Q WESLEY CLOVER QUARTERLY UPDATE

Information Security Strategies and Stakeholders in 2017

3 Alacrité France Teams Have a Security Focus

Turning to Public Service in a Time of Personal Security

Wesley Clover

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Security of All Forms — More Critical Than Ever

We live in a period of almost unbelievable progress, growth and global opportunities in the ICT tech sector. But at the same time, it is a period of unprecedented risk! Millions of personal data records being stolen from the databases of top-name firms on a frighteningly frequent basis. Political elections in the largest nations on earth being the target of suspected covert foreign influence. New data protection policies being enacted with accompanying fines for non-compliance of tens or even hundreds of millions of dollars. The issues go on and on.

Like so many generations have said, we live in interesting times indeed. And in such times, there are always opportunities to prosper. The Wesley Clover portfolio includes several companies focused on solutions to security challenges, and we dedicate much of this issue of *Q* to telling their stories. From advanced technologies being used by international security investigation firms, to an automated platform for keeping employees educated about the latest cybersecurity threats and ideal defenses, to new appliances for detecting malicious wireless signals and listening devices, and more. We clearly have interesting innovations being applied to these global challenges.

But these stories are not all of a cloak-and-dagger nature. This issue includes updates on the latest move by Mitel to invest further and faster in the industry transition to cloud-based communications platforms. There is news of another international award for InitLive, the maker of an innovative event management application. You will read how an employee at one of the portfolio firms, applied the company search and monitoring technology to create a public-service resource to help in the face of devastating forest fires. And there are updates on the ways the real estate portfolio and Wesley Clover Parks continue to delight guests and patrons.

So read on, enjoy it, and the bottom line, ensure your systems, networks and databases are highly secure! Thank you as always for your continued interest.

Kind Regards,
Terry Matthews, Chairman

Information Security Strategies and Stakeholders in 2017

Following InfoSec best practices makes companies safer

The global technology sector has seen no shortage of internet security threats and data breaches lately. Among many, there were DoS attacks on Twitter and Netflix, 'Peace' attacks on MySpace, LinkedIn and Tumblr, and what would come to be known as the biggest data breach in history (so far of course) for over 1 billion Yahoo users. And all signs suggest these attacks are not going to slow down any time soon, with data breaches on Docusign, Gmail and Verifone added to the list recently.

Online client profiles and databases present a land of opportunity for hackers, criminals and hacktivists motivated to commit fraud and steal/sell/hold for ransom this information. Most business leaders are aware that their company must assume responsibility for the protection of the information provided to them by their clients, and therefore also know that they must adopt a range of specific policies and practices to ensure full client confidence and information safety in an online and software-based environment.

Information Security Versus Cybersecurity

Information security (often referred to as 'InfoSec') is a broad term for 'data security', and refers to protecting the confidentiality, integrity and availability (CIA) of data, including physical data stored in filing cabinets, produced at printers, or transported for disposal by third-party firms, etc. InfoSec covers a broad range of assets.

Cybersecurity is about protecting electronic data specifically. This is critical to modern businesses whose databases are largely stored online, or 'in the cloud'. There are still physical components associated with cybersecurity, of course, including laptops, iPads, data centers, server rooms and other devices and infrastructure on which digital data is created, exchanged and kept.

Over the past decade, InfoSec and cybersecurity have fused together somewhat, as the needs for companies to ensure the delivery of both have grown. And in an age of ever-more serious and sophisticated security threats, combined with requisite and ever-evolving compliance regulations to keep pace, the solutions are far from simple.

"Data has become the crown jewels for an organization. Knowing what Data Assets a company has, where they reside, and who has access to them, is critical", says James Taylor, strategic development manager at Nuvias Group and a security industry specialist. "Whether this is due to compliance/legislation in the instance of Personal Identifiable Information (PII) or to protect Intellectual Property etc., securing data proactively is now essential."

So how exactly does a company go about minimizing the risks and preventing security breaches? In this article we examine a few of the best-practices that can help keep corporate data safer.

Update Software Regularly

The longer a software product has been on the market, the more opportunity there has been for someone to uncover its vulnerabilities or instabilities. This helps explain why the majority of malware attacks affect out-of-date programs. It also means that when you neglect to update your software, you are exposing your device and organization as a potential victim.

In May of this year, a ransomware outbreak occurred that targeted computers running an older version of the Microsoft Windows operating system. The attack encrypted personal data on those machines, and was accompanied by a demand of $300 in Bitcoin cryptocurrency as ransom for releasing the system. The attack, dubbed 'Wannacry', was unprecedented in scale and netted 200,000 victims in 150 countries. In response, Microsoft released a security update for older Windows OS and Windows Server editions, but much damage was already done.

Despite cases such as these, companies typically still don't update their software frequently enough. There are a variety of reasons for this — system updates can be expensive or labour intensive, they often require staff to relearn and readjust to program procedural changes, etc. But avoiding these short-term pains can lead to even more costly issues in the long run. Fortunately, the trend now is for vendors to make their software updates easier to embrace and less disruptive to use.
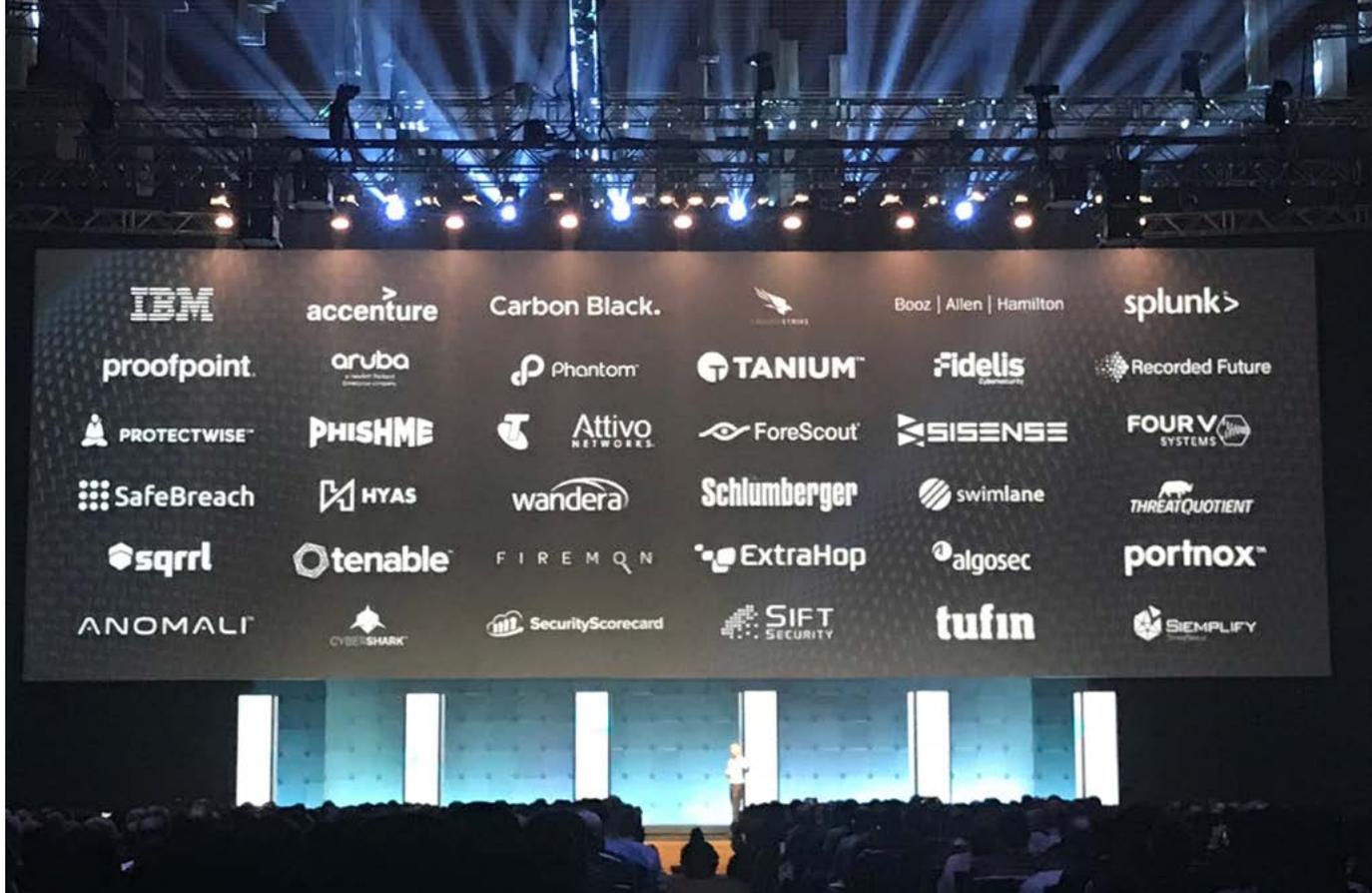
HYAS PLATFORM USED TO INVESTIGATE HIGH-PROFILE HACKS

The first company update comes from **HYAS Infosec**. HYAS is an Alacrity Canada-funded company producing technology at the forefront of information security. The HYAS Comox threat investigation platform provides one-of-a-kind threat intelligence and safety insights for global information security teams, and has become a key resource for detecting and attributing (identifying the 'bad guys') behind cyber attacks.

Recently, Comox data helped identify guilty parties in the well-publicized 2016 breach of the Democratic National Committee database in the United States. A number of security companies used Comox as part of conducting their investigations into that incident. Comox enabled expanded investigations by discovering information threads that would have been unavailable previously without international police assistance and court orders. Similarly, Comox was used to investigate the hack of a major international film studio, and provided attribution intelligence that was just not available anywhere else.

As more companies deal with significant attacks like these, rapid detection and culprit identification become more critical for damage containment and potential prosecution. Saving companies from losses

that can run into the hundreds of millions of dollars is no small benefit offered by HYAS and Comox.

HYAS Named Start-Up of the Year and Launch Partner for Palo Alto Networks

In other news, this Quarter saw HYAS named as the top start-up at the VIATEC annual technology awards. Given the success of their new platform, it's easy to see why. As noted, the market response has been very positive, from financial institutions, Fortune 500 companies and major security vendors.

This demand has driven compound recurring revenues up more than 50% month-over-month for the fiscal year so far. And the momentum has also caught the attention of senior executives at Palo Alto Networks. At the recent Palo Alto global user conference held in Vancouver, Canada, HYAS was invited to be part of a select group of launch partners for the advanced new Palo Alto 'Network Application Framework' launching in 2018. Being part of this new framework enables plug-and-play access to the Comox threat intelligence platform for more than 30,000 Palo Alto Network customers.

A big step for HYAS and Comox. **hyas.com** ◉

Hut Six: Teaching a Man to Fish, Securely

Alacrity UK-affiliate **Hut Six** is also focused on InfoSec/Cybersecurity. In this case, the team is tackling the challenge of training others to improve their own defenses and loss prevention. The company has created an Information Security Awareness Training (ISAT) system that uses the software-as-a-service (SaaS) model to deliver customized security education to client employees. This effective Learning Management System (LMS) includes real-time metrics on the progress of each student, according to criteria dictated by the client.

The timing for such a SaaS platform is ideal. With the European General Data Protection Regulations (GDPR) compliance deadline fast approaching (May, 2018), organizations are under increasing pressure to ensure an effective means of information security. An easy-to-use awareness and training platform that will better-equip individuals to recognize and defeat these electronic threats, both at work and at home, can be a large component of that security.

Fines for non-compliance with the GDPR have been set at 4% of company revenue, or €20 Million, whichever is more! While that level of penalty is steep indeed, the sense of urgency and seriousness around the initiative cannot be understated. As noted earlier, the last Quarter saw a rise in coordinated, high-profile, debilitating cyber attacks around the globe, ranging from covert spyware intrusions into corporate databases

including those of HBO and Sony, to devastating ransomware attacks on critical infrastructure such as the 'Wannacry' crypto-worm. The frequency of sophisticated phishing, social engineering and old-school Denial-of-Service (DoS) attacks is only increasing. And while the underlying execution and propagation of much of this 'malware' is extremely complicated, the mechanism by which it enters the target networks and systems is very basic. Human error!

90% of cyber attacks are the result of human error, and the majority of organizations unfortunately are doing almost nothing about it. Simply making company employees aware of cyber threats, for example, and of how to identify them and help mitigate their damaging effects, can prove as effective or more so than many advanced technical solutions.

This backdrop made the latest Quarter an increasingly busy one for Hut Six. The evolution of the ISAT product resulted in a new partnership and successful deployment with IQE plc, as well as an official engagement with the Celtic Manor Resort Group. These two clients bring the total ISAT user community up to 1,567 users in 7 countries.

And customer feedback continues to be very positive. IQE in particular has had excellent 'buy-in' at the board level, citing testimonials from managers across their US and UK sites that spoke to a much more "switched on" internal security culture.

Looking forward, business development is continuing in parallel with further product evolution. The pending release of an integrated 'phishing simulator' is next on a roadmap to provide an increasingly full-featured 'Train, Test, Track' solution. The module will augment the 'Test' capabilities of the product, helping better assess the effectiveness of a given security awareness campaign and provide direction to clients for continued education focus.

The product is also approaching a point where it can be packaged into a more simple, 'off-the-shelf' variant, for adoption by smaller clients who may not need the customization offered to larger organizations. This streamlined variant should reduce adoption times for some customers significantly. Which sounds encouraging. *We look forward to another update in the next issue of Q.* **hutsix.io** ◉
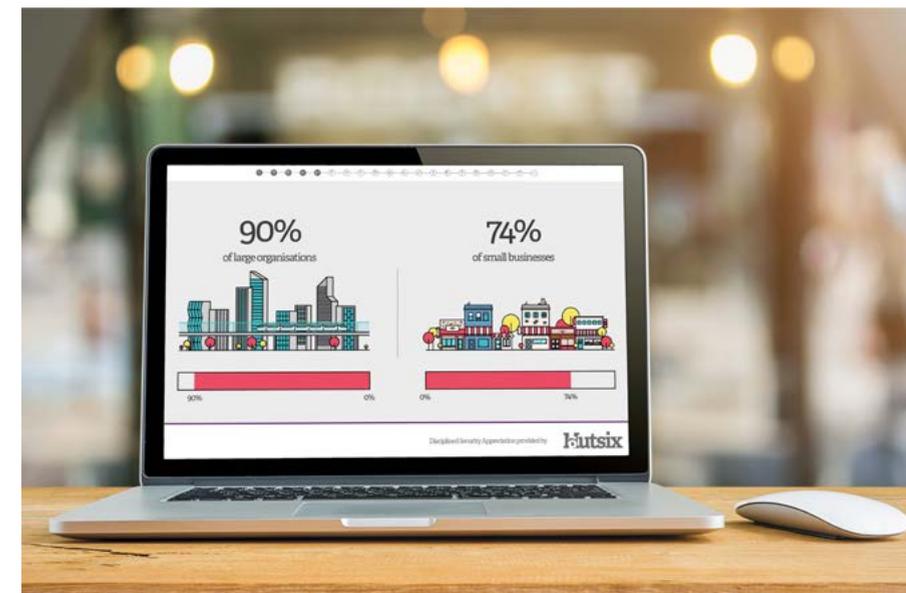
THREE ALACRITÉ FRANCE TEAMS HAVE A SECURITY FOCUS

alacrité France

Management at Wesley Clover Incubator, **Alacrité France**, has been busy. Active social and event marketing has created press coverage, social media followers, and importantly, a large group of applicants to join the local entrepreneurial 'adventure'.

And from that strong response, three start-up teams are now in place, each with a focus on some aspect of modern digital 'security'.

The first team is working on a ready-to-use application that integrates video surveillance cameras with networked Point of Sale (POS), lighting, door, alarm and other infrastructure to provide small business owners with more coordinated and rapid response to unwanted events on their premises. The project is being conducted in concert with

Wesley Clover affiliate and security analytics company, Solink, highlighting another key benefit of membership in the Alacrity global ecosystem of start-up companies and technologies.

The second team is working on a partner-led project to create a secure biometric authentication API and application that uses vocal signatures and speech recognition to control user access to fixed and mobile terminals in

logistics, industrial, airport or support desk environments. The third team is refining their business plan now to embrace one of two application initiatives: anti-fraud detection on telephony systems, or an IoT security solution for low-range WAN infrastructure.

We look forward to solid progress for each of these teams, and will provide another update in the next issue of Q. **alacrite.fr** ⊙

Wesley Clover Parks Continues to Grow Its Fan Base

Not-for-profit hub Wesley Clover Parks enjoyed another strong Quarter of community programing, competition and entertainment. Highlights from across the Parks included the following:

CAMP
- In May, the Campground hosted a public ceremony to celebrate the 50th anniversary of camping in the Capital. Guests attended from all key stakeholders, including the National Capital Commission, the City of Ottawa, the Wesley Clover Foundation and Wesley Clover Parks sister and partner organizations. The milestone was marked by the unveiling of a commemorative plaque

and the planting of a native Canadian maple tree.

- The rainy summer did not put a damper on the spirits of most campers, as the Campground continued to be fully booked for weekends and holidays.

FARM
Earlier this Quarter, guests would have seen the Canada 150 commemorative tulips in full bloom. Why is that noteworthy? As part of the celebrations surrounding the 150th birthday of the nation, more than 1,000 special tulips were planted on site, and the colourful display will be a pleasant reminder every early summer for many years to come.

GATHER
In support of the Boys and Girls Club of Ottawa, the annual Color Vibe 5K run took place in June. The event drew a crowd of

WESLEY CLOVER PARKS
PARCS · 50 YEARS/ANS OF/DE CAMPING · PARKS

wesleycloverparks.com

more than 1,000 participants this year, all of whom ran a challenging but enjoyable five-kilometer course through the Parks grounds. While getting blasted with colourful powder along the way. Congratulations to all who came out to join in the community spirit and support a great local cause.

LEARN
Each week, the Forest and Nature School summer camp was filled with registered young guests who participated in outdoor activities such as exploring the trails, building forts and creating clay sculptures. These very popular camps run every summer from early July until late August.

PLAY
While the aforementioned summer rains definitely delayed the unveiling, the four new sports fields at the Parks were successfully fertilized and mowed repeatedly, and are now in top shape and hosting a variety of sports including soccer, flag football and ultimate Frisbee.

RIDE
- June saw Wesley Clover Parks host the 5th annual Ottawa Horse Day, a day dedicated to giving local families and people of all ages the chance to observe and learn more about equestrian sport, and to get up close to the animals we love. An estimated 2,500 attendees took advantage of the opportunity, and the popularity of the event continues to build each season.

- The Parks also hosted the first Trillium Equestrian Show of the season and had a record-breaking number of entries for both the Eastern Ontario Trillium Equestrian Circuit and the Ottawa Valley Primary Equestrian Show Circuit. The Wesley Clover Parks Equestrian Team continues to be among the top competitors, we might add, at both the local and national level shows.

- And as previewed in earlier issues of Q, the much-anticipated 2017 Ottawa

Equestrian Tournaments did take place over three weeks this summer, to terrific reviews from competitors and spectators. A new Ottawa Welcome competition was added to the start of the competitions, and the back-to-back Ottawa National and Ottawa International CSI3 events followed. Over the three weeks, the Parks hosted a record number of athletes and welcomed more spectators than ever before. Special guest Amber Marshall from the CBC television show Heartland was there as well, helping host the Celebration of the Horse activities, providing emcee services for weekend competition, and generally spending time with the thousands of equestrian fans who attended the National event. ⊙

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ONBOARDING RAMPS UP AT MARTELLO AS AWARENESS CONTINUES TO GROW

Boosted by exposure to top channel partners and customers at the Mitel Elite Experience event this Quarter, device activations on **Martello** Unified Communications (UC) network performance management SaaS have grown at a rapid pace in the first six months of 2017. Private-labelled Mitel Performance Analytics (MPA) software helps channel partners, service providers and enterprises deliver top-grade UC network service quality by coupling deep insight into Mitel voice quality performance with support for third-party vendor equipment such as routers and servers.

Now deployed in more than 5,000 networks worldwide, MPA is a key competitive differentiator for Mitel channel partners. Mitel partner Fujitsu commented recently, "MPA is an essential support tool that allows us to do more with fewer resources. Text-based alerts allow us to respond to issues before they become bigger problems for our customers, and help avoid many calls to the help desk". And Martello continues to add more value with each new release of the software. The upcoming MPA 2.2 will feature new tools such as network diagrams and voice quality cause-correlation graphs (designed to shorten problem-to-resolution time), as well as support for new Mitel devices.

Martello also continues to build its community and foster brand awareness locally, hosting an Open House and Demo Day and participating as a founding member of the newly formed Canadian chapter of the Institute of Industry Analysts Relations (IIAR). And the ongoing company support for the community causes chosen by employees through the unique Employee-Directed Gift Program remains a popular internal initiative. **martellotech.com** ⊙

Martello Sales Director Pardeep Koonar presents an MPA session at Mitel Elite Experience 2017.

FILEFACETS EXPECTING CONTINUED GROWTH

Data analytics, content migration and privacy compliance company **FileFacets** continued to strengthen its relationships across multiple verticals and geographies this Quarter. In North America, the company secured a strategic partnership with <u>NextLaw Labs</u>, an organization dedicated to the sales and support of new technologies that improve law practices around the world. FileFacets signed a similar agreement during the Quarter with <u>Ricoh Canada</u>, adding the FileFacets software to the suite of products that Ricoh Canada markets to Fortune 500 companies.

The FileFacets platform makes it easy for businesses to locate, process and move unstructured content as required, and ensure privacy compliance in the process.

These capabilities are making the software particularly attractive in Europe, where as noted earlier, the pending new General Data Protection Regulations (GDPR) are putting pressure on European and global organizations operating there to become compliant by May 25, 2018. While companies will have had more than two years to prepare for that date since the initial GDPR announcement, there is an increasing sense of urgency tied to meeting the new standards.

The regulations are designed to protect EU citizens when they interact with businesses and agencies that request "personal data" to complete transactions. As stated, penalties for non-compliance with these regulations are significant. The FileFacets platform locates Personally Identifiable Information (PII) across networked and cloud-based drives and enterprise content management systems, as well as email servers, desktop and laptop devices, and enables clients to secure, move, delete or take other action(s) to protect or destroy the sensitive content.

These requirements are expected to create a positive demand on the team at FileFacets. *We will check back with them next Quarter to see the progress.* **filefacets.com** ⊙

Information Security Strategies and Stakeholders

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Enable Two-Factor Authentication

Two-Factor Authentication (TFA, also called "multi-step verification") is an authentication mechanism that double-checks your identity before allowing access to a given device or system. It dictates that two steps of authorization (e.g., biometric plus password, password plus password, etc.) be successfully completed before allowing a user to proceed. It can be pre-installed as an option on your laptop, smartphone or e-mail system, or be installed independently as a third-party application. Not only does TFA do a better job of preventing the wrong parties from accessing protected systems, networks or data, but it also distinguishes between authorized users of shared accounts, improving access control in such environments.

Single authentication techniques such as passwords alone are relatively simple for well-equipped cyber attackers to target and overcome. Tests show that as much as <u>90% of the employee passwords</u> used can be cracked by such attackers within 6 hours. Adding the second layer of authentication provided by TFA reduces such risks dramatically. And while TFA is not a fool-proof fix for all security breaches, reducing the chances of criminal attacks can be well worth it. Further research suggests the average cost to a small business to fix all issues related to a data breach is <u>currently around $200,000</u>. The increased security can also create cost savings up front. Companies such as <u>MailChimp</u>, for example, are such fans of TFA that they offer customers who deploy it a discount on their own services. ➤
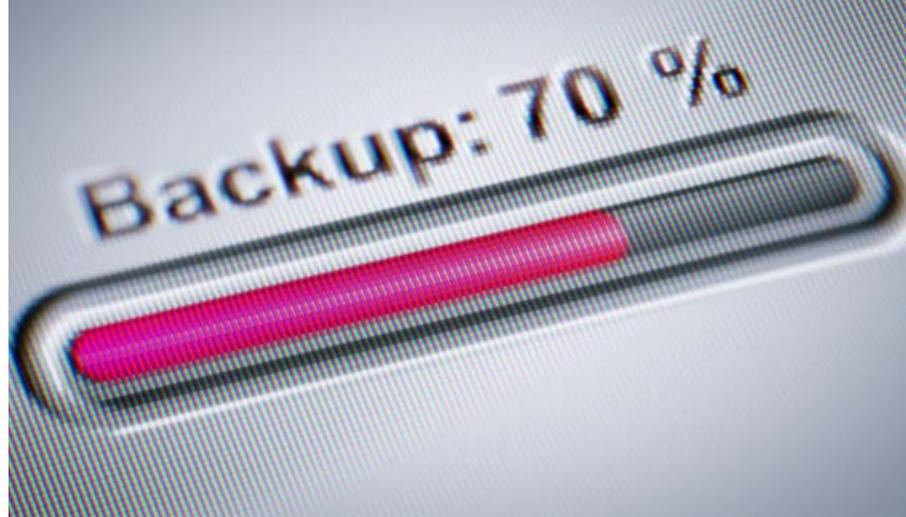
Monitor and Manage Third-Party Access Diligently

In this age of the Internet, opportunities to leverage highly-skilled, remote teams abound. Providing remote system and data access to suppliers, business partners, teleworkers, contract employees, customers and others enables them to work together with your company without being physically present. The ability to exchange information of all sorts in this trusted, interconnected scenario, however, can prove too hard to resist for those with bad intentions.

One example of the risks created comes from 2005, when four Citibank account holders in New York were defrauded of nearly $350,000 by a group of call center staff based in Pune, India. The staff were employed by a software and services company to which Citibank had outsourced a project, and by virtue of the third-party system access they were granted, they managed to procure and exploit the personal data, PINs and account numbers of the unfortunate Citibank customers.

To avoid opening such doors for hackers and malware, many companies use temporary passwords whenever they provide remote system access. This limits access to essential components of a particular project, and provides a greater degree of traceability in the case of an undesirable event. Also logging all remote team actions makes it easier to detect unusual activity sooner, and assists in conducting any investigations that become necessary.

Back-Up Your Data

Another basic security measure that doesn't require an IT team but is exercised far less than it should be, is that of backing-up all corporate data on a regular basis. The incidents of attack by ransomware, the form of malware that locks company files with powerful encryption until funds (often in cryptocurrency) are paid to release them, soared in 2016. Kaspersky Lab tracked an 11-fold increase in such incidents between Q1 and Q3 of last year, and by the end of Q3, a business was being attacked by ransomware every 40 seconds!

Failure to comply with the illicit demands resulted in critical data at many of those companies being locked out of their hands permanently. Alternatively, the University of Calgary, for example, was unwilling to suffer such a set-back, and paid a $20,000 Bitcoin ransom to a hacker in order to have them release control of the university computer systems they had seized. Having a full, recent back-up of the corporate data on those systems, stored in a secure, remote location, could have prevented that financial loss.

Best practices for implementing a back-up procedure include ensuring the task is divided among multiple employees (to avoid insider threats), and implementing a frequent back-up routine (to minimize the delta of data that would be lost in the event of an attack). These and other good suggestions can be found in this guide to back-up options provided by the US Computer Emergency Readiness Team.

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ECHOSEC TURNS FROM CLIENT TO PUBLIC AWARENESS IN A TIME OF NEED

Social media monitoring and searching software from **Echosec** enables customers to monitor consumer messages across a breadth of feeds simultaneously, and combine unique geo-tech location data in order to 'see' what is happening on these channels, by location and in real-time.

Combining this data into a unique interface allows businesses to react to the sentiments — good or bad — that their customers are sharing about them online. They can leverage positive comments for competitive gain, and minimize the damage from negative feelings by taking corrective action faster. They can even take things a step further and exploit any mistakes made by competitors to lure away their dissatisfied consumers.

This Quarter, the benefits of Echosec technology were put to work addressing a different type of challenge. With the ravaging forest fire season that continues to take place this summer in western Canada where the company is based, employee Neil Johnston was compelled to do something to help. Using the features of the Echosec software, he created an **interactive map** that became a one-stop shop for all wildfire information across the province of British Columbia.

According to Neil, the motive for his map was the struggle he had making real-time sense of all the information coming from a variety of sources on the different fires and road closures taking effect. He realized he could and should synthesize all this data, including fire location information, evacuation orders and alerts, highway closures, crowd-sourced tweets and more, into one publicly available interface.

"I grew up in Soda Creek, B.C., where my parents still live", said Neil, "and I had just checked the latest information available on the **BC Emergency Management** website, and saw that my family members were under an evacuation order. My partner and I began searching for routes that could let us navigate my Mom and Dad to the safety of the coast [and] quickly discovered it was very difficult to correlate the different information sources - active wild fires on one map, road closures on another, traffic status on another, etcetera."

Johnston also had the good idea to listen to the radio and get a sense of the kinds of questions listeners were seeking answers to. That helped him refine the map further. "Echosec provided me with access to our ArcGIS Online account and I rebuilt the map to include that technology," he said. "One of the biggest requests turned out to be for wind direction, so I added that. It was not perfect, but I hope it helped. I also had the idea, at about 5:30 one morning, to add in BC highway camera feeds to show traffic status in real-time, and by 9:00 I had that integrated too!"

Having family in a rural community made Neil very aware of the challenges they might have of finding and reacting to the right information at the right time. Having technology such as that produced by his company Echosec provided a real opportunity to help. He added, "I think the biggest problem we are now running into is that, while more and more of this information is pushed online, a lot of rural residents still don't have access to it. This means the onus remains on those of us who do, to help keep these people in the know, by cell and landline, as these types of situations develop and evolve."

Well done so far Neil. We look forward to another update on this initiative and the progress of the company in the next issue of Q. **echosec.net**
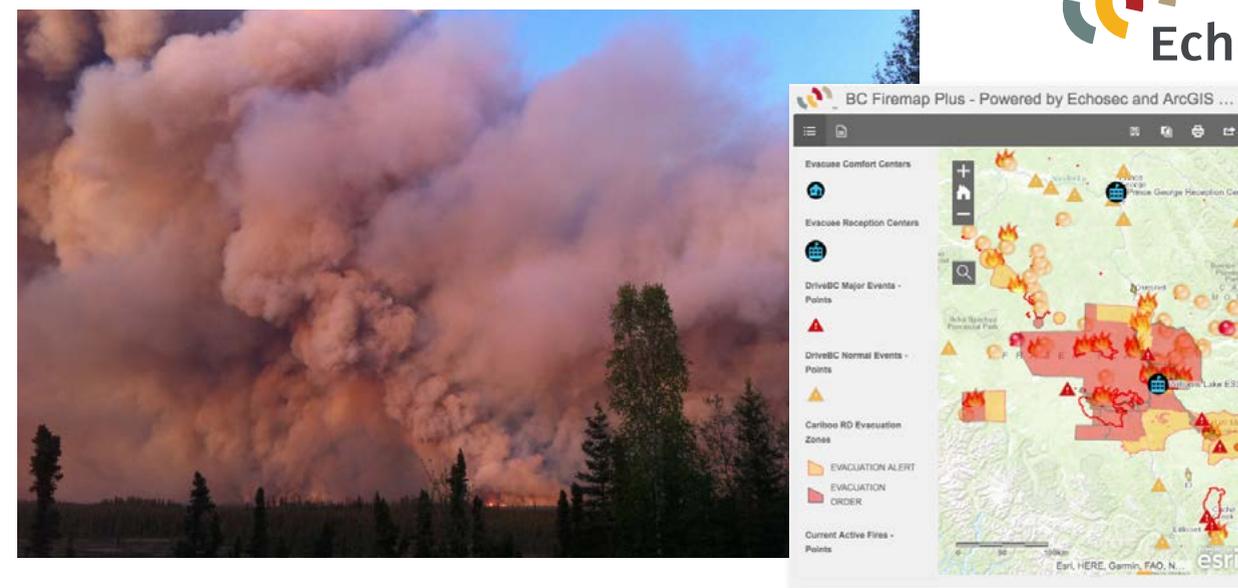
InitLive Software Shines at Omega Dubai Desert Classic, Winning Prestigious MEES Award for "Best Use of Technology"

Running a golf tournament of any size is challenging at the best of times. Managing the scheduling, activities and communications with staff and volunteers can be time consuming and unreliable, particularly at a major event, and particularly given the manual, unautomated processes typically involved. That is why Rhys James, Chief Marshal, and Boyd Edmondson, Marshal Director, selected **InitLive** software to address these issues at the 2017 Omega Dubai Desert Classic golf tournament, a major stop on the European golf tour.

And the organizers could not have been more happy with their decision. They were able to create the schedules for staff and volunteers well in advance, on-line, and have the full team sign necessary waivers, provide contact and other details, outline their qualifications for various tasks, identify their daily availability and sign up for, into and out of resultant shifts, all electronically and in most cases, directly from the application downloaded to their smartphones. App-based automatic emails with schedule information and shift reminders/alerts helped address the perpetual issue of no-show volunteers. As team members arrived at the site, they were checked into the system, and management was alerted automatically to any gaps in staffing so that adjustments could be made in real-time.

Typical of the world of event planners, during both the Women's and the Men's events themselves, weather and other uncontrollable factors did introduce delays to the activities, and in one case, even a suspension of play. This meant shifts had to be updated rapidly, and team members notified just as quickly. Thanks to the features of the InitLive software, this literally took only minutes to accomplish, and everyone was updated through their phone app and email.

By the close of the event, Boyd Edmondson had the following clearly-impressed comments to share regarding the InitLive system: "Using InitLive for our event was outstanding. The software has taken the Volunteer Management Programme used at the Omega Dubai Desert Classic to a new level, with effective functionality and unprecedented simplicity. It reduced my scheduling times by 75%. And the integrated communication facility was easily the most used feature, both on the app and on the web. The InitLive system was a massive success."

Shortly afterwards, the use of InitLive at the Desert Classic was submitted to the Middle East Event Show 2017 awards committee for consideration in the category of "Best Use of Technology at an Event". And the team came away victorious. A very happy customer and strong third-party validation as well. Not a bad event, we would suggest. Congratulations to all and continued success. *Q will stay tuned for more.* **initlive.com** ⊙

InitLive President Greg Vanclief accepting award for Omega Dubai Desert Classic.

AN EVENTFUL TIME AT THE CELTIC MANOR RESORT

As is typical during the summer season, the **Celtic Manor Resort** was kept very busy during the Quarter with a series of popular events. In June, the Resort welcomed guests to Motorpoint Polo at the Manor — the fifth staging of the sporting and social event that has become a fixture on the calendar.

More than a thousand people were entertained in the hospitality areas, many enjoying a three-course lunch in a large marquee pavilion, and others enjoying gourmet polo picnics in the surrounding private pods.

An additional 2,000 guests opted for general admission to the Polo Village, providing for a vibrant gathering and showing that polo can definitely be an occasion for enjoyment by everyone. These were record numbers for attendance, and the warm sunshine added to what was described by one guest as "the best polo event to date for the Celtic Manor".

The weather cooperated again in early July when the Resort once more staged the Celebrity Cup golf competition. Sponsored by Bulmers, this event too has continued to grow in popularity and has become a

These were record numbers for attendance, and the warm sunshine added to what was described by one guest as "the best polo event to date for the Celtic Manor".

favourite of the celebrities who participate and the spectators who come out to watch them.

Many of the players, such as Wales captain Rob Brydon, have been involved since the event began four years ago, but fresh faces are also joining in each year, such as James Nesbitt who made his debut this year for Ireland. Unfortunately, returning soccer superstar Gareth Bale could not inspire the home nation Wales to a repeat of the victory secured during his last appearance in 2015. Mike Tindall and the England team became worthy champions this year, beating out Scotland in the final. More importantly, the event raised more than £40,000 for the Marie Keating Foundation, the cancer charity dedicated to the memory of the mother of Ronan Keating.

Between these two established events, the Resort also held a Building Brilliance Gala Dinner to celebrate the ground-breaking for construction of the new International Convention Centre (ICC) Wales. First Minister of Wales Carwyn Jones joined Sir Terry Matthews and other dignitaries to formally launch the exciting project which will have a major impact for the whole of Wales when it opens in 2019.

These events added to a calendar that included welcoming literally thousands of families on summer vacation stays. The range of activities for guests to take advantage of grows continually, and so does the popularity of the Resort as a destination for work and for play.

We look forward to another update next Quarter. **celtic-manor.com** ⊙

ThinkRF Partners with Wireless Analysis Industry Leader Keysight

The Ottawa-based company **ThinkRF** is a leader in software-defined spectrum analysis systems for detecting, monitoring and analyzing complex waveforms in the rapidly evolving wireless landscape. Security applications and environments are a growing part of this landscape. Built on patented technologies, ThinkRF products offer significant versatility, performance and feature improvements to support signal intelligence (SIGINT), technical surveillance counter measures (TSCM), regulatory monitoring and emerging 5G networking applications.

This Quarter the company announced a strategic collaboration with industry leader Keysight Technologies (previously Agilent and HP). The compact ThinkRF R5500 Real-Time Spectrum Analyzer now offers direct integration with highly-respected Keysight 89600 VSA software. The combined solution provides government agencies, aerospace, defense, security and other firms with the most advanced and consistent signal measurements across multiple application and deployment scenarios, including SIGINT, wireless intrusion detection and regulatory compliance monitoring.

Key features of the integration include:
- Portable, remote, distributed deployment for wireless spectrum monitoring in complex and difficult environments
- Robust, advanced, consistent analysis of more than 75 wireless signal standards and modulation types
- Multi-measurement capabilities to configure, execute and display multiple measurements simultaneously
- Open, flexible, cost-effective spectrum monitoring and analysis in a variety of scenarios.

Also during the Quarter, the company announced the opening of a new US office in Washington, DC, and the appointment of a US Sales Director to better serve the US market. New distributors were also signed on in Singapore, South Korea and France, as the company works to increase market and geographic activities.

Wireless communications continue to impact every aspect of daily life. The ability to detect, monitor and analyze this wireless spectrum is ever-more important. With the achievements above now in place, ThinkRF is positioned for further growth steps in the coming Quarter and beyond. *We look forward to sharing those updates in future issues of Q.* **thinkRF** ⊙

CounterPath – Not Just Another Pretty Interface

Through eight generations of iPhones and seven generations of the Android mobile operating system (so far!), **CounterPath** has kept pace with industry-leading unified communications interfaces. This past Quarter, the company released the subscription-based Bria Mobile for Android and iOS, in support of yet newer generations of mobile devices.

Bria Mobile became available in the iTunes and Google Play stores in early August, and marries a services platform together with the softphone app. Features include Bria Push, which eliminates mobile battery consumption when the app is running in the background, and a 99-cent-per-month subscription offering that provides ongoing softphone updates as they become available.

In other developments this Quarter, the Bria 5 Desktop client was also launched. Leveraging more than 10 years of softphone experience, Bria 5 introduced Microsoft Office integration which enables users to make voice and video calls over IP, determine the availability of contacts, and send messages all from within MS Outlook. Bria 5 also introduced support for 1080p video, the new standard for more crisp and clear video images in softphone meetings, conferences and collaboration activities.

Further updates from CounterPath will be provided in future issues of Q. **counterpath.com** ⊙

L-SPARK Team Enjoy a Busy and Successful Summer

SaaS Accelerator **L-SPARK** held one of its premiere events during the Quarter — the third annual Canadian Cottage Pitchfest. The invitation-only event drew more than 200 investors, corporate partners and other key participants to join Terry Mathews and L-SPARK in Gananoque and the Thousand Islands, for a unique day of networking and funding pitches from each of the current cohort of L-SPARK companies.

The day began with a river boat cruise through some of the 1000 Islands, destined for the Thousand Islands Playhouse theatre in the town of Gananoque, where the cohort primes presented to an international community of angel and venture capital investors. Guests included partners from Celtic House Venture Partners, Information Venture Partners, BDC, MaRS Investment Accelerator Fund, Maple Leaf Angels, Capital Angels and others. Sean Stanleigh, Managing Editor of Globe Edge at the Globe & Mail, provided MC services for the pitch sessions.

Activity on social media during the Pitchfest was impressive, with #cottagepitch reaching the third-highest Twitter subject trend across Canada that day. The L-SPARK team has been tracking the results of the investment opportunities created during the event, and several engagements are continuing to evolve.

In other news from the Quarter, the SaaS Showcase OTT provided another networking and showcase opportunity for the portfolio companies. The event created exposure to more than 375 registrants from the Ottawa startup and investment community.

And toward the end of the Quarter, applications for the next Accelerator program closed, with an impressive funnel of more than 300 companies expressing an initial level of interest! That funnel is now being refined down to a much more manageable group of target candidates who will then be mentored for the all-important pitch to an impressive, VC-filled selection committee. The prize for the fortunate eight to ten start-ups will be a 9-month partnership with L-SPARK beginning this fall.

Well done once again, L-SPARK team! The brand and the program appeal continue to climb along with the successes. *We look forward to the next update …* **l-spark.com** ⊙

Activity on social media during the Pitchfest was impressive, with #cottagepitch reaching the third-highest Twitter subject trend across Canada that day.

Information Security Strategies and Stakeholders in 2017 (continued from Page 10)

Installing firewalls and using secure physical infrastructure clearly are important measures to elevate information security. However, having access to the services of a skilled security consultant or team is the best approach for most companies.

Be Wary of Phishing

Ironically, it is often unaware employees that expose a company and its data to malicious threats. In a technique known as phishing, criminals use seemingly legitimate emails or phone calls to trick employees into providing unintended access points into corporate systems and databases where they can then inflict their damage. The prevalence of this type of attack is increasing dramatically. Barkly determined that incidents of phishing increased 250% in Q1 of 2016 alone, and estimated that almost 30% of malicious emails actually do get opened by employees! Not surprisingly, these messages have now become the number-one delivery vehicle for ransomware and other malware.

In one extreme example, Waltar Stephan, CEO of airplane parts manufacturer FACC, fell for an email scam in 2016 that cost his company more than $56 Million. Criminals posing as another senior executive in the same company sent a phishing email to Mr. Stephan asking him to organize a secret transaction for business development purposes. Mr. Stephan fell for the scam. While FACC was able to regain some of what was taken in the end, the majority of the funds disappeared into accounts in Slovakia and Asia. The loss removed considerable value from the company share price, and removed poor Mr. Stephan from his office after 17 years in the position of CEO.

To avoid the fate of Mr. Stephan, business leaders need to ensure that company email systems have proper spam filters, and that employees are educated on the latest phishing techniques, as well as on what to do in the event they encounter one.

What Else Can be Done to Stay Secure?

Installing firewalls and using secure physical infrastructure clearly are important measures to elevate information security. However, having access to the services of a skilled security consultant or team is the best approach for most companies. And many are heeding that advice. To put that into context, the Cybersecurity Ventures Market Report shows that spending on such assistance is expected to exceed $1 trillion over the next five years!

In terms of other resources to consider — additional tools, programs and vendors that can help protect systems, networks and data — the following points are worth noting.

root9B is a cybersecurity consulting and operational support firm that provides remote defense, a manned InfoSec solution, training, cyber-policy assessment and malware analysis. root9B has been ranked first on the Cybersecurity 500 list and is considered a top player in the information security arena.

FileFacets is an enterprise content management system that enables clients to locate, process and move unstructured content from multiple sources across your whole enterprise. The company is vocal about the pending General Data Protection Regulation (GDPR) and Information Governance (IG) compliance certifications and is committed to helping clients keep sensitive data secure.

Echosec is a social media search and discovery platform that enables security professionals to monitor and act on events in real-time. Trusted by Fortune 500 companies, Echosec is becoming a key tool for security and intelligence professionals.

Blackberry has held claim to the most secure mobile device platform for some time, helping mobilize leading companies and governments around the world. While the firm is moving ever further from the handset business, it retains deep domain knowledge and services for the secure management of applications, files, voice and data messaging, and mass-crisis communications.

Hut Six addresses what can be called the 'human side of information security'. The company promotes security as a responsibility for everyone (not just the IT team), and offers a cloud-based education platform for training employees about security. The Hut Six management dashboard provides visibility into department and employee security preparedness, which some suggest that alone can help prevent as much as 95% of security breaches.

Though mostly known for audit and tax consulting services, PwC also provides a set of cybersecurity consulting services. These services are packaged into four bundles that take the broader view of cybersecurity and privacy as both protectors and enablers of a business: strategy and transformation, privacy and consumer protection, incident and threat management, implementation and operations. These offerings helped PwC rank number 32 on the Cybersecurity 500 list.

HYAS Infosec is a skilled security firm focused on the next generation of information protection technologies for small- to medium-sized businesses. HYAS is an established partner of law enforcement agencies in matters of international computer crime.

Plurilock is a security compliance solution that restricts 3rd-party access to systems, networks and applications by monitoring and analyzing how users interact with their keyboards. The software detects anomalies from established, authorized behaviours in real-time. Artificial Intelligence (AI) technology is used to build profiles of each authorized user according to the way they type (speed, cadence, etc.), and these profiles provide the basis for access control.

Certn is a risk management tool that enables property managers, financial institutions, insurance firms and others to establish a better understanding of the risks associated with the individuals applying for their services. It is very difficult for these firms to assess with the desired degree of certainty and consistency the full character of applicants. Certn has created an AI-based intelligent screening platform that produces comprehensive applicant profiles to help address this challenge.

An Ounce of Prevention is Worth a Pound of Response

In this climate of increasing risks and rapid change, the quest to secure systems and data effectively can seem unending and daunting. Continued development of IoT devices and machine learning technologies is predicted to make the challenge worse by opening up opportunities for ever more sophisticated malware. But surrender is not an option! It is fundamental that companies take regular steps to ensure they are protected, and that the protection policies and technologies they deploy are able to evolve and adapt to changing challenges.

No plan will be 100% foolproof, but thankfully companies can eliminate a large number of the vulnerabilities they would otherwise face by adopting security best-practices such as those outlined here, and by consulting with experts as opposed to finding things out the hard way. ⭕

MITEL ANNOUNCES DEFINITIVE AGREEMENT TO ACQUIRE SHORETEL

The key news this past Quarter from Mitel® (Nasdaq:MITL) (TSX:MNW), a leader in enterprise communications software and systems, was the announcement at the end of July of a definitive merger agreement whereby Mitel will acquire 100% of the outstanding shares of Sunnyvale, California-based communications solutions company ShoreTel. With a total enterprise value of approximately $430 Million, the all-cash transaction is expected to be completed during the third Quarter of 2017.

This transaction accelerates the execution of the Mitel strategy to move-to-the-cloud. ShoreTel is established as a leading supplier to the UCaaS (Unified Communications as a Service) market, a rapidly growing market where digital transformation is driving aggressive customer demand globally for cloud-based solutions. The combined company will become the number-two player in the market, creating a supplier with the scale, applications and technical capabilities to meet this demand.

The company will be headquartered in Ottawa, Canada, and will operate as Mitel. Rich McBee, Mitel Chief Executive Officer, will lead the combined organization. Steve Spooner, Mitel Chief Financial Officer, will continue in his role.

Financial highlights of the transaction include:
- Creates combined annual sales of $1.3 Billion* .
- Increases Mitel recurring revenue to 39% of total.*
- More than doubles Mitel UCaaS revenue to $263 Million*
- Creates significant synergy opportunities, estimated at $60M annually and expected to be achieved in 24 months.
- Expected to be accretive to non-GAAP EPS in the first year.

*based on trailing twelve months combined to March 31, 2017

Commenting on the acquisition, Mr. McBee said, "This natural combination enables us to continue to consolidate the industry and take advantage of cost synergies while adding new technologies and significant cloud growth to our business. Together, Mitel and ShoreTel will be able to take customers to the cloud faster and further, with full-featured, cloud-based communications applications."

The combined company will have approximately 3,200 channel partners and an industry-leading portfolio of communications and collaboration solutions. Mitel and ShoreTel are committed to providing continued support and an attractive path forward for all customers and partners — cloud and premise. At the close of the transaction, the global workforce of the company will be approximately 4,200 employees.

Don Joos, CEO of ShoreTel commented, "Customers are moving to the cloud at a rapid pace. The combination of Mitel and ShoreTel creates a new UCaaS market leader with a differentiated strategy and solution set, and a clear migration path that ensures no customer will be left behind or have to abandon what they already have in order to cloud-enable their organization."

Additional Mitel Quarter highlights included:
- Recurring cloud seats increased by 77,000 to a total of 665,000.
- A large US-based food processing company operating across North America, Central America and Europe will be deploying Mitel Cloud supporting more than 4,000 users. This five-year contract has a value of approximately $8 million.
- For the fourth consecutive year, Mitel has been acknowledged as a Leader in the Gartner Magic Quadrant for Unified Communications.

Further details on these and other developments can be found on the Mitel website. *Q will share another update from the company next Quarter.* **mitel.com** ◐

NEW FUNDING WILL ENABLE CONTINUED GROWTH FOR CLINICONEX

Clinical outreach software from **Cliniconex** improves patient engagement by streamlining communication and reporting processes for pre- and post-visit patient outreach. During the latest Quarter, the company raised $1 million dollars in financing which will be used to fund continued growth in the Canadian market and create new business development opportunities and partnerships in the U.S.

On the Canadian side of the boarder, preparations are now complete to launch the previously announced partner program with Telus Health, the leading Electronic Medical Records (EMR) vendor in Canada. Even before this program takes full effect, healthcare provider deployments this Quarter increased by 19% compared to the previous Quarter, with the total number of active clinics now exceeding 2,850.

Expanded office space and key additions to the customer-facing teams over the period also help set the stage for similar or greater growth next Quarter. *Stay tuned for another update in the next issue of Q.* **cliniconex.com** ◐

FURTHER INDUSTRY INSIGHTS FROM ALACRITY GLOBAL

Data Storage and Consumer Privacy Policies

Protectionism has definitely been in the global affairs spotlight in 2017, with issues such as Brexit and the implementation of an "America First" policy in the U.S. being just two particular catalysts. The technology industry is faced with protectionist developments as well, despite the fact much of the industry offers products and services made available through a seemingly borderless internet. Digital Protectionism is an evolving movement that can have an adverse effect on global tech companies if measures are not taken to adapt go-to-market strategies to local regulations.

The latest trend in Digital Protectionism is a concept known as **Data Sovereignty**, wherein policies are being created to state that information and communications infrastructure, technology and data are subject to the laws of the country in which they are located. Such policies effectively create "digital borders", establishing specific requirements (read: cost barriers) that compel corporations to store, maintain, protect and process citizen data domestically. The focus of these policies in large part is to reduce the cross-border transfer and use of private data. Penalties for violations of the new rules in certain jurisdictions have become more severe recently. Again, we note the pending E.U. General Data Protection Regulations (GDPR) and the hefty non-compliance penalties accompanying that initiative.

The key significance of Data Sovereignty and the reshaping of Cyber Privacy Laws is the resulting impact on the free and granular flow of information needed by international organizations to develop Big Data insights. Data has become a precious resource that, among other things, organizations use to develop market insights and structure product and strategic plans with which to compete. In some jurisdictions, organizations that want to use collected data in this way will need to develop those insights using only localized data analytics services and professionals, and not resources in place already at, for example, global headquarters (i.e., in this case, a "foreign" data ecosystem).

Back to some of the motives behind such policies, the theory goes that greater data sovereignty helps support domestic tech ecosystems and local innovations, as more local investments are required (e.g., data centers) and more skilled local professionals are needed. These concepts are already playing out in key global territories including mainland China, Indonesia and India.

However, the Alacrity global ecosystem model is uniquely positioned to deal with this potentially significant challenge, in that it already leverages localization in its structure. Each Alacrity operation is committed to starting and building local technology companies together with local entrepreneurs, students, corporations and governments. Shifting trends in data sovereignty policies should not create undue barriers.

North America has taken a different position on Data Sovereignty. Canada has a primary focus on protecting the private data of its citizens. Any organization that relies on data from a Canadian public institution has strict guidelines to which it must adhere. In the case of Nova Scotia and British Columbia, for example, in-province server storage is required, as a security measure more than one of job creation.

On the other hand, the current U.S. policy is pro-business and individual Data Privacy Rights are more limited. To the dismay of many, the U.S. Federal Communications Commission (FCC) recently rolled back (and to these observers, weakened) the Internet Service Provider (ISP) data-sharing policy known as **net-neutrality**, making it acceptable once again for data to be collected, sold and used as desired by the ISP without the permission or knowledge of the individual involved. One of the objectives behind this move was to increase the ability for companies to compete with tech giants such as Google and Facebook, however the move reduces privacy protection at the same time, as the customer opt-in requirements found in existing software and application environments are no longer an obligation for the ISP.

All this said, the full future of data sovereignty in North America remains unclear, as it is a subject on the agenda for the talks to modernize the North American Free Trade Act (**NAFTA**) that are taking place this Quarter. And this is not unique to NAFTA. Data privacy policies do need to evolve to keep pace with changing times, and this can have impacts on many global Trade Agreements. The optimum systems will strike a balance between individual data protection and permission for corporations to extract data sets that reveal secure, valuable market insights. Data does need to be treated as a national resource today, and to be managed using economic incentives to develop appropriate security in concert with healthy local tech ecosystems. Let's hope the policy makers get more of it correct than not. ◐

PRINCIPAL COMPANY INDEX

* Featured in this issue of *Q*

AirVM - airvm.com

Alacrity Canada - alacritycanada.com

Alacrité France* - alacrite.fr

Alacrity Global* - alacrityglobal.com

Alacrity India - alacrityindia.com

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Alacrity UK - alacrityfoundation.co.uk

Benbria - benbria.com

Brookstreet Hotel - brookstreethotel.com

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CareerJSM - careerjsm.com

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Cliniconex* - cliniconex.com

CounterPath* - counterpath.com

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Echosec* - echosec.net

Encepta - encepta.net

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FileFacets* - filefacets.com

Hut Six* - hutsix.io

HYAS Infosec* - hyas.com

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Iven - iven.io

KRP Properties - krpproperties.com

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L-SPARK* - l-spark.com

Marshes Golf Club - marshesgolfclub.com

Martello Technologies* - martellotech.com

Mitel* - mitel.com

Mydoma Studio - mydomastudio.com

Persona - personajobs.com

Pisano - pisano.co

Pretio Interactive - pretio.in

ProntoForms - prontoforms.com

Referral SaaSquatch - referralsaasquatch.com

Solace - solace.com

Solink - solinkcorp.com

StartSub - startsub.com

Talkative - talkative.uk

TaraSpan - taraspan.com

Teldio - teldio.com

The Better Software Company - thebettersoftware company.com

ThinkRF* - thinkrf.com

Tutela - tutela.com

Twentify - twentify.com

WCS Europe - wcs-europe.com

Wesley Clover Parks* - wesleycloverparks.com

Wesley Clover Solutions - wesleycloversolutions.com

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