION OF TERMS:

- After a new product has been designed, companies typically have a small number of the new product made (called **prototyping**), so they can interact with it. This always provides ideas for small improvements to make the product even better.
- **High volume** means a production run of millions of units. **Medium volume** runs are in the thousands of units and **small volume** runs are on the order of hundreds and may be prototype runs.
- Many of today's electronic products, such as smart coffee machines and dishwashers, contain an **embedded system**, which is a computer system integrated into the product that is designed to perform a specific set of functions.
- A **contract electronics manufacturer** is an outsourced manufacturer. It allows the client to focus on product

sales and engineering, without having to also manage the manufacturing. Based on their factory equipment, different contract manufacturers will have different capabilities and specialities.

- **Low mix** means a client has a very small amount of different product variations. This is often the case for a consumer electronics product. **High mix** means a client has several variations (10-20) of a product. Each variation requires a new manufacturing setup.

NEW PRODUCT DESIGN & ENGINEERING

Advanta Design Group

SPECIALTY: Design for casing enclosures for electronic products (e.g. design for plastic injection moulding, castings, sheet-steel or extrusions)

INDUSTRIES: High-tech, industrial, consumer, and transportation

IN THEIR WORDS, THIS IS WHAT MAKES THEM SPECIAL: "We love great design and all the details that go with it. We focus on the enclosure portion of products from the idea stage to a ready-to-manufacture, revenue-generating product."

Is MANUFACTURING OFFSHORE STILL THE RIGHT OPTION?

A TRUE STORY: A high tech company asked an Alberta contract manufacturer to build 180 pieces of their new electronics product. The price the Alberta company charged was \$75 per unit. The units were shipped in 5 weeks with 100% of the units in working order and the high tech company was very happy with these units. In the meantime, the high tech company had also found a contract manufacturer in Asia to manufacture a larger run of 1,200 units which they negotiated at a price of \$52 per unit. The high tech company received the order from Asia after a 4 month wait time, no flexibility in the product design, flights to Asia to check on production, along with duties and customs charges. After this hassle and additional costs, the high tech company went back to the contract manufacturer in Alberta and asked for a quote on the 1,200 units and found that they would have charged \$56 a unit, a difference of only \$4 per unit or 8%, which would have easily outweighed their hassle costs.

POINT OF THE STORY: Many people still have the mindset that going to Asia is the only way to get products made at a reasonable price. But today, as the example in the story shows, the difference between manufacturing in Asia and North America might be very small, especially for medium volumes and when all the costs involved are considered.

PRODUCT COST BREAKDOWN: Whether an electronics product is made in Asia or North America, approximately 90% of its cost is the materials that go into it. This leaves 10% of the cost for labour, but about 90% of the work of placing computer chips on circuit boards is done by robotic machines now. Shipping costs from Asia to North America continue to rise, as does labour costs in Asia. The cost of equipment is the same in both places.

ADVANTAGE OF MANUFACTURING IN ASIA:

The Apple iPod is an example of high volume production with little product variation (low mix). It requires a huge pool of people, often in excess of 30,000 people under one roof, and creation of a manufacturing campus with dormitories. In North America, there isn't a workforce of this level readily available at one location.

ADVANTAGES OF MANUFACTURING IN NORTH AMERICA:

Here is a list of possible hidden financial and business costs, beyond unit price, to weigh into the decision that favours manufacturing in North America:

- Flexibility in product configuration and design changes
- Ease of local weekly meetings in same time zone
- Less time and money spent on travel and jetlag recovery
- Shorter wait times to receive products
- Smaller minimum order sizes and more flexibility with payment (access to credit, wire money before beginning)
- Often times fewer defective products and greater warranty support
- No duties, brokerage fees or customs clearance delays
- Lower shipping costs, especially for heavier or bulkier products
- The ability to take advantage of NAFTA to both manufacture and distribute your product within North America
- Greater IP protection
- Protection of corporate reputation knowing that your product is manufactured using acceptable labour standards
- Value added services that cannot be offered from afar, such as product support, firmware updates, RMAs (return merchandise authorization), and product fulfillment
- Easier to transition from prototype to production without re-tooling and re-setup
- Less risk of shipping damage over shorter distances
- Difficulty to track shipping progress or exact shipping container parcel location

SAMPLE CLIENTS: Several clients with wireless and GPS products in North America including **Blackline GPS** (p.46) in Alberta

10 EMPLOYEES, 1992 FOUNDED, 35% EXPORTS

CONTACT: www.advantadesign.com, Kent Davidson, President & Founder, 403.547.7159 x 222, Calgary, solutions@advantadesign.com,

Au-Zone Technologies

SPECIALTY: Turnkey product development for embedded electronic devices especially complex industrial and video/imaging

INDUSTRIES: Industrial (oil and gas, security, utilities & avionics), high end consumer/professional

IN THEIR WORDS, THIS IS WHAT MAKES THEM SPECIAL: "Flexible engagement model and seasoned design staff each with many

years of experience bringing products to market with these technologies."

SAMPLE CLIENTS: Small start-ups to large Fortune 100 companies

10 EMPLOYEES, 2001 FOUNDED, 20% EXPORTS

CONTACT: www.au-zone.com, Brad Scott, President & Co-Founder, information@au-zone.com, Calgary, 403.261.9985

Microlynx

SPECIALTY: Design wireless and wired electronic systems for low power, hazardous, and extreme environments

INDUSTRIES: Oil and gas, avionics, security

IN THEIR WORDS, THIS IS WHAT MAKES THEM SPECIAL: "We are easy to work with and like to develop long term relationships with our clients."

SAMPLE CLIENTS: Oil and gas exploration and service companies, pipeline, telecomm and power service companies; aviation support companies.

13 EMPLOYEES, 1984 FOUNDED, 25% EXPORTS

CONTACT: www.microlynxsystems.com, Ken Mouratidis, President, sales@microlynxsystems.com, Calgary, 403.275.7346

Motive Industries

SPECIALTY: Design, engineering and prototyping of advanced real-world transportation solutions

INDUSTRIES: Transportation

IN THEIR WORDS, THIS IS WHAT MAKES THEM SPECIAL: "We work with advanced materials (including biocomposites) and new manufacturing technologies that accelerate project development, reduce cost and decrease time to market."

SAMPLE CLIENTS: Over 200 major vehicle development projects around the world

5 EMPLOYEES, 2004 FOUNDED, 80% EXPORTS

CONTACT: www.motiveind.com, Nathan Armstrong, Director & Co-Founder, nathan@motiveind.com, Calgary, cell: 403.826.2605, 403.236.3133

Murandi Communications

SPECIALTY: wireless products, modules and designs

INDUSTRIES: Resources management (water, energy, forestry, mining), M2M, broadband wireless

IN THEIR WORDS, THIS IS WHAT MAKES THEM SPECIAL: "Longest range, lowest energy consuming wireless monitor/control. Best performing broadband RF (radio frequency) solutions."

SAMPLE CLIENTS: Suppliers of industrial and commercial controls, wireless meter reading, medical telemetry, 4G infrastructure

13 EMPLOYEES, 1992 FOUNDED, 65% EXPORTS

CONTACT: www.murandi.com, Mike Patterson, Business Manager, mike.patterson@murandi.com, Calgary, 403.777.9988

Norcada

SPECIALTY: Design, prototyping and fabrication of tiny 3D electromechanical devices (MEMS) used for sensors and other industrial products

INDUSTRIES: Suppliers to oil and gas, telecom, scientific analysis, industrial sensors and applications

IN THEIR WORDS, THIS IS WHAT MAKES THEM SPECIAL: "In MEMS design and innovation we are leaders in Canada. More than 80% of business is from repeat clients."

SAMPLE CLIENTS: Leading manufacturers of instruments for scientific and industrial applications, national laboratories

6 EMPLOYEES, 2001 FOUNDED, 85% EXPORTS

CONTACT: www.norcada.com, Graham McKinnon CEO & Co-Founder, 780.431.9637, 1.877.431.9636, graham@norcada.com

SignalCraft Technologies

SPECIALTY: Wireless, precision analog, programmable logic and embedded controllers

INDUSTRIES: Telecommunications, microelectromechanical (MEMS) based solutions, test and measurement, industrial monitoring and control

IN THEIR WORDS, THIS IS WHAT MAKES THEM SPECIAL: "85% of our business comes from repeat customers. Most team members have over 15 years experience delivering products into manufacturing. We support our customers from the conceptual phase, through design and testing, and into production."

SAMPLE CLIENTS: Fortune 500 companies, **National Instruments** (test control and embedded design applications), **Phoenix Contact** (electric connection and industrial automation)

21 EMPLOYEES, FOUNDED 1999, 70% EXPORTS

CONTACT: www.signalcraft.com, Bernard Gobeil, President/Co-Founder, Calgary, 403.275.3883

Tyler Research

SPECIALTY: Design and development of advanced equipment

INDUSTRIES: Medical, biomedical, industrial, environmental, scientific research

IN THEIR WORDS, THIS IS WHAT MAKES THEM SPECIAL: "We find elegant working solutions to difficult engineering problems and perform small quantity manufacturing runs."

SAMPLE CLIENTS: Treating microbiologically induced corrosion in industrial fuel lines. Creating tools and chambers for the directional growth of neurons. Designing and manufacturing prosthetics, orthotics and mobility-assisting devices.

10 EMPLOYEES, 1986 FOUNDED, 90% EXPORTS

CONTACT: www.tylerresearch.com, Dr. Jonathan Tyler, President & Founder, Edmonton, 780.448.1249

CONTRACT ELECTRONICS MANUFACTURING

August Electronics

SPECIALTY: Industrial oil and gas instruments.

INDUSTRIES: Oil & gas, telecommunications, mobile computing

IN THEIR WORDS, THIS IS WHAT MAKES THEM SPECIAL: "We have the experience to fully appreciate and understand our customer's needs and the flexibility to shape our resources to most effectively meet those needs. Consistently ranked among *Profit's Fastest Growing Companies in Canada*. Annual sales of \$42 million."

SAMPLE CLIENTS: World's leading provider of data management systems for land and offshore drilling rigs.

150 EMPLOYEES, 1991 FOUNDED, 66,000 ft² PLANT, 30% EXPORTS

CONTACT: www.aeicm.com, Calgary, Jack Francis, CEO & Co-Founder, 403.273.3131

Control Innovations

SPECIALTY: Oil and gas well drilling and servicing instrumentation and controls

INDUSTRIES: Oil and gas, petrochemical, transportation, mining

IN THEIR WORDS, THIS IS WHAT MAKES THEM SPECIAL: "Control Innovations delivers exceptional customer service with integrity, quality and flexibility to meet our customers' needs."

SAMPLE CLIENTS: North America's leading oil and gas well service companies. North America's largest drilling instrumentation company.

43 EMPLOYEES, 2000 FOUNDED, 21,000 ft² PLANT, 30% EXPORTS

CONTACT: www.controlinnovations.ca, Doug Keller, President, dkeller@controlinnovations.ca, Calgary, 403.720.0277 x 101

Dynamic Source Manufacturing (DSM)

SPECIALTY: Complete turnkey electro-mechanical assembly, from prototype to high volume, high complexity

INDUSTRIES: Telecommunications, oil and gas, medical, military, industrial

IN THEIR WORDS, THIS IS WHAT MAKES THEM SPECIAL: "Partnering with our clients as an extension of their business encourages open communication and collaboration at multiple levels and compliments DSM's flexible, customized manufacturing solutions."

SAMPLE CLIENTS: Leaders in telecommunications, oil and gas down-hole

100+ EMPLOYEES, 2000 FOUNDED, 30,000 ft² PLANT, 10% EXPORTS

CONTACT: www.dynamicsourcemfg.com, Calgary, Kelly Adolph, Business Development Manager, dsmsales@dynamicsourcemfg.com, 403.516.1888

LogiCan Technologies

SPECIALTY: Medium volume, high mix robotic manufacturing of electronic medical, military, commercial and industrial products

INDUSTRIES: Medical devices, military, automotive, communications, industrial controls

IN THEIR WORDS, THIS IS WHAT MAKES THEM SPECIAL: "Team approach for cradle to grave accountability so nothing falls between the cracks. We add value at every step so customers can focus on selling products and engineering new ones. We are adaptive to rapid changes."

SAMPLE CLIENTS: Large medical equipment brand. First international automotive contract started. Electronic assemblies for industrial welding equipment. In Alberta, **Cleankeys** (p.33).

200 EMPLOYEES, 1992 FOUNDED, 55,000 ft² PLANT (+ MORE plant space opening in 2013), 75% EXPORTS

CONTACT: www.logican.com, Warren Sheydwasser, Director of Business Development, warren@logican.com, office: 780.450.4467, cell:780.405.9911

Trilogy Net

SPECIALTY: Fast prototyping and medium volume production

INDUSTRIES: Telecommunication, oil and gas, military, medical, high end audio

IN THEIR WORDS, THIS IS WHAT MAKES THEM SPECIAL: "We invest in people, equipment and culture. Our focus is supporting our clients to be successful."

SAMPLE CLIENTS: Many different electronics industry. Leading semiconductor electronics product companies. Multinational oil and gas companies.

40 EMPLOYEES, 1999 FOUNDED, 15,000 ft² PLANT, 35% EXPORTS

CONTACT: www.trilogy-net.com, Trevor Pullishy, info@trilogy-net.com, Calgary, 403.219.8868x225

ELECTRONIC PRODUCT TESTING

Applied Test Systems (ATS)

SPECIALTY: Electronic product compliance test services per regulatory and industry standards (pre-compliance testing available, compliance testing starts Feb 2013)

INDUSTRIES: Electronic products from any industry including commercial, military, medical, avionics and oil and gas.

IN THEIR WORDS, THIS IS WHAT MAKES THEM SPECIAL: "We are the only wireless regulatory compliance testing facility up to 18 GHz in Western Canada."

SAMPLE CLIENTS: Designers and manufacturers of any type of electronic product

5 EMPLOYEES, 2012 FOUNDED, 2,500 ft² FACILITY, 0% EXPORTS

CONTACT: www.appliedtestlab.com, Trung Nguyen, General Manager & Founder, Trung@appliedtestlab.com, Calgary, 403.708.0559

DVT Solutions

SPECIALTY: Diagnostic testing and design improvement of electronic products, power lines emitting unwanted electromagnetic (EM) energy or are sensitive to it. Similar services for antenna, lightning and product safety.

INDUSTRIES: All electronic products including wireless, military, communications, consumer and industrial electronics, avionics

IN THEIR WORDS, THIS IS WHAT MAKES THEM SPECIAL: "We are a single stop radio frequency (RF) resource center for debugging and design. We have developed a new product to predict EM energy produced by electronics within a 3 metre perimeter. It complements the products from **EMSCAN** (p.68)."

SAMPLE CLIENTS: Electronic product designers, power utilities

4 EMPLOYEES, 2001 FOUNDED, 2,400 ft² FACILITY, 10% EXPORTS

CONTACT: www.dvt-solutions.com, Adishesu (Adi) Nyshadham, President & Founder, anyshadham@dvt-solutions.com, Calgary, 403.668.4252

Successful Exits

PHOTO CREDIT: TRENT OSTER, FOUNDER OF EDMONTON'S **Overhaul Games** (p.26), IS PART OF THE SUCCESSFUL EXIT **BioWare** (p.91).

This **Cool Companies** industry guide has profiled 116 innovative advanced technologies companies growing in Canada's province of Alberta. Now we'll look at a sample of some successful exits.

In North America there is a big focus on building a company and selling it for lots of money, called a **successful exit**.

When the company's decision making power leaves or the company moves and takes its jobs and revenue stream with it, an exit—while profitable for the founders—can be a loss for the community. In other countries, different approaches are taken to the development and growth of companies.

For example, the "**Mittelstand**" companies credited for Germany's current economic growth and strength are small and medium sized high tech companies with innovative, high quality products with niche market leadership that are export focused and located in small rural communities. They are built to last, not to be sold. We love this idea! As a result, this chapter is a sample of successful exits that have generated a rebirth locally: Either the founders or former employees have started a new business and/or have become investors or advisors in Alberta's high tech community.

The price the company sells for is called its **exit value**. Some of the companies we profile in this chapter didn't make their exit value public knowledge. In some cases

such as **Investopedia** (p.93) and **Tynt** (p.97), the exit is really a strategic deal where the selling company joins the purchasing company to work together for a short time to create even more value and then they sell for big money.

Since not knowing the exit value is no fun for us as readers, here are some rules of thumb for an estimate. These will depend on the type of business and timing in the market:

- Technology companies generate \$100,000 gross revenue for every employee
- Exit values are generally 2 to 4 times gross revenue (annual sales before expenses are deducted). Today a quickly growing SaaS-based (Software-as-a-Service) company can be worth 6 to 8 times its revenue, much higher than this rule. A services company is often worth less than 1 times its revenue.

There are some companies where the exit values are much, much higher than these rules of thumb because the exit offers a significant competitive advantage to the purchaser. In addition to selling for cash, exit deals can also involve shares of the purchasing company and reverse takeovers which make the new company publicly traded such as **Blackline GPS** (p.46, 91) and **Matrikon** (p.93).

Except for **Saville** and **Zentra Computing**, the data in the exit profiles have been verified with founders, former and/or current employees.

AudeSi Technologies

WHAT THE COMPANY DID: Initially AudeSi Technologies (pronounced “odyssey”) partnered with **Sun Microsystems** and **Motorola** to work on smart card electronic cash technology for Visa and Mastercard. It also worked with WindRiver to develop the Storm Pad, a tablet that was a joint initiative with Intel, but was pulled before launch.

VITALS: Founded in 1997 in Calgary, AudeSi grew to 40 employees. Recognizing that silicon-based electronic cash was the new gold, AudeSi loosely translated to ‘Gold (Au) from Silicon (Si)’.

EXIT VALUE: **\$62.5 million** by California-based **Wind River Systems** (NASDAQ:WIND) in 2000.

VALUE TO THE PURCHASER: AudeSi’s products expanded Wind River’s product portfolio.

FOUNDERS: It was co-founded by **Brian McKinney** and **Terry Sydoryk** of **Nortel**, and **Steve Maryka** and **Greg Kletke** of **Jade Technologies**. Brian and Steve cofounded Calgary-based **ICESoft** that develops open source Java technology for developing mobile rich internet applications. Terry is currently COO at **Evoco** (p.73).

BioWare

WHAT THE COMPANY DOES: BioWare creates some of the world’s best-selling role-playing video games (RPG), revolutionizing this genre. Games included **Baldur’s Gate** (p.24), **Neverwinter Nights**, **Star Wars: Knights of the Old Republic**, and the **Mass Effect** and **Dragon Age** series of games.

VITALS: Founded in Edmonton in 1995, it grew to 400 employees in different locations when it was sold in 2008.

EXIT VALUE: **\$860 million (split)** as a joint purchase of BioWare and Pandemic by US-based **Electronic Arts** (EA) in 2008.

VALUE TO THE PURCHASER: EA gained a foothold in the RPG market, franchises, and a passionate community of fans.

FOUNDERS: Just graduating from medical school, co-founders **Dr. Greg Zeschuk** and **Dr. Ray Muzyka** used their salaries to fund the company and continued at BioWare until their retirement in September 2012.

FORMER EMPLOYEES: **Trent Oster** co-founded video game company **Overhaul Games** (p.26). **Dups Wijayawardhana** is CEO and Co-Founder of **Empire Avenue** (p.21) which also includes many former BioWare employees including: **Ric Williams**, **Craig Miller**, **Brad Grier**, and **Todd Derechey**. **Craig Welburn** co-founded **Pyxwise** (p.23).

Blackline GPS

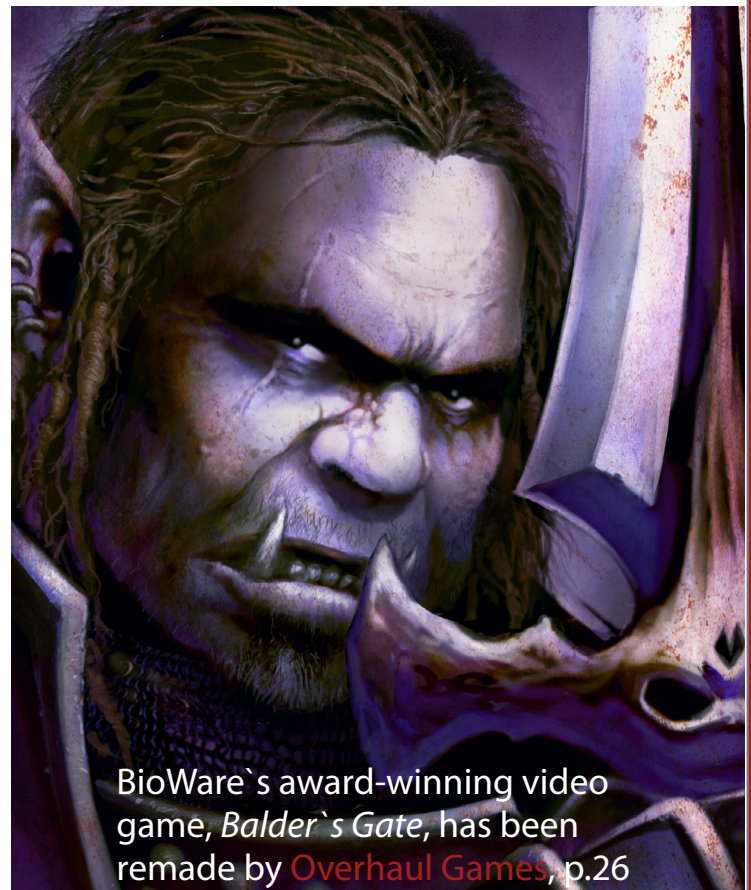
WHAT THE COMPANY DOES: **Blackline GPS** (p.44) develops GPS devices to monitor the safety of workers and assets.

VITALS: Founded in Calgary in 2004, Blackline had 6 employees at the time of sale. Under a new structure, the company continues in Calgary with over 30 employees.

EXIT VALUE: **Not fair to say yet.** Blackline needed to raise investment. The exit in 2008 was a reverse takeover that made Blackline a publicly traded company (TSXV: BLN) to attract investors. Blackline has raised \$18 million.

VALUE TO THE PURCHASER: **Cody Slater**, who founded and exited **BW Technologies** (p.90), led this purchase. As CEO he sees an opportunity to repeat BW’s success.

FOUNDERS: Blackline GPS was co-founded by **Brendon Cook** who is still Blackline’s CTO, and **Patrick Rousseau** who has founded **budtobud** (p.15). They got the company idea working at **Hemisphere GPS** (p.63) where they tested Patrick’s motorcycle racing performance using GPS to map the racing line. The inspiration for Blackline’s current product line came from **Dale Ramsbottom** of **Enmax** who approached them to develop the technology to help him monitor the safety of his meter reader team.



BioWare’s award-winning video game, *Baldur’s Gate*, has been remade by **Overhaul Games**, p.26

BW Technologies

WHAT THE COMPANY DOES: BW is the world leader in gas detection instruments that measure toxic gas levels suspended in air. These detectors are used by people in industries where encountering a poisonous gas is a daily risk, such as mining, fire, rescue, police, transportation and the oil and gas industry. BW started with the world's first wireless solar-powered gas detector.

VITALS: Founded in 1985 in Calgary, BW grew to 500 employees and was publicly traded. All manufacturing continues to be done in Calgary. In the 5 years before its purchase, BW Technologies had 30% growth EACH year.

EXIT VALUE: \$260 million cash in a friendly takeover by UK-based **First Technology** in 2004.

VALUE TO THE PURCHASER: First Technology was able to expand its product line and market scope.

FOUNDERS: BW Technologies was co-founded by CEO **Cody Slater**. In 2009, Cody purchased **Blackline GPS** (p.46, 91) where he is currently CEO.

Greenpoint Software

WHAT THE COMPANY DID: Leading tax software for Canadian tax professionals.

VITALS: Founded in Calgary in 1995, Greenpoint grew to 30 employees and was used by 2,000 professional tax offices across Canada at time of exit.

EXIT VALUE: **Undisclosed amount** in 2000 by California-based **Intuit Canada** (see **WinTax** p.97).

VALUE TO THE PURCHASER: Greenpoint's products extended Intuit Canada's product portfolio into the Canadian professional tax segment.

FOUNDER: Greenpoint was co-founded by **Cameron Peters** and **Stephen King**. Cameron served as Intuit Canada's CTO and recently founded his third tax software company, **Trilogy Software** for Canadian tax professionals. Stephen became CMO of Intuit Canada until he left in 2007 to found his executive consulting CMO4Hire firm **Stephdokin.com**. He is also CEO of Boston-based **TCELab.com** and a co-founder of the **A100** group of entrepreneurs and executives interested in helping Alberta's next generation of innovative start-ups become successful.

Dynastream/ANT+ Wireless

WHAT THE COMPANY DOES: Initially sold through **Nike**, Dynastream's sensor technology was the world's first device to practically and accurately measure a runner's speed and distance. Its ANT+ wireless technology has become a world leader in ultra-low power wireless networking and is used globally in world class products for sports, fitness, and wellness monitoring.

VITALS: Dynastream was founded in 1998 in Cochrane where it continues with 80 employees.

EXIT VALUE: \$36 million in cash by **Garmin** in 2006.

VALUE TO THE PURCHASER: Garmin accelerated the growth and expansion of its fitness products.

FOUNDERS: The initial patented technology to launch the company originated from the **University of Alberta** by **Dr. Ken Fyfe**. Ken's brother, former CEO **Kip Fyfe**, and colleagues **Victoria Brilz** and **Jim Rooney** founded Dynastream. Kip has started **4iii Innovations** (p.18) with Victoria. Kip is an investor/advisor at **Orpyx Medical** (p.31) and **Eleven Engineering** (p.16). Jim continues on with Dynastream as President.

Hyprotech

WHAT THE COMPANY DID: Hyprotech was the world's leading supplier of process simulation and optimization software for use in industrial applications.

VITALS: Founded in Calgary in 1976, Hyprotech grew to 400 employees with revenues of \$80 million at exit. It had 20% growth year to year and 20% margin, making it the 10th largest software company in Canada in revenue and number one in profit.

EXIT VALUE: **Undisclosed amount** by **AEA Technologies** in 1997. Hyprotech was a subsidiary of **AEA** until it was sold for **\$106.1 million** to **AspenTech** (NASDAQ:AZPN) in 2002.

VALUE TO THE PURCHASER: AspenTech developed software for the same market. Hyprotech had more software packages on the market than any other process simulation company.

FOUNDERS: **Wayne Sim** operates **3esi** in Calgary. **Tony Vysniauskas** has an investment firm **West Mountain Capital**. **Craig Morris** has a company called **Red Tree Development** in BC. These 3 founders were students with **Dr. Bill Svrcek** (4th founder) who was a professor at **University of Calgary** and is now President of **Virtual Materials Group**.



Dynastream's wireless technology enables wireless devices to easily talk to each other (p.92)

Matrikon

WHAT THE COMPANY DID: Matrikon was a leading provider of intelligence solutions that enabled industrial customers to optimize their operations.

VITALS: Founded in Edmonton in 1988, Matrikon grew to 570 employees and \$82.2 million revenue at the time of the exit. It became publicly traded on TSX in 2001 through the purchase of **TigrSoft** (p.96).

EXIT VALUE: **\$145 million** by **Honeywell** (NASDAQ: HON) in 2010.

VALUE TO THE PURCHASER: The deal increased Honeywell's product offering.

FOUNDER: Founder and CEO **Nizar J. Somji** has now started **The Jaffer Group of Companies** which deals in real estate, management consulting, financing and construction.

Investopedia

WHAT THE COMPANY DID: Investopedia is one of the Internet's largest sites devoted to educating people who want to understand and be personally involved in their investment decisions. It makes money by selling advertising on the site.

VITALS: Founded in 1999, the company remains in Edmonton and had 25 employees in 2007.

EXIT VALUE: **undisclosed amount** by **Forbes** in 2007. In 2010, it was purchased by **ValueClick** for **\$42 million** cash. Based on 2010 projections, Investopedia was expected to generate \$10 million in revenues.

VALUE TO THE PURCHASER: Investopedia offered high quality content, organic traffic and established advertiser relationships. Adding the Forbes name improved advertising reach and significantly grew the company.

FOUNDERS: **Cory Janssen** is President of **Galt Capital**, a private investment firm and co-founder of **Janalta Interactive**, an online media startup. **Cory Wagner** is founder of **SportingCharts.com**, a tech company devoted to advanced analytics of sports.

Merak Projects

WHAT THE COMPANY DID: Economic evaluation and management software for oil and gas companies that allows them to calculate valuations based on production forecasts and royalties.

VITALS: Founded in Calgary in approximately 1986, Merak grew to over 200 employees at exit.

EXIT VALUE: **Undisclosed amount** by **Schlumberger** (NASDAQ: SLB) in 1999 who is one of the world's largest energy services and technology companies.

VALUE TO THE PURCHASER: Schlumberger acquired leading software to sell to their existing customers, plus access to a large group of new customers.

FOUNDER: Merak's Co-Founders are **Adrian Zissos**, **Don Jeffers** and **Andrew Orr**. Adrian lives in Canmore and mentors the computer science students at the **University of Calgary** to consider entrepreneurship. Don lives in BC and Andrew lives in Barbados.

EMPLOYEES: Former employees with companies: Arcurve, Aclaro, **Chaordix** (p.39), Enersight, Intaver Institute, **Solium** (p.52), **Stormworks** (p.95), and Visage.

NeuroArm Surgical

WHAT THE COMPANY DID: NeuroArm is a surgical robot capable of performing delicate surgeries in a way that allows the surgeon to see more and work with greater precision and safety. Watching real-time MRI and visual video of the brain through a microscope or monitors, the surgeon's hand movements are translated into movements of the robotic arm in increments of 50 microns (the width of a human hair) with no hand tremors.

VITALS: Founded in Calgary in 2006, NeuroArm was a **University of Calgary** spinoff. Being grant funded, it was important to the team that NeuroArm remain in Canada.

EXIT VALUE: **\$10.7 million** by Canadian Winnipeg-based medical technology company **IMRIS** (NASDAQ: IMRS) in 2010. Additional funds received for ongoing research.

VALUE TO THE PURCHASER: IMRIS is a Canadian medical device company that commercialized the technology.

FOUNDER: NeuroArm was developed by **Dr. Garnette Sutherland** and his team at the **University of Calgary** and **Calgary Health Region**. They continue to develop new leading-edge robotics-based technologies and products in Calgary.



NeuroArm: World's first MRI-compatible surgical robot revolutionized micro neurosurgery (left)

NovAtel

WHAT THE COMPANY DID: NovAtel manufactured cellular communication technologies, and later GPS through the acquisition of **NorStar Instruments** in 1989.

VITALS: NovAtel was originally formed in 1978 in Calgary. Today, **NovAtel Inc.** continues in Calgary with 350 employees and is the world's leading OEM provider of high precision GPS. Applications include **Mars Rover Expedition** (p.10).

EXIT VALUE: In 1990, a major restructuring saw the company split into 2 independent companies: **NovAtel Inc.** (to pursue GPS technology development) and **NovAtel Wireless** (for the cellular telephone business). In 2007, **NovAtel Inc.** was purchased by **HEXAGON** (NASDAQ: HEXA B) for close to **\$400 million**.

VALUE TO THE PURCHASER: Expanded product portfolio and created product development opportunities.

FOUNDER: NovAtel was a joint venture between **Nova Corporation** and **Alberta Government Telephones** (AGT).

EMPLOYEES: Many former employees have started their own companies including **Dynasteam** (p.92), **LTX Software** (p.50) **Microlynx** (p.87), **Murandi** (p.88), **SignalCraft** (p.88) and **Wireless Dynamics** (p.24).

RADSS Technology

WHAT THE COMPANY DID: RADSS developed software to track and optimize transportation assets for shippers. The products used analytics and artificial intelligence to calculate cycle times and schedule empty cars to loading points in order to maximize utilization.

VITALS: Founded in Calgary in 1995, RADSS quickly became one of the top rail management software companies in North America with customers like **Lafarge**, **Rescar**, **Cemex**, and **First Union Rail**.

EXIT VALUE: **Undisclosed amount** by US-based **IntelliTrans** in 2003.

VALUE TO THE PURCHASER: RADSS allowed IntelliTrans to increase their market share, add innovative IP to their product portfolio, and utilize expertise in the development team at RADSS.

FOUNDER: CEO & Founder **Roy Masrani** is now CEO of Calgary-based **CodeExcellence** (p.46) which helps large companies maintain quality control with their SAP implementations.

Saville Systems

WHAT THE COMPANY DID: Saville was a leading provider of convergent billing and customer care solutions for the telecommunications industry that allowed communications services such as telephone, cable and internet to be integrated onto a single bill for the customer.

VITALS: Founded in Edmonton in 1982, Saville Systems grew to 1,400 employees worldwide.

EXIT VALUE: **\$700 million** by Minneapolis-based **ADC Telecommunications** (NASDAQ: ADCT) in 1999.

VALUE TO THE PURCHASER: Saville Systems allowed ADC to offer a wider product range and boost their bottom line.

FOUNDER: **Bruce Saville** is a philanthropist and community supporter. He supported the construction of Edmonton's **Saville Sports Centre**.

Sonic Mobility

WHAT THE COMPANY DID: Sonic Mobility developed and sold secure wireless and infrastructure management products that made it easier to administer and manage mobile devices and data centers on multiple platforms.

VITALS: Founded in Calgary in 2000, Sonic Mobility grew to 20 employees. It had over 300 customers in 14 countries including **Lockheed Martin**, the **US Army** and **FedEx**.

EXIT VALUE: **\$13 million** CDN by Alabama's **Avocent** (NASDAQ: AVCT) in 2004.

VALUE TO THE PURCHASER: Sonic's technologies were integrated into Avocent's suite of products and provided a major competitive advantage.

FOUNDERS: Sonic Mobility was co-founded by **Derek Ball**, **Barry Shilmover** and **Ken Cheung**. **Dayton Foster** joined as VP of R&D. Later in 2007, Derek and Dayton co-founded **Tynt** (p.97).

Shana Corporation

WHAT THE COMPANY DID: Shana was a world leader in electronic forms software.

VITALS: Started in 1985 in Edmonton, Shana grew to 80 employees and \$10 million in revenue. Its clients included **Boeing**, **NASA** and **Liberty Mutual** and it was on **Alberta Venture Magazine's** list of fastest growing companies.

EXIT VALUE: **Undisclosed amount**, all cash in 2003 by **FileNet**. FileNet was later acquired by **IBM**.

VALUE TO THE PURCHASER: FileNet acquired technology and expertise to integrate forms management into enterprise level workflow and document management solutions.

FOUNDERS: Shana had 5 Co-Founders: **Don Murphy**, his brother **John Murphy**, **Tim Senger**, **Dave Perman**, and **Wayne Malkin**. John has founded **D-TEX** which is pioneering a new optical filter technology. Don has co-founded **Stream Technologies** which increases productivity from data gathered from sensors. Both Don and John are invested in several Alberta startups and serve on many Boards. Wayne's software development consulting company is **InsightFools**.

Stormworks

WHAT THE COMPANY DID: Stormworks was a software development and online marketing firm.

VITALS: Stormworks was a Calgary based company that started in 2000 and grew to 17 employees.

EXIT VALUE: **\$475,000** by **Solium** (TSX:SUM) (p.52) in 2002.

VALUE TO THE PURCHASER: Solium acquired Stormworks' commercialization and capitalization expertise.

FOUNDERS: Stormworks Inc. had 2 Co-Founders, husband and wife team **Brian Craig** and **Shelley Kuipers**. Previously, both Brian and Shelley were part of **Merak Projects** (p.93) and later founded the Calgary-based private equity company, **Adventure Capital** whose investments include **Tynt** (p.97), **Evoco** (p.73), and **Curve Dental**. Shelley is currently Founder and CEO of **Chaordix** (p.39) which crowdsources market insights for market research, brand loyalty and new product ideas. Brian was President and CEO of **Solium** (p.52) until 2006. Based in London, Brian now leads Solium's global expansion beyond North America.

Swype

WHAT THE COMPANY DID: Swype is a technology that allows you to input words into a touchscreen keyboard by “swyping” (i.e. sliding) a finger from letter to letter, lifting only between words. This makes typing very fast and has helped break the speed record for text input.

VITALS: Although the inventor and Co-Founder is from Alberta, Swype started with operations in Seattle in 2002, where the other co-founder and original angel investor were located. It raised a total of \$14 M dollars in investment capital, approximately half of which came from strategic investors **Samsung, Nokia, and NTT DOCOMO**. At time of sale, Swype was hugely popular on Android with over 100 million installations. The company had grown to over 80 employees by exit.

EXIT VALUE: **\$102.5 million** in cash by the world’s leading speech and imaging technology giant US-based **Nuance Communications** (NASDAQ: NUAN).

VALUE TO THE PURCHASER: Nuance has established itself as the leader in all forms of computer text input, including voice recognition. Text input on mobile phones and smartphones was another specific target for Nuance. Swype held key patents and had good market traction which made it attractive to Nuance.

FOUNDERS: **Randy Marsden** discovered the concept of Swype in 2001 in Edmonton and co-founded Swype with **Dr. Cliff Kushler** (the original inventor of T9 predictive text). Previously, Randy invented the onscreen keyboard that has been licensed by **Microsoft** and included in every copy of Windows sold since 1998. Randy is also CEO and Founder of Edmonton-based **Madentec**, which is a successful assistive technology company that specializes in adapted computer input. Randy also has **Cleankeys** (p.33), which makes the world’s easiest-to-clean keyboard as well as cleaning monitoring software for healthcare markets.

Quote from Randy Marsden about his Swype experience: *“When we started Swype over a decade ago, the appetite for this type of investment just didn’t exist in Alberta. Smartphones hadn’t even been invented yet, and so it took significant vision and faith to see where it could go. We found a home in Seattle. But I hope it’s now clear that good ideas can come from anywhere—especially Canada where we have all the ingredients we need for building technology success stories.”*

Telebackup

WHAT THE COMPANY DID: Telebackup developed leading-edge storage management software that automatically backed up data.

VITALS: Telebackup was founded 1995 in Calgary, became publicly traded, grew to 60 employees and was on target for \$10 million in revenue. **This exit made almost all 60 employees millionaires!** The company stayed in Calgary 1½ years before moving to the US and offering 70% of the employees a chance to relocate.

EXIT VALUE: **\$600 million** by the time the deal was signed with **Veritas Software** in 1999. Seven months earlier when the intention to purchase was made, the exit was for \$202 million in shares but, being in the dotcom era, Veritas shares increased to \$600 million at exit.

VALUE TO THE PURCHASER: Telebackup’s products fit Veritas’.

FOUNDERS: 3 Co-Founders: CEO **Dr. Byron Osing** who is co-Founder and CEO of **Calgary Scientific** (p.29) and **PureWeb** (p.56), board member **Irfhan Rajani** who co-founded **Zentra Computing** (p.99) with the third co-founder **Scott Wagner** who has now started **Raging Bull Cloud Services**.

TigrSoft

WHAT THE COMPANY DID: TigrSoft (formerly ShivaSoft) was a leader in the development and implementation of advanced planning and scheduling software systems. It was the first of its kind during the dotcom days.

VITALS: Founded in 1993 in Edmonton, TigrSoft had 45 employees at time of purchase. It became publicly traded in 1998. TigrSoft had installations all over the world.

EXIT VALUE: **\$8 million** by Edmonton-based **Matrikon** (TSE:MTK) (p.93) in 2001.

VALUE TO THE PURCHASER: Through the acquisition, Matrikon expanded its product line and IP. Matrikon purchased TigrSoft as a reverse takeover, meaning the acquisition made Matrikon into a publicly traded company.

FOUNDERS: TigrSoft’s CTO and co-Founder was **Srinivas (Vasu) Netrakanti** who is now the CEO and Founder of **Optessa** (p.61)

Tynt

WHAT THE COMPANY DID: The most popular way to share information you read online with friends is still copying and pasting content from websites. Tynt allowed content publishers to automatically place a URL link on the pasted content referencing its source. This simple action allowed Tynt to capture the interests and online interactions of over 1.2 billion users around the world! Based on this insight, publishers knew exactly what content their audience enjoyed and shared, and experienced increased traffic back to their website, ranking them higher in search engines. More importantly, Tynt gave publishers (and their advertisers) an accurate measure of consumer intent, and the insight to target new readers through targeted advertising with the right message.

VITALS: Founded in Calgary in 2007, Tynt grew to 17 employees and 650,000 clients including **Hearst**, **Conde Nast**, **Newscorp** and **Time Warner**. It raised \$11.9 million in investment from several VCs and AVAC (p.34)

EXIT VALUE: **Undisclosed amount** all-stock transaction to New York's **33Across** in January 2012 (after 5 years). This means Tynt's team has shares in 33Across and will be working together with them to increase the value of 33Across for a large future exit.

VALUE TO THE PURCHASER: 33Across' technology produced insights into what consumers think of brands on behalf of 350+ Fortune 1000 clients. Just like Google and Facebook, 33Across with Tynt, now has access to both the publisher and advertisers perspective on customer intent. However with Tynt, 33Across now has the world's largest social and interest graph, reaching over 1.25 billion users, compared to Google's 1 billion and Facebook's 800 million users.

FOUNDERS: Tynt was co-founded by CEO **Derek Ball** and COO **Dayton Foster**. Derek is now CEO and Co-Founder of **AtVenu** and Dayton is COO at **Advocus**. Previously, they were the founders of Calgary's **Sonic Mobility** (p.95) which sold in 2004. Tynt's Big Data Research Engineer, **Shawn Wang**, has become the Big Data Engineer and Co-Founder of **Granify** (p.40).

Veer

WHAT THE COMPANY DOES: Veer is an online website for digital stock photography, illustrations and type. Veer is the fourth largest stock photo company in the world (according to Corbis).

VITALS: Founded in Calgary in 2001, Veer grew to 170 employees with offices in 5 locations. Veer's Calgary operations moved to Seattle in Jan 2012. In 2006 Veer was recognized as one of Calgary's *Best Places to Work* by *Avenue Magazine*.

EXIT VALUE: **Undisclosed amount** by US-based **Corbis**, a company owned by **Bill Gates**, in 2007. Corbis was the world's second largest stock photography company in 2007.

VALUE TO THE PURCHASER: The acquisition of Veer helped Corbis increase its market penetration.

FOUNDER: Veer's CEO & Founder was **Brad Zumwalt** who owns the venture capital company **Zinc Ventures**. Previously, Brad had founded and grown **EyeWire** which was purchased by **Adobe Systems** for \$33 million.

EMPLOYEES: Veer employees have started Calgary-based **Minigroup** (p.51), mobile product development company **Decoder** and creative studio **Uppercut**.

WinTax (Intuit Canada)

WHAT THE COMPANY DID: Windows-based personal income tax preparation software for Canadians.

VITALS: Founded in Edmonton in 1992, WinTax had 2 employees, the founders, at exit.

EXIT VALUE: **undisclosed amount** by **Chipsoft** in 1993. A few hours later WinTax founder Bruce Johnson got a surprise call from **Scott Cook** of **Intuit** telling him Intuit had acquired Chipsoft. WinTax became **Intuit Canada** known for Quicken and QuickTax products.

VALUE TO THE PURCHASER: WinTax secured Intuit's foothold in the Canadian market.

FOUNDER: WinTax was co-founded by computer programmer **Bruce Johnson** and accountant **Chad Frederick**. Bruce's first business created music recording software which is how he met Chad, who was an amateur musician. Bruce became CEO of Intuit Canada and UK, growing the company to 700 people before he left in 2004. He is now an investor in local startups including **Baby Gourmet**. Quote from Bruce, "*My advice for startups or growing businesses is that it's all about working with amazing people. Look for smart people with passion and fire in their belly.*"

Successful Exits in Alberta



This list has been compiled by *Cool Companies: Alberta's Advanced Technologies 2013*.

Successful exit with Alberta roots	Exit Value	Start Date	Exit Date	Purchaser	Known founders with new Alberta companies (and/or past employees founding new Alberta companies)
Attassa	Undisclosed	2007	2011	YouSendIt	Co-Founder David Quail is starting a new venture in Edmonton and on the board of Startup Edmonton (p.83). Also Dwayne Mercredi and Rod Fitzsimmons Frey.
AudeSi Technologies (p.91)	\$62.5 million	1997	2000	Wind River Systems	Brian McKinney and Steve Maryka co-founded ICEsoft. Terry Sydoryk is COO at Evoco (p.73). Greg Kletke was the other Co-Founder.
BioWare (p.91)	\$860 million together with Pandemic Studios	1995	2008	Electronic Arts (EA)	Founders: Drs. Ray Muzyka & Greg Zeschuk retired from EA in 2012. Former employees with companies: Overhaul Games (p.26), Empire Avenue (p.21), Pyxwise (p.23).
Blackline GPS (p.91)	undisclosed (reverse takeover)	2004	2008	Picasso (related to Cody Slater of BW Technologies)	Patrick Rousseau has founded budtobud (p.15). Brendon Cook continues with Blackline GPS (p.46, 91)
BW Technologies (p.92)	\$260 million	1985	2004	First Technology	Founder Cody Slater and Barry Moore are growing Blackline GPS (p.46, 91).
CLINICARE	\$5 million Revenue near exit \$8.3 million	1984	2009	Canadian-based QHR Technology	CEO & President Dennis Niebergal has healthcare IT strategic consulting firm D. Niebergal & Associates
Control F1	undisclosed 50 employees at exit	1999	2005	CA	Brothers Veer and Vinay Gidwaney co-founded DailyFeats.com. Veer is primary investor in Neurosilicon.
DO2 Technologies	undisclosed	2000	2010	ADP	Roderick Munro founded Vendanges Investments. Previous startups Munro Engineering and Argus Technologies.
DocSpace	\$811 million 85 employees at exit	1997	2000	Critical Path	7 Co-Founders: Evan and Shane Chrapko have now founded and operate Himark bioGas and Growing Power Hairy Hill.
Dynastream/ANT+ Wireless (p.92)	\$36 million	1998	2006	Garmin	Kip Fyfe and Victoria Brilz have co-founded 4iiii Innovations (p.18). Jim Rooney remains President at Dynastream. Dr. Ken Fyfe is an engineering professor at University of Calgary.
Elluminate	Part of \$116 million deal	2000	2010	Blackboard	CEO Nashir Samanani and CTO Mike Mabey continue at Blackboard in Calgary. Both previously founded EraSoft.
EraSoft Technologies	\$8 million	1995	1998	ViaSoft	CEO Nashir Samanani and CTO Mike Mabey later co-founded Elluminate that was sold to Blackboard.
EyeWire	\$33 million Revenue at exit \$12 M	1985	1994	Adobe Systems	Brad Zumwalt who founded Veer (p.97) after.
Greenpoint Software (p.92)	undisclosed 30 employees at exit	1995	2000	Intuit	Cameron Peters started Trilogy Software in Calgary. Stephen King helps companies commercialize B2B technology.
Hyprotech (p.92)	\$106.1 million	1976	2002	Aspen Technology	Wayne Sim operates 3esi. Tony Vysniauskas has an investment firm West Mountain Capital. Dr. Bill Svrcek now has Virtual Materials Group. Craig Morris has company in Vancouver.
Net Safety	undisclosed 65 employees at exit	1995	2011	Emerson	Ken and Marlene Coffey. Founded and run Miro-Watt Control Devices in Calgary.
Investipedia (p.93)	\$42 million (Grew with Forbes)	1999	2010	ValueClick	Cory Janssen founded and runs Galt Capital and Janalta Interactive. Cory Wagner is founder of SportingCharts.com.
iStockPhoto	\$50 million	2000	2006	Getty Images	Founder Bruce Livingstone joined Getty Images.
Matrikon (p.93)	\$145 million 570 employees at exit Revenue \$82 million	1988	2010	Honeywell	Nizar Somji has founded Jaffer Group of Companies.
Merak Projects (p.93)	undisclosed 200 employees at exit	~1986	1999	Schlumberger	Co-founders Adrian Zissos, Don Jeffers, Andrew Orr. Former employees with companies: Arcurve, Aclaro, Chaordix p.39, Enersight, Solium p.52, Stormworks p.95, Visage.
Messaging Direct	\$70 million CDN 100 employees at exit	Early 1990	2001	Transaction Systems	Founder Grant Lakeman also had MONTAGE eIntegration at the same time.
MONTAGE eIntegration	\$90 million 400 employees at exit	1986	1999	Allstream	Grant and Elizabeth Lakeman, as well as other co-founders. Also had Messaging Direct at the same time.
NeuroArm (p.94)	\$10.7 million + future contracts	2006	2010	Winnipeg-based IMIRIS	Dr. Garnette Sutherland continues to develop new products at the University of Calgary.

NovAtel (p.94)	\$400 million (includes only 1 part)	1996	2007	Hexagon AB	Many employees that worked at NovAtel has started their own companies including Dynasteam (p.92), LTX Software (p.50), Microlynx (p.87), Murandi (p.88), SignalCraft (p.88).
RADSS (p.94)	undisclosed	1995	2003	IntelliTrans	Roy Masrani is now CEO & Founder of CodeExcellence (p.46).
Saville Systems (p.95)	\$700 million 1,400 employees at exit	1982	1999	ADC Telecommunications	Bruce Saville is a philanthropist living in Edmonton.
Shana (p.95)	undisclosed 80 employees at exit Revenue at exit \$10M	1985	2003	FileNet IBM later acquired FileNet	5 Co-Founders: Don Murphy and his brother John Murphy have new companies and are investors (p.95). Tim Senger, Dave Perman, and Wayne Malkin. Wayne has InsightFools.
Servidium	unknown 15 employees at exit	1999	2001	ThoughtWorks	Hongwen Zhang is Founder of Wedge Networks (p.57) Michael J. Sikorsky is Co-Founder of Robots & Pencils (p.27), angel investor at Tynt (p.97), Evoco (p.73) and CoolIT (p.54).
Sonic Mobility (p.95)	\$13 million	2000	2004	Avocent	Founders Derek Ball and Dayton Foster started Tynt (p.97)
SmartSynch	\$100 million	1998	2012	Itron	Smart grid technology. Moved to Mississippi (US).
Stormworks (p.95)	\$475,000 17 employees at exit	2000	2002	Solium (p.52)	Brian Craig is part of Solium (p.52). Shelley Kuipers is CEO and Founder of Chaordix (p.39). Together they are principals in Adventure Capital and investors in other Alberta companies.
StumbleUpon	\$75 million	2001	2007	eBay	Founders purchased it back and now live in US.
Swype (p.96)	\$102.5 million 80 employees at exit	2002	2011	Nuance Communications	Randy Marsden founded Cleankeys (p.33) in Edmonton.
Telebackup (p.96)	\$600 million 60 employees at exit	1995	1999	Veritas Software	Dr. Byron Osing is now CEO & Co-Founder of Calgary Scientific (p.29) and Pure Web (p.56). Co-Founder Scott Wagner did Zentra (p.99) and now Raging Bull Cloud.
TigrSoft (p.96)	\$8 million Reverse takeover	1993	2001	Matrikon (p.93)	CTO and co-Founder Srinivas (Vasu) Netrakanti is now the CEO and Founder of Optessa (p.61).
Tynt (p.97)	undisclosed VC input \$12 million	2007	2012	33Across	Derek Bell, Dayton Foster and team grow 33Across for the big exit. Previous co-founded Sonic Mobility (p.95)
Upside Software	\$22 million	2000	2012	SciQuest	Ashif Mawji starting up a new venture for charities
Veer (p.97)	undisclosed 170 employees at exit	2001	2007	Corbis	Brad Zumwat has venture capital firm Zinc Ventures. Previously, Brad had founded and exited EyeWire (p.98)
Voodoo Computers	undisclosed	1991	2006	Hewlett-Packard (HP)	Rahul Sood is CTO of HP's Global Voodoo Business Unit..
Widality	undisclosed	2006	2010	Wmode (p.53)	Terry Hughes is growing Wmode (p.53) in Calgary.
WINTAX (p.97)	undisclosed	1992	1993	Intuit	Bruce Johnson and Chad Frederick. Bruce headed Intuit Canada.
Zentra Computing (p.99)	undisclosed Revenue at exit \$50M 65 employees at exit	1991	2011	The Herjavec Group (owned by Robert Herjavec who was on the <i>Dragon's Den</i> TV Show)	Scott Wagner has startup Raging Bull Cloud Services. Previously Scott was Co-Founder at Telebackup (p.96).
Zi Corporation (p.99)	\$78 million	1987	2009	Nuance Communications	Michael Lobsinger now in real estate development.

Zentra Computing

WHAT THE COMPANY DID: Zentra Computing was a data storage and virtualization integrator.

VITALS: Zentra Computing was started in 1991 in Calgary. At the time of purchase it had \$50 million in revenue and a staff of 65 people in 5 offices across Canada.

EXIT VALUE: **Undisclosed amount.** It was purchased in 2011 by Toronto-based **The Herjavec Group** (owned by **Robert Herjavec** was on the TV Show *The Dragon's Den*).

VALUE TO THE PURCHASER: Zentra's offering complements that offered by its new owner.

FOUNDERS: Zentra Computing had 2 Co-Founders: CEO **Scott Wagner** started Calgary-based **Raging Bull Cloud Services** in 2012. Fresh out of the commerce program at the University of Calgary, Zentra Co-Founder **Irfhan Rajani** co-founded Calgary-based **Telebackup** (p.96) that sold for \$600 million.

Zi Corporation

WHAT THE COMPANY DID: Zi Corporation created predictive text input systems that made inputting Chinese language words into handheld devices very easy. Zi was embedded in the first text messaging cell phones in China and at one time was embedded on 90% of all phones sold in China.

VITALS: Founded in 1987 in Calgary, Zi was publicly traded on TSX and NASDAQ. At one time Zi was trading at a market cap of \$3.3 billion.

EXIT VALUE: **\$78 million** by **Nuance Communications** (NASDAQ: NUAN) in 2009.

VALUE TO THE PURCHASER: Nuance is a leading provider of speech and imaging solutions and Zi's products increased device usage which provided additional revenues and improved customer retention.

FOUNDERS: Zi's CEO and Co-Founder was **Michael Lobsinger** who is now CEO of Calgary-based **Lake Placid** doing real estate development.



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