



Welcome to the **October** edition of ACT News – Driving Insights. This complimentary service is provided by ACT Canada. Please feel free to forward this to your colleagues.

In This Issue

1. Editorial - bad odds, even if you love betting.
2. ACT Canada congratulates the winners of the IVIE awards
3. MasterCard and BMO make fingerprint and 'selfie' payment technology a reality in North America
4. Track rewards points, shop and book travel all from your mobile device with the new RBC rewards app
5. VISA opens tokenization services to third party partners
6. Interac named most innovative organization by ACT Canada
7. G&D provides its mobile payment solution to Nordic it company Evry
8. Samsung Pay to add three new countries, online and in-app payments, location-based deals and more
9. The next phase of relationships between fintech and banks: working together for a better future
10. ICC Solutions wins two ACT Canada International Innovation Awards
11. After years of warnings, Internet of Things devices to blame for big internet attack
12. Fido alliance announces new authentication specification effort with EMVco to bring added security and convenience to mobile payments
13. Apple Pay now available to Desjardins members and customers
14. Apriva completes extensive EMV certification with MIURA bluetooth readers to global payments
15. Toronto's Dream Payments wins global fintech challenge
16. ACCEO and TruRating partner to simplify merchants and retailers' instant visibility on key customer experience metrics
17. EMVco and PCI SSC combine expertise on 3-D Secure 2.0
18. UnionPay's chip card tech to be adopted in six Asian countries
19. Alibaba and Gemalto work hand-in-hand to secure China's IoT market

- 20.** Discover qualifies pulse test suite from ICC Solutions
- 21.** Ingenico Group offers innovative consumer experience at Farmacias Guadalajara stores in Mexico
- 22.** Canada's credit unions win big for mobile pay
- 23.** Oberthur supports mobile payments future in the Nordics
- 24.** Bitcoin and mobile payments share some growing pains
- 25.** Speed merchants: clearing and settlement systems around the world becoming faster
- 26.** How technology impacts the three most important moments in retail
- 27.** VISA intros international B2B payment service built on blockchain technology
- 28.** Central 1 launches first fully integrated open anywhere online and mobile account opening with Conexus Credit Union
- 29.** Mobile payments awareness grows, cash use declines; consumers demand more to make the leap to mobile, Accenture survey finds
- 30.** Ethoca wins 2016 ACT Canada IVIE Award for Canadian Innovation benefitting merchants
- 31.** FIME and BSmart partner to seamlessly support payment technology implementations in Brazil
- 32.** Vantiv first to offer VeriFone Carbon with commerce platform
- 33.** Giesecke & Devrient teams with Rittenhouse Payment Solutions for event-based wearable solutions
- 34.** New print on demand services from CPI Card Group provide flexibility for prepaid payment card programs
- 35.** Digital coupons now available through Samsung Pay
- 36.** Cyber security leader will complement company's capabilities serving internet of things (IoT)
- 37.** RBC invests in machine learning through partnership with the University of Toronto
- 38.** Retail payment to introduce customer-friendly, efficient and low-cost payment platform in Norway
- 39.** Edge-to-edge metal from CPI Card Group enhances payment card design



- 40. OT and Etisalat launch the first mobile wallet service in UAE
- 41. What you need to know about the imminent threat of IoT botnets
- 42. When a payment is more than a transaction
- 43. Europeans embrace mobile payments
- 44. Google gets aggressive with new phones, other gadgets

ACT Canada Partners

INGENICO - *Point of Sale Equipment Partner*

Ingenico Group is the global leader in seamless payment, providing smart, trusted and secure payment solutions to empower commerce across all channels, in-store, online and mobile. With the world's largest payment acceptance network, we deliver secure solutions with a local, national and international scope in 125 countries. For over 30 years, we have been the trusted world-class partner for financial institutions and for retailers, ranging in size from small merchants to several of the world's best known global brands. Our smart terminal and mobile solutions enable merchants to simplify payment and deliver their brand promise.

INTERAC - *Payment Network Partner*

Interac Association is a recognized world leader in debit card services. Interac Association is responsible for the development and operations of the Interac network, a national payment network that allows Canadians to access their money through Interac Cash at 60,000 Automated Banking Machines and Interac Debit at 766,000 point-of-sale terminals across Canada. Interac Flash, a secure contactless enhancement of Interac Debit allows Canadians to pay for items instantly with their Interac chip debit card at a reader that supports Interac Flash.

PAYMENTS BUSINESS - *Media Partner*

New and Renewing Members

General Member

advertience Inc. ~ new member

Financial Consumer Agency of Canada ~ new member

Tailwind Solutions Ltd ~ new member

Associate Member

C. Byrne Consulting ~ new member



Career Opportunities

Visit our career opportunities section for the latest opportunities - <http://www.actcda.com/information/careers/>

Looking for good people?

There is a lot of movement in the market, so if you are looking for new employees, we are always aware of some great people. Please contact ACT Canada for more details - postings@actcda.com

Calendar Of Events

GSMA Mobility Live! – North America

Nov 1-2, 2016

Atlanta, GA

www.mobile360series.com/north-america

Cardware 2017

May 1-3, 2017

Niagara Falls, Canada

www.cardware.ca

ACT Canada members receive discounts

TRUSTECH

Nov 29-Dec 1, 2016

Cannes, France

www.trustech-event.com

ACT Canada members receive discounts

Money2020 Europe

June 26-28, 2017

Copenhagen, Denmark

www.money2020europe.com

ACT Canada members receive discounts

Articles

1. EDITORIAL - BAD ODDS, EVEN IF YOU LOVE BETTING.

Source: Catherine Johnston, CEO, ACT Canada (10/28)

A year ago I wrote about what I'd learned from a speech given by Colonel Chris Hadfield. 12 months later it is just as relevant, so let me remind those who read that editorial and share it with those who didn't. He said that we shouldn't visualize success but instead we should always ask, as space teams do, "What can kill us next?" As we face pressures from cyber-threats, pace of technological change, fear of missing out and digitization, it is hard to stop and ask this or any other question – but our survival depends on it. Over the past month I've gone across Canada to talk with members about blockchain, biometric authentication, aggregated loyalty, digital currency, IoT payments, mPOS and iPOS, real time payment, P2P and others and mobile wallets. I shared with them a career



changing statistic. A McKinsey & Co. report called The Future of Digital Wallets states that, “Most payments innovations fail; historically, the failure rate is about 98%.” How your career is changed depends on what questions about innovation you ask or ignore – and who you ask. Today’s payment 2.0 is far more complex than ever before. It is not enough to look at the upside of innovation. Failure to ask questions and hold discussions with all the stakeholder groups may not kill you, but it could kill your career.

2. ACT CANADA CONGRATULATES THE WINNERS OF THE IVIE AWARDS

Source: ACT Canada (10/20)

ACT Canada, the stakeholder association driving payment evolution and digital identity, is pleased to announce the winners of the IVIE Awards, celebrating innovation in payments and digital identity products. The IVIE Awards recognize the ingenuity of the winners and the value that implementations of emerging technologies bring to the market. We are pleased to announce the following winners of the 2016 IVIE Awards:

2016 IVIE Award Winner for Privacy By Design

Gemalto for Allynis ID Verification

2016 IVIE Silver Award for Privacy By Design

truRating for truRating

2016 IVIE Bronze Award for Privacy By Design

Canadian Imperial Bank of Commerce for CIBC's Secure One Click Digital Registration Service for Mobile Wallets

Dr Ann Cavoukian, Executive Director of Ryerson University’s Privacy and Big Data Institute and former Information and Privacy Commissioner of Ontario announced the winners of the Privacy by Design award and presented the IVIE.

2016 IVIE Award Winner for International Payment Innovation benefiting Issuers or Acquirers

ICC Solutions Ltd. for VIABLE Scanner

2016 IVIE Award Winner for International Payment Innovation benefiting Merchants

Ingenico Group for Connected Screen

2016 IVIE Silver Award for International Payment Innovation benefiting Merchants

ICC Solutions Ltd. for VIABLE Scanner



2016 IVIE Award Winner for International Payment Innovation benefiting Citizens

Advanced Card Systems Ltd. for Cebu BRT System

2016 IVIE Silver Award for International Payment Innovation benefiting Citizens

Cardtek Group for Passolig Card

2016 IVIE Award Winner for Merchant Innovation

Moneris Solutions for Moneris Gift Card program

2016 IVIE Award Winner for Sonja Halvorson Memorial Social Merit

Canadian Imperial Bank of Commerce for CIBC Banking Card Decks for MagnusCards

2016 ACT Canada Hero Awards

John Stewart and Bob Jenisch

2016 IVIE Award Winner for Canadian Payment Innovation benefiting Issuers or Acquirers

Interac Association/Acsys Corporation for Interac Token Service Provider

2016 IVIE Silver Award for Canadian Payment Innovation benefiting Issuers or Acquirers

Ethoca for Ethoca Alerts

2016 IVIE Bronze Award for Canadian Payment Innovation benefiting Issuers or Acquirers

Interac Association/Acsys Corporation for Interac on Apple Pay

2016 IVIE Award Winner for Canadian Payment Innovation benefiting Merchants

Ethoca for Ethoca Alerts

2016 IVIE Award Winner for Canadian Payment Innovation benefiting Consumers

Large Credit Union Conference CIO Group for Mobile Pay

2016 IVIE Silver Award for Canadian Payment Innovation benefiting Consumers

Canadian Imperial Bank of Commerce for CIBC Hello Home

2016 IVIE Bronze Award for Canadian Payment Innovation benefiting Consumers

Tangerine Bank for Tangerine Money-Back Credit Card



Scoring was very close in the **Canadian Payment Innovation benefiting Consumers** category.

Honourable mentions are made for:

Interac Association for Interac Token Service Provider
and

Interac Association for Interac on Apple Pay

2016 IVIE Award Winner for Canadian Non-Payment Innovation benefiting Corporations

Equifax Canada for Equifax Dimensions

2016 IVIE Award Winner for Most Innovative Organization

Interac Association/Acxsys Corporation

2016 IVIE Silver Award for Most Innovative Organization

Canadian Imperial Bank of Commerce

2016 IVIE Bronze Award for Most Innovative Organization

American Express Canada

Scoring was very close in the **Most Innovative Organization** category.

Honourable mentions are made for:

Everlink Payment Services Inc.

2016 IVIE Silver Award for People's Choice

Ingenico Group for Connected Screen

2016 IVIE Award Winner for People's Choice

Large Credit Union Conference CIO Group for Mobile Pay

“ACT Canada is pleased to provide a program through which innovation in our industry is recognized and presented to our members, because innovation is a foundation for market growth,” said Catherine Johnston, CEO of ACT Canada

The IVIE Awards were sponsored by Gemalto; ICC Solutions Ltd; Interac Association and Ingenico Canada Ltd.

3. MASTERCARD AND BMO MAKE FINGERPRINT AND 'SELFIE' PAYMENT TECHNOLOGY A REALITY IN NORTH AMERICA

Source: MasterCard Canada (10/24)

MasterCard announced the North American rollout Identity Check Mobile, a new payment technology application that uses biometrics, including fingerprint and facial recognition, to verify a cardholder's identity and simplify online shopping. BMO Financial Group (BMO) will be the first bank in the U.S. and Canada to offer



Identity Check Mobile to its corporate customers starting in the first half of 2017. The rollout of Identity Check Mobile follows a successful soft launch that MasterCard and BMO tested earlier this year. The post-soft launch survey of BMO biometric program participants found:

- Three of every four (74 percent) of participants strongly agree that biometrics are easier to use than passwords.
- Nine out of ten participants anticipate using biometrics for online payment security in the future.

"The pilot tested the potential of delivering greater security and convenience using biometric technology. Our goals were to understand the attitudes and perceptions of our participants toward biometrics as an online payment security solution," said Steve Pedersen, vice president, head, North American Corporate Card Products at BMO. "After using Identity Check Mobile, our program participants gave strong reviews on biometric security and ease of use, especially as compared with passwords. We are looking forward to bringing this same experience to our clients in 2017." Existing BMO commercial customers who opt-in to using Identity Check Mobile will use an app provided by BMO and MasterCard to verify their online purchases. While shopping the cardholder will be notified instantly by the app when he or she needs to verify an online purchase by swiping a fingerprint or snapping a selfie photo.

Often, existing identity verification methods take shoppers away from a retailer's website or mobile app where a password is required. The process can be time consuming and can result in a shopper abandoning his/her purchase or having the transaction declined if the password is incorrect. MasterCard Identity Check Mobile minimizes the need for passwords, dramatically speeding the digital checkout process while also improving security. A cardholder can verify his/her identity by using the fingerprint scanner or facial recognition technology (aka taking a selfie photo) on his/her smart phone with the Identity Check app. "Making the online payment experience near frictionless and more secure is a priority for MasterCard," said Ajay Bhalla, president of Enterprise Risk & Security, MasterCard. "Moving this technology beyond the pilot phase is a significant milestone in the evolution of payments. Online payments are being revolutionized; and now we are making Identity Check Mobile a reality for commercial use in the U.S., Canada, Europe, and soon, the world."

The U.S. and Canada availability of Identity Check Mobile follows the recent European rollout across 12 markets, including: Austria, Belgium, Czech Republic, Denmark, Finland, Germany, Hungary, the Netherlands, Norway, Spain, Sweden and the U.K. The technology will continue to be made available worldwide in phased rollouts throughout 2017. In the U.S. and as part of the White House "Lock Down Your Login" public awareness campaign, MasterCard committed to developing solutions that eliminate static passwords, utilizing biometrics to make payments safe and simple.



MasterCard is a member of ACT Canada; please visit www.mastercard.com.

4. TRACK REWARDS POINTS, SHOP AND BOOK TRAVEL ALL FROM YOUR MOBILE DEVICE WITH THE NEW RBC REWARDS APP

Source: RBC 910/14)

RBC launched the RBC Rewards App for iOS and Android. The RBC Rewards app allows clients to see their RBC Rewards points accumulate, browse all the cool stuff they can redeem rewards points for and keep track of how much they need for their next dream vacation, all in one seamless and convenient experience right in the palm of their hand. “The RBC Rewards app will allow clients to experience and interact with RBC Rewards in a whole new way,” said Athena Varmazis, Vice President, Global Loyalty Program and Rewards, RBC. “With the RBC Rewards app, our clients will now have the functionality of the online Rewards platform, from tracking existing and pending points activity to browsing and redeeming for travel, merchandise and more while they’re on the go.”

How it works

In addition to viewing available points balance, pending points activity and history, the RBC Rewards app will feature the RBC Rewards website’s functionality, optimized to the mCommerce shopping experience, giving clients the ability to:

- Search and book flights, hotels and car rentals, using a combination of points and cash
- Shop Apple and Best Buy products with points and cash
- Use points for RBC Rewards merchandise and gift cards
- Favourite items within the various catalogues and recent travel searches
- Get relevant offers and product recommendations based on interests
- Access RBC Mobile app and RBC Wallet app without having to sign in again
- iOS users can use the Touch ID feature to sign in

“As a world leader in mobile technology, RBC is committed to innovation and pushing the boundaries of what is possible in order to meet the evolving expectations of our clients,” said Jacqueline Calisto, Vice President, Digital & Commercialization, RBC. “The Rewards app is another example of how we continually strive to provide best-in-class mobile solutions that offer real value and deliver an exceptional client experience.”

RBC is a member of ACT Canada; please visit www.rbc.com.



5. VISA OPENS TOKENIZATION SERVICES TO THIRD PARTY PARTNERS

Source: Visa (10/25)

Visa announced it is accelerating the adoption of secure, digital payments by allowing third party partners to offer Visa Token Service (VTS). By expanding access to VTS to new partners – including technology companies, device manufacturers, issuers, Internet-of-Things (IoT) companies, wallet providers, merchants and others – Visa will be able to more quickly and easily offer secure digital payment services on any device to the market. Giesecke and Devrient, Gemalto and Inside Secure are the initial partners participating in Visa’s token service provider program to offer new expanded access to VTS. The Visa Token Service standard is a security technology that replaces cardholder information, such as account numbers and expiration dates, with a unique digital identifier (a “token”) that can be used for payment without exposing a cardholder’s more sensitive account information. Tokenization hides consumers’ confidential account information during digital transactions, making digital payments more secure for everyone, everywhere.

Visa’s token service provider program gives technology companies a standards-based approach to access Visa’s broad network of tools and services, including VTS, as well as development and marketing support. It also expands the market to other companies to develop new, secure digital payment services and ensures consistency envisioned in the EMVCo token standards. “Secure digital payments will take a huge leap forward with Visa’s token service provider program, by accelerating tokenization throughout the industry,” said Jim McCarthy, executive vice president, innovation & strategic partnerships, Visa Inc. “By expanding tokenization and giving both issuers and token requestors choice, digital payment solutions will continue to grow and give consumers peace of mind when paying on any device.”

There are two ways that Visa partners can take advantage of Visa’s token service provider program: Issuer TSPs are certified partners connected to VTS and other networks. They provide solutions for financial institutions to facilitate the provisioning, consumer ID and verification, token lifecycle management and VTS notifications of tokens in participating token requestors payment services. These include services such as Capital One Wallet, PNC Virtual Wallet, U.S. Bank Mobile Wallet, Wells Fargo Wallet, Apple Pay, Samsung Pay and Android Pay. Token Requestor TSPs are certified partners connected to Visa Token Service and other networks that allow token requestors to develop consumer digital payment solutions powered by VTS. Token Requestor TSPs facilitate the provisioning and lifecycle management of Visa payment tokens across token requestor payment applications and consumer devices, including mobile phones and the expected proliferation of connected devices.

“The integration between G&D and the Visa Token Service extends our leadership as a provider of secure digital payment solutions,” says Stefan Auerbach, member of the management board and head of the mobile security



business at Giesecke & Devrient. “Our CONVEGO Hub solution offers seamless access to secure mobile payment services to Visa issuers, and gives manufacturers of wearables, mobile devices and other wallet providers secure and flexible payment functionality.”

“Gemalto as a long time promoter of a secure digital payment ecosystem is pleased to partner with Visa,” says Jean Claude Deturche, SVP of Mobile Financial Services at Gemalto. “Our numerous payment issuers’ customers will be offered the possibility to use VTS to accelerate the deployment of their digital payment services on multiple wallets and devices.”

Gemalto, Giesecke & Devrient and Visa members of ACT Canada; please visit www.gemalto.com, www.gi-de.com and www.visa.ca.

6. INTERAC NAMED MOST INNOVATIVE ORGANIZATION BY ACT CANADA

Source: Interac (10/20)

Interac Association/Acxsys Corporation (“Interac”) was recently named “Most Innovative Organization” for its leadership in digital payments by ACT Canada at its annual IVIE awards. Held in Toronto, the IVIE Awards celebrate innovation in payments and digital identity products, and recognize the value that emerging technologies bring to the market and consumers. “We are proud to be recognized for the innovation, expertise and the positive impact our secure payment solutions have had on consumers, financial institutions, acquirers and merchants,” said Mark O’Connell, President and CEO, Interac Association and Acxsys Corporation. “These awards are a testament to the commitment and passion of our employees who are helping to shape the future of digital payments in Canada.”

Interac was also presented with Canadian Payment Innovation Awards for the following: Award Winner (benefiting Issuers or Acquirers) for the Interac Token Service Provider (TSP); Bronze Award (benefiting Issuers or Acquirers) for Interac Debit with Apple Pay; and Honourable Mention (benefiting Consumers) for Interac Debit with Apple Pay. “Payment innovation demands a careful balance of invention and security. To be named as the Most Innovative Organization for 2016 is an accolade to everyone at Interac,” said Catherine Johnston, CEO of ACT Canada. Interac is at the forefront of Canada’s digital transformation, bringing innovative debit solutions to market that address the needs of its stakeholders who demand superior user experiences and world-class security. Over the past year, the organization has launched the following solutions:

- Interac TSP, a proprietary token management platform which is among the first for a domestic debit network globally, allows financial institutions, merchants and partners to build and manage secure digital payment experiences.



- Interac Debit with Apple Pay, which allows consumers who bank at the six largest financial institutions in Canada to pay securely and conveniently with Interac using their Apple devices.
- Interac e-Transfer bulk disbursement service, a commercial enhancement of Interac e-Transfer.
- Mobile Pay, leveraging Interac Flash, launched by the Canadian Credit Union Association
- International licensing capabilities of Interac contactless and mobile debit solutions

The IVIE Awards are held annually by ACT Canada, an internationally-recognized authority in payments, authentication and identity management. It is the key ambassador for new payment and secure identification technology in Canada – the crucial foundation for building and maintaining consumer trust in online commerce.

Interac Association is a member of ACT Canada; please visit www.interac.ca.

7. G&D PROVIDES ITS MOBILE PAYMENT SOLUTION TO NORDIC IT COMPANY EVRY

Source: Giesecke & Devrient (10/19)

EVRY, one of the largest IT companies in the Nordic region, has licensed a cloud-based mobile payment solution from technology group Giesecke & Devrient (G&D). G&D Convego CloudPay solution supports contactless payments for NFC-enabled mobile devices with Host Card Emulation (HCE). Mobile channel has become a major focus for banks worldwide to develop and offer payment new services to consumers. G&D Convego CloudPay solution enables EVRY to provide intuitive and secure mobile payment services to its banking customers for payments at any contactless enabled merchant locations. “We are very happy to partner with EVRY as a leader in its sector in the Nordic region. By combining its issuance solutions with our Convego CloudPay solution, EVRY will be well positioned to offer versatile mobile payment services to its banking customers for a true tap & pay experience with high security”, says Edgar Salib, Group Senior Vice-President, Head of Financial Institutions from G&D.

“EVRY is pleased to announce its partnership with G&D. EVRY’s ambition is to leverage our extensive banking industry experience by combining it with world-class payment technologies and solutions. As a partner to both national and international banks, it is important for us to base our solutions on industry standards and well-established infrastructure. User-friendly innovation that provides both greater cost-efficiency and a better banking experience thanks to secure and easy-to-use solutions is key for us”, says Wiljar Nesse, Executive Vice President for Financial Services at EVRY.



The Convego CloudPay solution from G&D supports various international payment schemes and has capabilities also to support domestic schemes to enable all end-users to benefit on mobile payments. It consists of two main components – CloudPay Server and CloudPay Client. The CloudPay Server provides an online interface to banks for the provisioning and life-cycle management of the bank’s payment cards on the end users’ HCE enabled smartphones. The CloudPay Client is a secure software library that is integrated into the bank’s mobile application and provides a secure storage for the payment card data and payment engine to execute mobile payment transactions. The CloudPay Client implements state-of-the-art security mechanisms to protect the payment data stored on the mobile device.

Giesecke & Devrient is a member of ACT Canada; please visit www.gi-de.com.

8. SAMSUNG PAY TO ADD THREE NEW COUNTRIES, ONLINE AND IN-APP PAYMENTS, LOCATION-BASED DEALS AND MORE

Source: Browsetechnology.com (10/26)

Samsung Electronics announced Samsung Pay will add three new countries to the roadmap including Malaysia, Russia and Thailand, which will bring the convenience of the service to 10 countries by the end of 2016. Samsung Pay also announced a global partnership with MasterCard to offer a simplified online payment and express checkout solution through its digital payment service Masterpass, starting early next year. Hundreds of thousands of merchants in 33 countries currently accept Masterpass for online payments. “When we introduced online payments in South Korea last year, the service was well received by the market. Online payments accounted for more than 25 percent of the 2 trillion won in processed transactions, demonstrating that consumers may be actively looking for solutions to make their online experiences faster, simpler and secure,” said Thomas Ko, VP and Global GM, Samsung Pay, Mobile Communications Business at Samsung Electronics. “By partnering with MasterPass in the U.S. and rolling out online payments globally, we will simplify the online transaction experience by eliminating the need for customers to fill out tedious online checkout forms, remember long passwords or fumble for their wallets.”

“MasterCard is working to ensure that every one of our accounts is as digital as the people using them,” said Garry Lyons, Chief Innovation Officer at MasterCard. “Enabling our cardholders to use Samsung Pay to shop online via Masterpass is the latest example of our work – alongside our banks, merchants and digital partners – to deliver rich, innovative, compelling and secure ways to pay and get paid across all channels and devices, redefining commerce globally.” Samsung Pay will provide consumers with a seamless online payment platform with benefits including:

- Express Checkout: Skip the process of filling out long online forms. With the express checkout solution, customers will be able use their MasterCard



- debit or credit cards along with the shipping information saved on their Samsung Pay account to quickly complete online transactions.
- Make Purchases from Any Device: Customers can make online purchases from a computer, tablet or smartphone while shopping on their favorite sites or apps.
 - Secure Transactions: Security remains our top priority. When making online payments, a unique token is used in an encrypted form – not the actual debit or credit card number. Users can authenticate transactions using secure methods including a fingerprint scanner, which is built into Samsung's mobile devices.

Samsung Pay also announced new features in the United States, including support for in-app payments and new nearby discounts and savings, marking one more step toward a true digital wallet. The announcements came at Money 20/20, a leading payments and financial services event.

Access to Deals at Nearby Stores:

Beginning in November, Samsung Pay users will be able to locate discounts and coupons for nearby stores through the new Deals feature within the Samsung Pay app, and redeem these deals instantly – without having to upload or have an existing membership or loyalty card. With a new refreshed look, and enhancements to user experience and design on the Samsung Pay app, users will be able to find and access the Deals feature easily and quickly.

New In-App Payments:

In November, users will also be able to use Samsung Pay as their payment option when they shop at select merchant apps. Simply select Samsung Pay during check-out, and select from the cards loaded within the app to make an in-app payment. To start, in-app payments will be available for Samsung Pay users when they shop with Velocity, Raise, Fancy, Hello Vino, Wish and Touch of Modern, with more to come.

Partnership Ecosystem:

With the addition of its latest financial partners Capital One and USAA, Samsung Pay now supports over 500 banks and credit unions, representing over 85 percent of the U.S. debit card and credit card market.

MasterCard is a member of ACT Canada; please visit www.mastercard.ca.

9. THE NEXT PHASE OF RELATIONSHIPS BETWEEN FINTECH AND BANKS: WORKING TOGETHER FOR A BETTER FUTURE

Source: *Let's /talk Payments* (10/06)

The whole FinTech crusade started out with the idea to fill the void and serve disadvantaged groups of the population left out by cautious policies of financial institutions. As a result, a range of startups gained substantial market traction and crossed international borders to threaten the existing national players. Industry professionals even estimated that ~40% of revenues and up to 60% of the profits in retail banking could be under the threat of FinTech rivals. Overall, the history of relationships between FinTech and financial institutions can be distinguished into three waves, the last one being a mutual interest in collaboration between startups and large players evolving into a beautiful friendship. Partnerships are believed to be mutually beneficial, while competition could be somewhat unbalanced due to financial, talent and scale mismatch of former competitors.

Katherine Manuel, SVP of Innovation at Thomson Reuters, emphasized the importance of unification and a collaborative approach to growth and development in the financial services industry, saying “The speed of financial technological innovation means that big companies and banks have to collaborate with entrepreneurs and academics to keep up with the pace of change. At the same time, startups and academics need the business input to scale, fund and provide relevance in highly regulated markets.” Collaborative projects will define the next wave of FinTech and for a good reason – they benefit both parties. Innovation labs/joint projects/trials allow corporations to source ideas, the latest technological advancements, international talent and provide a chance to improve banking infrastructure by implementing solutions developed by legacy-free startups.

Startups, in turn, gain an opportunity for priceless feedback from experienced professionals, knowledge and financial support – a way into the big game, simply put. An isolated development path denies these businesses potential mentor/investor exposure as well as an opportunity to improve existing solutions. Moreover, Chris Myers, the Co-founder and CEO of BodeTree, points out that for startups any other game rather than collaboration is most likely a loss. As Myers explains, “If you’re gambling on FinTech, either as an entrepreneur or an investor, you’d be wise to remember that the bank is the house. You might have a few wins here or there, but in the end, the house always comes out ahead.” The third wave of FinTech is actually already here as a wide range of institutions are walking hand-in-hand with startups or being involved in some sort of interbank consortiums. As a result, banks are now mostly well-armed with the latest technological advancements in partnership with startups and are therefore able to finance deals secured through the more appealing platforms of their FinTech ‘competitors’. Alternative lending is a good example here with flagship deals like BofA & Viewpost, JPMorgan & OnDeck and others.



Professionals from Moody's are among the experts emphasizing the beneficial outcomes of the 'third wave' for the other players in the ecosystem. Tie-ups between marketplace lenders and banks, for example, can benefit small businesses. Most importantly, as Moody's stated in the official press release, "The partnerships that small business marketplace lenders (MPLs) are forming with banks could help them lower their non-credit costs by cutting customer acquisition costs and funding costs. <...> Banks could benefit from the tie-ups by increasing their lending volumes and speeding up their review and approval process for clients."

The benefits of collaborative work in the financial services industry are not limited to businesses – they shed the light on underbanked population and facilitate the inclusive growth of economies. Startups that decide to 'travel' alone and fight their way into the market may soon face rivalry from former colleagues that have chosen to lean on powerful supporters to catalyze their growth and development. Even in case they reach a certain level of success, the market is not stretchable and limits may be reached sooner for lone warriors than for startups ready to work with the system.

10. ICC SOLUTIONS WINS TWO ACT CANADA INTERNATIONAL INNOVATION AWARDS

Source: ICC Solutions (10/21)

ICC Solutions Ltd, has scooped two awards at the 2016 IVIE Awards hosted by ACT Canada. ICC Solutions Ltd has recently announced the availability of an innovative test tool automation feature. This functionality facilitates even faster and more efficient test case execution without having to manually perform this function. This innovative feature enables acquirers and merchants to perform EMV Level 3 chip terminal integration tests for brand accreditation in a faster, more efficient and robust manner. The awards were presented at an Award Ceremony on 19th October in Toronto and reflect outstanding achievements from the payments industry as voted by a panel of experts.

- 2016 IVIE Award Winner for International Payment Innovation benefiting Issuers or Acquirers
- 2016 IVIE Silver Award for International Payment Innovation benefiting Merchants

2016 has been a fantastic year for ICC Solutions Ltd. The company has won the Queen's Award for Enterprise in the International Trade category along with further awards from BritishAmerican Business CHASE Awards and ACT Canada. This coupled with the celebration of 20 years in the payments industry has ensure that ICC Solutions Ltd is still a global leader in EMV payment testing and certification technology. ICC Solutions Ltd export to over 60 countries globally. Organisational types such as the payment brands, laboratories, through to the end users, such as the merchants, all deal with ICC Solutions Ltd. All of these organisations benefit from the power, efficiency and simplicity of ICC Solutions Ltd.



Wendy Maisey, Director, was at the Award Ceremony and commented “This has truly been a memorable year for the company. The hard work of the whole team is reflected in the recognition being received. The year is not yet over and we hope to have more accolades to shout about before the start of 2017”.

ICC Solutions is a member of ACT Canada; please visit www.iccsolutions.com.

11. AFTER YEARS OF WARNINGS, INTERNET OF THINGS DEVICES TO BLAME FOR BIG INTERNET ATTACK

Source: Fastcompany.com (10/23)

On Friday, a series of massive distributed denial of service attacks disrupted access to major internet services including GitHub, Twitter, Spotify, and Netflix. The attackers apparently used tens of thousands of hacked internet of things devices—household appliances such as digital video recorders, security cameras, and internet routers—to generate a massive amount of digital traffic. That digital noise was sent to Dyn, a domain name service provider used by major online companies, disrupting its ability to translate human-readable internet addresses into the IP addresses networks use to route traffic. The attack came after years of warnings from security experts that the makers of many internet-enabled devices paid too little attention to security, shipping internet-connected hardware with preset passwords, insecure default connections, and other vulnerabilities.

"It is just a matter of time until attackers find a way to profit from attacking IoT devices," a report from security firm Symantec warned last year. "This may lead to connected toasters that mine cryptocurrencies or smart TVs that are held ransom by malware. Unfortunately, the current state of IoT security does not make it difficult for attackers to compromise these devices once they see the benefit of doing so." Hackers and security researchers have previously exploited vulnerabilities to get access to devices like baby monitors and webcams. Researchers from security company Pen Test Partners even demonstrated earlier this year how hackers could install ransomware on an internet-connected thermostat, leaving victims sweltering or shivering until a ransom is paid. And in Friday's attack, compromised IoT devices were coordinated as part of a botnet—a network of hacked machines essentially turned into remote-controlled robots by malware—dubbed Mirai. Between 500,000 and 550,000 hacked devices around the world are now part of the Mirai botnet, and about 10% of those were involved in Friday's attack, said Level 3 Communications chief security officer Dale Drew on the internet backbone provider's Periscope channel Friday.

"With a rapidly increasing market for these devices and little attention being paid to security, the threat from these botnets is growing," according to a blog post published by Level 3 just days before the attack. Mirai-controlled devices were also key components in a September denial of service attack on Krebs on Security, the high-profile blog by security journalist Brian Krebs that's both required reading for

many in the industry and a juicy target for the hacking groups Krebs covers. At the time, Krebs reported that the attack was the largest ever seen by content distribution network provider Akamai, nearly twice the size of the existing record holder. Devices compromised by Mirai have been detected in at least 164 countries, researchers from security firm Imperva reported earlier this month, with the bot programmed essentially to scan wide swaths of the internet looking for more devices with default or easily predictable passwords that it can infect. It's still not known who created the initial Mirai malware, although the source code powering the botnet was released by a hacker using the name Anna_Senpai earlier this month.

It's also unclear whether the botnet's initial creators are directly behind the attack on Dyn or whether they're effectively selling access to the attackers. "The person who's buying time on that bonnet could be buying time on quite a few other botnets as well," Drew said on the Level3 Periscope channel. The Department of Homeland Security and Federal Bureau of Investigation have said they're investigating Friday's attack. Security experts advise users of IoT devices to take simple steps like changing default passwords and installing any security updates that manufacturers provide, but it can be difficult to make many such devices fully secure against a determined hacker. Some manufactures don't provide updates at all, and some only provide them through an insecure online channel, letting hackers effectively generate their own malicious updates, according to last year's Symantec report.

"Unfortunately, it is difficult for a user to secure their IoT devices themselves, as most devices do not provide a secure mode of operation," says the report, which also urges manufacturers to implement basic security measures on their connected products. Requiring users to set their own secure passwords when setting up the devices, and disabling unneeded avenues for remote control, would help keep hackers out, according to Level 3's Mirai report. Users can often also configure the devices to disable remote login to the devices and use free tools to make sure those connections are actually disabled, says Imperva. "With over a quarter billion CCTV cameras around the world alone, as well as the continued growth of other IoT devices, basic security practices like these should become the new norm," says the company. "Make no mistake; Mirai is neither the first nor the last malware to take advantage of lackluster security practices."

12. FIDO ALLIANCE ANNOUNCES NEW AUTHENTICATION SPECIFICATION EFFORT WITH EMVCO TO BRING ADDED SECURITY AND CONVENIENCE TO MOBILE PAYMENTS

Source: Visa (10/24)

FIDO Alliance, the industry consortium developing open, interoperable authentication standards, announced today that it will work with EMVCo to add convenience and security to in-store and in-app EMV-compliant mobile payments.



The FIDO Alliance will develop a new technical specification into its FIDO authentication suite to fulfill use cases provided by EMVCo. The specification will provide a standard way for mobile wallet providers and payment application developers to support Consumer Device Cardholder Verification Method (CDCVM)¹, enabling consumers to conveniently use on-device FIDO Certified authenticators -- such as a fingerprint or "selfie" biometrics -- to securely verify their presence when making an in-store or in-app mobile payment.

To enable this capability, the new FIDO Alliance specification will be developed as an extension specification to the Web Authentication specification already in development by the World Wide Web Consortium (W3C). The Web Authentication specification, based on three technical specifications submitted by the FIDO Alliance last year, will define a standard web API to enable web applications to move beyond passwords and offer FIDO strong authentication across all web browsers and related web platform infrastructure. With this new specification, the same FIDO-compliant devices used to authenticate users on the web will also be able to fulfill payment networks' CDCVM requirements for mobile payment, giving device manufacturers yet another reason to ship their devices with support for FIDO authentication. For mobile wallet providers and payment application developers, the development of this specification intends to greatly simplify the development and support for CDCVM across mobile devices and other platforms.

"Today, mobile wallet providers and payment application developers need to custom-build support for CDCVM across mobile devices. This is a huge challenge given the fragmentation in the mobile ecosystem -- there are more than a thousand manufacturers for Android alone," said Brett McDowell, executive director of the FIDO Alliance. "This new specification will enable mobile payment stakeholders to FIDO-enable their applications and get the added benefit of built-in support for CDCVM on every FIDO-compliant mobile device. The mobile industry is rapidly adopting FIDO authentication, with FIDO Certified solutions already available on flagship mobile devices from six of the top 10 mobile handset manufacturers."

The new FIDO specification will also add another layer of convenience to the consumer mobile payment experience by providing mobile payment applications with additional risk management information, ultimately reducing the number of times that a consumer needs to authenticate themselves in order to approve a payment within a given time period. For example, when the mobile payment application calls the FIDO authenticator, it can check the last time the user was verified by the authenticator. If that falls within the requirements for CDCVM, the payment will be authorized without any additional interaction with the user. The FIDO Alliance also sees the potential for this capability to be extended to use cases beyond payments, including for VPN access, rights managements and workflow management.



W3C Strategy Lead Wendy Seltzer commented, "W3C is pleased to support this FIDO Alliance extension as yet another example of the growing and vibrant authentication ecosystem enabled through our Web Authentication API, currently under development by the WebAuthn Working Group."

13. APPLE PAY NOW AVAILABLE TO DESJARDINS MEMBERS AND CUSTOMERS

Source: Desjardins (10/04)

Desjardins Group brings Apple Pay to its members and customers, transforming mobile payments with an easy, secure and private way to pay that's fast and convenient. Security and privacy is at the core of Apple Pay. When using a Desjardins Visa credit or prepaid card or a Desjardins Interac debit card with Apple Pay, the actual card numbers are not stored on the device, nor on Apple servers. Instead, a unique Device Account Number is assigned, encrypted and securely stored in the Secure Element on the device. Each transaction is authorized with a one-time unique dynamic security code. "Desjardins is proud to add Apple Pay to our line of mobile services--our members and clients can now benefit from this secure and easy to use payment service," stated André Chatelain, Executive Vice-President, Personal Services, Payments and Desjardins Group Marketing. "Today, smartphones are basically indispensable and demand for mobile services--mobile payment in particular--is only going to grow."

Apple Pay is easy to set up and users will continue to receive all of the rewards and benefits offered by their credit card. Online shopping in apps accepting Apple Pay is as simple as the touch of a finger with Touch ID, so there's no need to manually fill out lengthy account forms or repeatedly type in shipping and billing information. When paying for goods and services within apps, Apple Pay is compatible with iPhone 7, iPhone 7 Plus, iPhone 6s, iPhone 6s Plus, iPhone 6, iPhone 6 Plus, iPad Air 2, iPad mini 3, iPad mini 4, iPad Pro and Apple Watch.

Holders of Desjardins Cash Back MasterCard, Cash Back World MasterCard, and World Elite MasterCard will be able to use Apple Pay in 2017.

Desjardins is a member of ACT Canada; please visit www.desjardins.com.

14. APRIVA COMPLETES EXTENSIVE EMV CERTIFICATION WITH MIURA BLUETOOTH READERS TO GLOBAL PAYMENTS

Source: Apriva (10/20)

Apriva and Miura Systems announced that they have completed EMV certification to Global Payments for Apriva's AprivaPay Plus application with the Miura's M010 Bluetooth capable mobile card reader. This certification builds on the existing partnership with Miura, announced last year, which integrated



AprivaPay Plus with Miura card readers. This comprehensive certification spans EMV transactions across both contact and contactless payments, including PIN debit transactions, as well as Online and Offline PIN. Supporting twelve transaction types, this is one of the most extensive EMV certifications to date in the U.S. This all-inclusive certification includes every major card brand: Visa, MasterCard, American Express and Discover, enabling the use of EMV chip card technology for both PIN debit and credit transactions with the Miura M010 card reader. Additionally, the certification covers MSR transactions and compatibility for Apple Pay, Android Pay and Samsung Pay.

“Payments are becoming more uniform and ubiquitous globally, spurring the need for a frictionless solution that functions across all regions for all payment types,” said Stacey Finley Tappin, SVP, Sales and Marketing Communications at Apriva. “By working with Global Payments and Miura, we position Apriva to expand along with the booming worldwide payments market, while delivering safety, security, the latest technology and an extensive selection in payments to our partners.” AprivaPay Plus turns any Apple, Android or Amazon Fire device into a mobile point of sale. This streamlined, EMV-certified application is geared towards small and mid-sized businesses, and can be used in any storefront or mobile venue. Complete with Apriva’s Online Merchant Portal, AprivaPay Plus allows businesses to easily measure and track purchases, manage inventory, and have a command center view of the important information about their business. This versatile, customizable solution can fit the unique needs of any merchant, providing an affordable, secure way to accept payments. Apriva’s connections to more than 30 processors and 1,100 merchant acquirers and Independent Sales Organizations (ISOs) make them an ideal partner for wireless payment services.

Miura’s M010 reader creates a seamless retail experience, transitioning from counter-top to mobile with ease. The platform connects to a tablet cash register and POS system, unclipping to function free of wires. This EMV enabled system is the most versatile on the market, offering expansive payment options for both merchants and their customers. “We are pleased to partner with Apriva and Global Payments to deliver payments mobility and the enhanced security of EMV and NFC transactions,” said Simon Stokes, Chief Commercial Officer at Miura Systems. “The decision to utilize the Miura M010 in effect future-proofs merchants who choose this solution for years to come.”

Apriva and Global Payments are members of ACT Canada; please visit www.apriva.com and www.globalpaymentsinc.com.

15. TORONTO’S DREAM PAYMENTS WINS GLOBAL FINTECH CHALLENGE

Source: Dream Payments (10/24)

Dream Payments, a leading Financial technology (fintech) company that provides a cloud-based mobile payment platform for merchants and financial



institutions, today announced it won first place at VentureClash, a global investment challenge for fintech and digital health companies held on Thursday, October 20, at Yale University in New Haven, Connecticut. This distinction among top early-stage fintech companies from around the world has venture capital (VC) firms taking notice. One of almost 200 contenders to enter the challenge, Dream Payments presented to a broad judging panel of venture capitalists and innovation experts from leading firms – including Canaan Partners, Kepha Partners, OAK HC/FT and Point72 Ventures. These experts picked Dream Payments over 10 other finalists from the U.S., Belgium, England, France, Hong Kong, Ireland and Israel.

The US\$1.5 million award for finishing first will help to further fuel the growth of Dream’s market share and accelerate the company’s entry into the United States, one of the largest financial services markets in the world. “VentureClash 2016 began with a pool of close to 200 very promising companies and ended up selecting the 11 best as finalists,” said Matt McCooe, CEO of Connecticut Innovations. “Dream Payments had a clear business model, an excellent growth plan and a fantastic team, which garnered them first place in our global challenge. We look forward to helping Dream Payments establish their presence in the U.S. and facilitating a soft landing for them in Connecticut.”

VentureClash helps transform top early-stage companies into the next generation of world-class leaders. It was developed by Connecticut Innovations (CI), which provides venture financing and ongoing support for innovative companies in Connecticut. In addition to an investment, awardees benefit from introductions to a network of potential customers, investors, mentors and talent. “It is an honour to be the winner of VentureClash as the caliber of finalists was incredibly strong. This is a significant milestone for Dream Payments as it further validates Dream’s market approach and position as an emerging global fintech leader,” said Brent Ho-Young, CEO of Dream Payments. “CI is a tremendous platform to help accelerate our move to becoming a world-class leader in our industry. Their work is also really bolstering Connecticut as a global innovation hub.”

Dream Payments is a member of ACT Canada, please visit www.dreampayments.com.

16. ACCEO AND TRURATING PARTNER TO SIMPLIFY MERCHANTS AND RETAILERS' INSTANT VISIBILITY ON KEY CUSTOMER EXPERIENCE METRICS

Source: Acceo (10/20)

ACCEO Solutions Inc. and TruRating announced their strategic partnership and launch set for 2017. ACCEO’s secure EMV-certified Tender Retail payment software will combine TruRating’s customer feedback solution to enable North American merchants and retailers to gather live consumer feedback at the point of



payment. "The need to innovate and provide services beyond just payments is core to ACCEO Tender Retail's vision for the future – by leading the marketplace to make great value-added services like TruRating available to our merchants, we want to make it clear that we're putting our customers' needs first," said Joey Vaccaro, VP of Business Development and Strategic Alliances at ACCEO.

Since its launch in January 2015, TruRating has consistently delivered response rates from an average 88% of customers, offering a huge increase on alternative industry-wide methods of feedback, which are often recognized as representing fewer than 1% of customers. TruRating takes the pulse of consumer sentiment via the Pin pad, asking each customer to anonymously rate an aspect of their experience from 0-9 on the keypad, just before they pay. TruRating is making it easier than ever for every consumer to have a say. For the first time, businesses are benefiting from mass, validated, representative feedback every single day. Jon Horsman, head of TruRating Canada, reinforced the value of the partnership: "It's very exciting to work with the incredible portfolio of retailers currently using Tender Retail's services. In the UK and Australia, TruRating has already shown major benefits for the retailers we work with. We are delighted to have ACCEO as a partner to bring this technology to the North American market."

ACCEO Solutions and TruRating are members of ACT Canada; please visit www.acceo.com and www.trurating.com.

17. EMVCO AND PCI SSC COMBINE EXPERTISE ON 3-D SECURE 2.0

Source: Mobile Payments Today (09/30)

EMVCo and PCI Security Standards Council have announced that they are collaborating to support the upcoming launch of 3-D Secure 2.0 (3DS 2.0). The announcement was made at the PCI Security Standards Council Community Meeting of global cybersecurity experts in Las Vegas last week, according to a press release. 3DS is a messaging protocol used by the payments industry to enable consumers to authenticate themselves with their card issuers when making online purchases through PC web browsers. Later this year, EMVCo will release EMV 3-D Secure – Protocol and Core Functions Specification v2.0 (EMV 3DS 2.0 Specification). This specification will support the payments industry in delivering a globally interoperable and consistent consumer experience across major e-commerce channels and connected devices, including in-app purchases.

Based on this functional specification, the PCI Security Standards Council is working to provide security requirements, testing procedures, assessor training and reporting templates to address the environmental security associated with 3DS 2.0. The related documentation will be released in the first half of 2017. "3DS 2.0 is critically important to introduce improved authentication and we are excited to be working hand-in-hand with EMVCo to secure all payment channels," said PCI Security Standards Council Chief Technology Officer Troy Leach. "The marketplace is changing every day, and with mobile payments projected to

continue to rise, it is vitally important that the security concerns be addressed in the design of the authentication system to keep up with the evolving threats."

18. UNIONPAY'S CHIP CARD TECH TO BE ADOPTED IN SIX ASIAN COUNTRIES

Source: PYMNTS.com (10/17)

UnionPay announced it launched a chip card technology licensing cooperation with seven members of the Asian Payment Network (APN). In a press release, UnionPay said this marks a new breakthrough in the "Going Global" of China's financial technology standards. Major switch networks in Singapore, Thailand, South Korea, Malaysia, Indonesia and the Philippines will adopt the UnionPay chip card standard in card acceptance and issuance. According to the company, UnionPay cards are now accepted in 160 countries and regions and issued in 40 countries and regions. While promoting cross-border businesses, UnionPay is also giving full play of its advantages in network, product, technology and standard to take part in financial infrastructure construction in markets outside of mainland China.

"China's payment industry is developing rapidly and is playing an increasingly significant role in promoting eCommerce, enhancing financial inclusion, meeting consumers' demands and fueling economic growth," said Fan Yifei, vice president of the People's Bank of China, in the press release. "APN members' adoption of the UnionPay chip card standard means that UnionPay's technology and service have been recognized by the international market." Composed of 13 switch networks in 11 Asia-Pacific countries, APN is aimed at realizing the interconnection among various payment networks in the region. In 2005, APN chose UnionPay as the sole provider of its cross-border chip card standard through competitive bidding. Now, its members will adopt the UnionPay chip card standard for all the APN brand cards it issues.

"This agreement signing is of great significance. First, it means that the cooperation between UnionPay and payment industries outside mainland China has upgraded from business cooperation to comprehensive partnership in product and standard. Second, it helps the payment industries in these markets upgrade and paves way for the rollout of UnionPay's innovative payment products. Third, it helps enhance the competitiveness of China's payment industry," UnionPay said.

UnionPay is a member of ACT Canada; please visit www.unionpay.com.

19. ALIBABA AND GEMALTO WORK HAND-IN-HAND TO SECURE CHINA'S IOT MARKET

Source: Gemalto (10/17)

Gemalto announced that it is collaborating with Alibaba Group's YunOS to provide connectivity and security for YunOS – developed by Alibaba Group, it is a cloud-based, data and services oriented Internet of Things (IoT) operating system, widely integrated into IoT devices, as well as chips and sensors across industries. In this partnership, Gemalto provides its Allynis Trusted Service Hub that allows easy provisioning of security sensitive applications throughout the identity lifecycle management. Security is a paramount component in IoT devices as it provides the peace of mind for YunOS customers, such as drivers of connected cars, and users of smart home appliances and mobile devices. This alliance extends YunOS' vision of a uniform identity framework for disparate IoT applications.

Although the IoT market is still in its infancy, it is widely expected to gain tremendous traction in the next few years. According to Gartner, by 2020, there will be 20.8 billion[1] IoT devices in use, generating a US\$3.49 trillion market. The YunOS had acquired 70 million smartphone users and over 100 million smart terminals by May this year. "The YunOS is not merely about connecting things, it connecting everything by credible perception, reliable connectivity, and efficient circulation of services," said Zhang ChunHui, Alibaba OS Business Group President. "By being a one-stop IoT security solutions provider and a long-time trusted partner, Gemalto has the right credentials and is an ideal fit to fulfil our YunOS vision."

"In recent years, the Chinese market is teeming with innovation, with Alibaba as one of the most active trailblazers in the industry. We are proud to be the technology enabler in Alibaba YunOS' biggest IoT push," said Suzanne Tong-Li, President, Greater China & Korea at Gemalto. "We have the rich expertise and experience in enabling security for a variety of IoT applications in China and across the globe, putting us in a sweet spot to provide security and trust in this ever-expanding ecosystem."

[1] Source: Gartner

Gemalto is a member of ACT Canada; please visit www.gemalto.com.

20. DISCOVER QUALIFIES PULSE TEST SUITE FROM ICC SOLUTIONS

Source: ICC Solutions (10/03)

ICC Solutions is delighted to announce the release of the PULSE Contact D-PAS Test Suite, hosted on the industry leading ICCSimTMat test tool platform, which has been fully tested and qualified by Discover enabling Acquirers, VAR's, ISV's and Merchants to perform EMV level 3 contact chip terminal integration tests



during development prior to deployment and formal accreditation with Discover. This PULSE Contact D-PAS: ATM, and POS Pin Debit, End-to-End Test Plans contain the test cases that may be executed by an Acquirer to validate that the Acquirer's infrastructure and terminals can support D-PAS chip card transactions in accordance with the D-Payment Application Specification (D-PAS). For the purpose of certification testing, Acquirers must execute a subset of these test cases as indicated on the Certification Response Form.

Derek Ross, Head of Sales and Business Development at ICC Solutions, commented: "ICC Solutions welcomes the PULSE Contact D-PAS Test Suite as the latest addition to our extensive portfolio supporting EMV migration and adoption in the U.S. re-enforcing our position as global leader in provision of qualified test tools. This new test suite features same leading edge automation features present in all ICCSimTMat test suites ensuring our customers benefit from a consistent and efficient certification test campaign."

Discover and ICC Solutions are members of ACT Canada; please visit www.discover.com and www.iccsolutions.com.

21. INGENICO GROUP OFFERS INNOVATIVE CONSUMER EXPERIENCE AT FARMACIAS GUADALAJARA STORES IN MEXICO

Source: Ingenico (10/27)

Ingenico Group and Farmacias Guadalajara, the main pharmacy chain in Mexico, announced the deployment of a comprehensive payment solution enabling Farmacias Guadalajara to enhance consumer experience in all its stores throughout the country. Ingenico iSC Touch 480The solution combines a multimedia POS solution, a software application and The Estate Manager, Ingenico's state-of-the art terminal management system.

Ingenico iSC480 and its multimedia capabilities will allow Farmacias Guadalajara to reinvent consumer engagement during checkout. Its extra-large 7" touchscreen and the integration of its new software application, specifically designed to enhance the remote management of the chain, will enable the retailer to play targeted videos, advertisements and run other processes of interest, enriching the customers' experience. In addition, Ingenico's Estate Manager will give Farmacias Guadalajara full knowledge and control of their estate remotely, while reducing their terminal estate management costs. The solution streamlines operations by enabling remote software deployment, allowing changes and updates with multimedia content.

"We chose Ingenico Group for its ability to provide a state-of-the-art multimedia payment solution, which will allow enhanced consumer interaction. We were looking for innovative technology to run online surveys, promote instant sales and broadcast targeted advertisements at points of sale," commented Farmacias



Guadalajara's Director, Mr Javier Arroyo. "In addition to a consumer-centric experience, the solution will allow us to better understand client behaviour while visiting our stores. Complete with efficient terminal estate management, the solution will help reduce our company's estate management costs and save time by avoiding technical visits to stores to fix problems or update the checkout solution," added Mr Javier Arroyo.

Mexico's large retailers, such as Farmacias Guadalajara, have increasingly high expectations for payment solutions to handle the complexity of their business," said Mr Fernando Alonso Morodo, Managing Director for Ingenico Group in Mexico. "The implementation of this innovative solution illustrates Ingenico's ability to address retailers' challenges, for instance the increased number of payment touch points, reducing payment-related costs and the complexity of payment operations," he added.

Ingenico is a member of ACT Canada; please visit www.ingenico.com.

22. CANADA'S CREDIT UNIONS WIN BIG FOR MOBILE PAY

Source: Canadian Credit Union Association (10/21)

Canada's Credit Unions were recognized with the 2016 IVIE Award Winner for Canadian Payment Innovation Benefiting Consumers; and the 2016 IVIE Award Winner for People's Choice, a new category for 2016. The awards program celebrates innovation in payments and digital identity products. Mobile Pay (www.mobilepaycanada.com) was the result of collaboration between credit unions and industry partners who worked collaboratively to create the most advanced and customer-friendly Android payment service in Canada. This secure Mobile Pay service uses Interac Flash and enables credit union member/owners to use their smartphones to make purchases directly from their savings or chequing accounts at retailers displaying the Interac Flash logo.

Canada's large Credit Unions led this initiative working closely on this collaborative solution with the following partners:

- Interac Association/Acxsys Corporation;
- Everlink Payment Services;
- Celero Solutions;
- Central 1 Credit Union;
- MNP LLP supported by NorthCard; and
- Canadian Credit Union Association.

Canada's credit unions pride themselves on their long history of innovation and financial services firsts focused on meeting members needs and strengthening their competitiveness. This approach enabled the four champion credit unions, Conexus Credit Union and Affinity Credit Union (SK); First West Credit Union



(B.C.); and Meridian Credit Union (ON), to go to market in June. Additional credit unions will be rolling out Mobile Pay in the coming months.

“Credit union leaders from across the country worked closely with industry partners to develop a structured process that allowed for the collection, cross-collaboration and cross-valuation of ideas. Credit unions have a long and rich history of innovation and we are looking forward to finding new and exciting ways of working with others to continue to meet the needs of our members and push the industry forward.” Martha Durdin, president and CEO, Canadian Credit Union Association

“It was a privilege to be a part of the coalition of the 15 largest credit union leaders from across Canada, who were responsible for using their collective knowledge, resources and national presence to provide technology leadership and innovation to enrich the financial lives of credit union members.” Chief Information Officer, Gary Genik, Meridian Credit Union.

Canadian Credit Union Association, Central 1 Credit Union, Interac Association, MNP LLP and NorthCard; are members of ACT Canada; please visit www.ccu.com, www.central1.com, www.interac.ca, www.mnpconsulting.ca and www.northcard.com.

23. OBERTHUR SUPPORTS MOBILE PAYMENTS FUTURE IN THE NORDICS

Source: PYMNTS.com (10/07)

Oberthur Technologies (OT) is partnering with payments service provider Nets to deliver support for mobile payments to Scandinavian banks. The collaboration, announced on Oct. 6, is aimed at helping to service banks in the Nordics with a financial platform that supports future international mobile payment methods. Nets and OT will combine their capabilities to offer an end-to-end mobile payment solution, which will include Host Card Emulation (HCE) and tokenization to secure payments.

“By adding OT’s Digital Enablement platform to our interoperable and modular platform, Nets will further increase our customers’ capabilities to seamlessly enable international mobile payment means, such as e.g. Samsung Pay for their customers. Once banks have finalized their commercial agreements with international mobile payment systems, Nets will be there to secure immediate enablement of these new payment means, on demand, through their mobile wallet solutions. For banks already integrated with Nets, this will be an off-the-shelf service,” Hans Henrik Hoffmeyer, SVP of mobile services for Nets, said in a statement. According to OT, the firm already has existing partnerships and connections with digital wallet providers, which will enable payment cards to be digitized from the moment the cardholder is enrolled in order to secure provisioning



services. The new partnership between OT and Nets will bring what the companies describe as a fully integrated service to participating financial institutions.

Eric Duforest, managing director of the Financial Services Institutions business at OT, added: "We are very proud to partner with Nets to help enable international mobile payment systems for Northern European banks. We are convinced that mobile payments will be adopted by consumers thanks to solutions enabling real-time card enrollment and provisioning. Nets is well-positioned in respect of processing services in Northern Europe, which will allow fast integration of banks. Nets' choice to work with us is a recognition of our leadership and expertise in enabling mobile payment initiatives all around the world."

Oberthur is a member of ACT Canada; please visit www.oberthur.com.

24. BITCOIN AND MOBILE PAYMENTS SHARE SOME GROWING PAINS

Source: Mobile Payment Today (10/13)

Bitcoin was a giant digital "take that" to the government and big financial institutions. Its founders basically said, "We don't need your centralized control; we can create a truly free currency." Bitcoin was the digital representative of libertarianism as it was built to encourage a free market without meddlesome government control. Many bitcoin evangelists believed it would one day overtake fiat currency. That dream, however, is still far from becoming a reality because bitcoin still has the same problem as mobile wallets – not enough people use them. Mobile payments have struggled to reach mass acceptance. This seems odd since the necessary technologies of near-field-communication, tokenization and authentication are all falling into place. Mobile payments has the "how" down, but it hasn't captured the "why." Why should customers use mobile payments? Bitcoin suffers from this same issue.

Most consumers don't see any problems with their preferred forms of payment: cash and plastic. Common sense dictates, "If it isn't broken, don't fix it." Why would customers turn to alternative payment methods such as bitcoin or mobile payments, when they don't see a problem with their cash or cards? Unless everyone becomes a libertarian, bitcoin isn't going to see mainstream acceptance at this rate. Bitcoin needs a "why" to have a path forward to mainstream acceptance. Retailers and bitcoin companies both have a role to play in providing this reason to the customer.

Provide incentives

If retailers want customers to use a new tool, they need to provide incentives. They could give customers, for example, additional loyalty points for using a bitcoin or mobile wallet. They could also offer discounts for bitcoin users. When customers realize they can save money by using virtual currency, adoption

rates will go up. Bitcoin Loyalty is one example of a loyalty program that tracks bitcoin addresses and rewards loyalty points to repeat customers.

Remove barriers

Bitcoin is a difficult tool for average users. "It has so far developed in a way that is too complex for (the) average person. If you talk to people in your life, you are going to get blank stares if you mention bitcoin," Gene Kavner, CEO of iPayYou told Virtual Currency Today last month. In order to draw in customers, you need to develop easier ways to use bitcoin. Bitcoin ATMs and vouchers can help solve this dilemma by supplying easier methods to purchase bitcoins. The company iPayYou is addressing this issue by allowing users to send bitcoins via Twitter.

Recognize bitcoin's benefits and limitations

Bitcoin is by nature a volatile currency, which makes it very valuable to investors but less tenable as a regular currency. The volatile nature of bitcoin can also make it a key incentive. An online retailer, for example, could partner with a bitcoin company to offer small amounts of bitcoin as a reward for loyalty program customers. Online retailers could create more loyal customers by using bitcoin as an incentive rather than other retailers who simply offer loyalty points. The online retailer could keep the rewarded bitcoins in a company owned bitcoin wallet that the user could use for purchases. Businesses could also emphasize the secure nature of bitcoin for customers who are worried about providing credit card information. Bitcoin is not the ultimate currency, but with the right tools and incentives, it can gain a lot more love from the mainstream.

25. SPEED MERCHANTS: CLEARING AND SETTLEMENT SYSTEMS AROUND THE WORLD BECOMING FASTER

Source: Payments Canada (10/11)

Research by Payments Canada and the Bank of Canada has shown that countries around the world are making innovative changes to their systems to pave the way for faster payments. As Payments Canada moves forward with its modernization strategy, the research looked at how 27 jurisdictions compared to Canada in their response to new technologies, evolving user demands and a changing regulatory landscape. The research, PDF icon Clearing and Settlement Systems from Around the World: A Qualitative Analysis compared timeliness, access, functionality, interoperability and risk management in payment systems.

Carol Ann Northcott, Payments Canada's vice president of risk, security and research explains the examination of the payments landscape worldwide in an article first published in the October edition of The Treasurer, the membership magazine for the Association of Corporate Treasurers in the U.K. To read the

article, please visit https://www.payments.ca/sites/default/files/36-37_payment_and_settlement.pdf

Payments Canada is a member of ACT Canada; please visit www.payments.ca.

26. HOW TECHNOLOGY IMPACTS THE THREE MOST IMPORTANT MOMENTS IN RETAIL

Source: Let's Talk Payments (10/05)

In modern tech-influenced retail, there are only three moments that matter and all of them have been redefined by financial technology companies. While mobile has been steadily taking over the traditional retail business model, startups working with various aspects of online shopping have been shaping customer experience in search, choice and payments for products. Those three elements of shopping experience are the ones that matter the most, and for each element, there are important developments that have enhanced the experience and facilitated growth of e-commerce. So, what are those retail moments that matter? Explaining the way mobile has redefined the consumer decision journey for shoppers, Google has defined three retail moments that matter in the following way: I-need-some-ideas moments happen when people have a general awareness of the product category they're interested in, such as living room furniture, but they haven't yet narrowed down their choices to an exact product.

Let's start with the first one – the search, or the moment that starts the journey. E-commerce has long recognized the importance of sophisticated search engine for a superior experience. At the end, only the ability to organize the categorization and suggestions in a sophisticated way can ensure the ability to offer what customers are really looking for. The technology that has been heavily involved in redefining this step is AI. Learning engines are able to offer customized experience and remember personal preferences of different users to surface relevant offers every time a user performs a search. As Keenan Baldwin, Co-founder of SiteZeus, commented to Forbes, "AI has had a great impact on the retail eCommerce customer experience. We've seen a large advancement in the past decade, but we've not even scratched the surface. Online retailers are scrambling to partner with or adopt new AI technologies to help facilitate customer interaction to try and match and even surpass the typical in-store experience."

One of the ways AI is believed to transform e-commerce is through NLP application. Professionals suggest that the key is to utilize the power of artificial intelligence combined with natural language processing capabilities (NLP), essentially putting the human element back into a digital experience. As the Information Age explains, by doing this, e-commerce platforms will be able to turn massive numbers of failed experiences into successful conversions. Natural language processing seeks to understand text as humans understand text. That means not merely computing words in a vacuum, but applying contextual



understanding. Chatbots are also a form of AI that can improve the quality of the search moment. Personal assistants embedded into websites can reduce the friction of looking for a perfect fit and cut the time from search to purchase by offering exactly what potential customers are looking for. Which-one's-best moments—a.k.a. consideration moments—happen when people turn to their phones in short bursts of activity to compare prices, brands and specs, and read product reviews from trusted sources.

The next retail moment that matters is the moment of choice. Product comparison websites, social media representation and peer reviews play a crucial role in the choice of the product. Reviews, in particular, have become an important element of websites and some of the most successful brands invest efforts in tracking and controlling the feedback, responding to the mood of target customers and reviews. Just like with search, chatbots are well-positioned to take control at this stage by offering an opportunity to look through reviews in the same interface and fetching comparison data upon the request of a customer. In that case, brands have control over the whole process and can satisfy the needs of a customer without letting him/her out of the loop. I-want-to-buy-it moments happen when the research is done and it's decision time. People make a choice about which brand or retailer to buy from, and whether to buy online or in-store.

The last element is all about seamless payment experience. A variety of options is ensuring frictionless, secure and convenient shopping experience when shopping online across devices. PayPal, Apple Pay, Android Pay, gift cards, prepaid cards, Google Checkout and a variety of other options have led to the expansion of online purchases share in total sales volume and facilitated new players to enter the space as companies saw the increasing usage of different options. As a result, user expectations now require retailers to offer a variety of checkout options to relieve users from the pain of filling out additional forms during checkout and provide an increased sense of security. In addition, the variety of payment options given to a customer can be one of the key factors of success in the online shopping industry nowadays.

The variety of options improves a customer's shopping experience, leading to a lower rate of abandoned carts and higher sales of a higher volume. With APIs being open on the left and right and extremely easy implementation of checkout options, there is no reason not to smoothen the last step in the online shopping journey.

27. VISA INTROS INTERNATIONAL B2B PAYMENT SERVICE BUILT ON BLOCKCHAIN TECHNOLOGY

Source: Mobile Payments Today (10/24)

Visa has announced a preview of Visa B2B Connect, a new platform the network is developing to give financial institutions a "simple, fast and secure way



to process business-to-business payments globally," according to a press release. Visa said it is working with Chain to build Visa B2B Connect using Chain Core, an enterprise blockchain infrastructure that facilitates financial transactions on scalable, private blockchain networks.

Building on this technology, Visa is developing a new near real-time transaction system designed for the exchange of high-value international payments between participating banks on behalf of their corporate clients. Managed by Visa end-to-end, Visa B2B Connect will facilitate a consistent process to manage settlement through Visa's standard practices.

Visa B2B Connect, which Visa plans to pilot in 2017, is designed to improve B2B payments by providing a system that is:

- predictable and transparent — banks and their corporate clients receive near real-time notification and finality of payment;
- secure — signed and cryptographically linked transactions are designed to ensure an immutable system of record; and
- trusted — all parties in the network are known participants on a permissioned private blockchain architecture that is operated by Visa

"The time has never been better for the global business community to take advantage of new payment technologies and improve some of the most fundamental processes needed to run their businesses," said Jim McCarthy, executive vice president of innovation and strategic partnerships at Visa. "We are developing our new solution to give our financial institution partners an efficient, transparent way for payments to be made across the world." "This is an exciting milestone in our partnership with Visa," said Adam Ludwin, CEO of Chain. "We are privileged to support Visa's efforts to enhance the service it provides to its clients and shape the future of international commerce with this blockchain-enabled innovation — streamlining business payments among financial institutions and their customers around the world."

Visa is a member of ACT Canada; please visit www.visa.ca.

28. CENTRAL 1 LAUNCHES FIRST FULLY INTEGRATED OPEN ANYWHERE ONLINE AND MOBILE ACCOUNT OPENING WITH CONEXUS CREDIT UNION

Source: Central1 (10/04)

Credit unions across Canada now have more options to streamline their member onboarding, and Canadians have more choice than ever to bank how and when they want. Open Anywhere, developed by Central 1 Credit Union (Central 1), enables prospective credit union members to open and fund new accounts online in minutes, using their mobile, tablet or desktop devices. This week Conexus, Saskatchewan's largest credit union, is the first to launch the enhanced Open Anywhere product. The new Open Anywhere includes full core banking



system integration for a streamlined back-end workflow, digital signature capture, real-time account funding via Interac e-Transfer, compliance with the latest regulatory changes, and more.

“True to our innovative spirit, we are always looking for ways to better serve our members and future members,” says Eric Dillon, CEO of Conexus Credit Union. “We believe banking is no longer a place you go, but a thing you do, and we are excited to partner with Central 1 to release Open Anywhere, an online account opening solution, that is the first of its kind in Canada. New members to Conexus can open their No-Fee Accounts within minutes without the need to deposit a cheque. This is just another way for us to deliver meaningful end-to-end service to our members anytime, anywhere they choose.”

Open Anywhere first launched in early 2015 with First West Credit Union acting as a pilot. Since then, more than 10 Canadian credit unions, including Westminster Savings, have turned to Open Anywhere to grow their membership and deepen share of wallet. Westminster Savings has seen its volume of completed online applications triple in the time it has been using Open Anywhere. Developed by Central 1’s “FinTech” experts in Digital & Payments, Open Anywhere is part of a suite of products that enable credit unions to offer a seamless customer experience across channels: in-branch, online, and mobile. This includes Borrow Anywhere, an online lending product currently in development.

Central 1 is a member of ACT Canada; please visit www.central1.com.

29. MOBILE PAYMENTS AWARENESS GROWS, CASH USE DECLINES; CONSUMERS DEMAND MORE TO MAKE THE LEAP TO MOBILE, ACCENTURE SURVEY FINDS

Source: Accenture (10/18)

Sixty percent of consumers in North America use cash at least weekly to make purchases at a merchant location, down seven percentage points from 2015 – the most significant decline in use of traditional payment methods over the past year, according to a new report from Accenture (NYSE: ACN). Awareness of mobile phone payments increased four percentage points from last year to 56 percent, however the regular use of mobile payments remains flat at 19 percent.

The report – the Accenture 2016 North America Consumer Digital Payments Survey – is based on a survey of more than 4,000 smartphone users in the United States and Canada, and is the most recent report in Accenture’s multi-year research on consumer attitudes about how they want to pay now and in the future.

The survey found that even with the decline in cash use, cash and plastic continue to be the most common payment methods. North American consumers’ use of debit cards for payments in merchant locations has remained consistent at 58 percent, while credit card usage was up three percentage points from the



previous year to 53 percent in 2016. “We are seeing a gradual increase in consumer awareness of mobile phone payments options; however, adoption has remained flat over the past few years,” said Robert Flynn, managing director of Accenture Payments in North America. “Consumers are content to use cash and plastic for their everyday transactions, and while the use of cash is declining overall, it is the most commonly used form of payment – and consumers expect it to remain so in 2020. To shift consumers’ payment behaviors will take more than just providing another ‘me too’ mobile payments option; leading merchants will identify and provide next-generation, value-added services.”

While the use of mobile phone payments at merchant locations remains flat according to the survey, other digital payments are on the rise – a trend that consumers expect to continue. Since 2014, consumers’ use of PayPal has increased four percentage points to 18 percent in 2016. Consumers expressed optimism about mobile wallet adoption in the future, expecting a nearly 60 percent increase in the use of mobile wallets by card networks (from 14 percent in 2016 to 22 percent in 2020) and tech giants (from 13 percent to 21 percent in 2020).

“The existing payments system isn’t broken, which is why consumers are not making a mass-move to mobile phone payments adoption – the incentives are not there yet,” said Michael Abbott, managing director of Accenture Digital, Financial Services, North America lead. “Today’s mobile phone payments options provide basic, first-generation functionality; it’s like running an Atari game on an Xbox system – amazing underlying potential, but only providing a very basic offering. Consumers expect more in today’s fast-paced digital environment; just the ability to tap-and-pay is not enough. Payments providers need to bring the traditional card to life and create a real-time interactive experience for consumers.”

The survey identified barriers to consumer adoption of mobile payments, which, if addressed, can provide first-movers with a significant advantage. Of the nearly two-thirds (64 percent) of consumers who have never used their mobile phone as a payment vehicle at a merchant location, more than one-third (37 percent) said they have not done so because they believe cash and plastic are fine for their payments needs; while nearly one-in-five prefer not to register payments credentials into their mobile phone (21 percent) or are concerned that unauthorized transactions may happen (19 percent).

Consumers trust traditional payments providers the most and are largely satisfied with digital payments transactions; however, there are no clear winners yet. Nearly three-quarters (73 percent) of North America consumers said they trust traditional card providers the most as their mobile payments provider, followed by alternative payments providers like PayPal (63 percent), established retail banks (62 percent) and large tech companies (59 percent). Of those consumers who have used mobile payments apps in store, consumers most frequently used their bank’s mobile app (26 percent), and 76 percent expressed satisfaction with this experience.

Millennials and Mass Affluents: the Path to Adoption

Millennials and mass affluent individuals (earn \$100,000 annually after taxes) are natural segments to target for payments providers, leading adoption trends in digital and mobile payments and self-proclaimed early adopters for the next wave of payments technology. More than half of both groups (52 percent) consider themselves to be among the first to try new technologies. Nearly one-third of millennials (30 percent) and mass affluents (35 percent) are extremely interested in initiating payments transactions using wearables (e.g. watch, etc.) or smart devices, such as a refrigerator or car.

Flynn concluded, “Millennials and higher income individuals may be low-hanging fruit for payments providers looking to increase adoption, but there is also a vast amount of untapped opportunity with consumers who are becoming more familiar with digital technologies and the rewards and convenience it affords. As open banking becomes more prevalent, driven by APIs, consolidated customer data will provide a full picture of the customer, giving payments providers the information they need to create unique and differentiated offerings. Winning in mobile payments is anyone’s game at this point.”

While millennials and mass affluents are leading the adoption charge, the survey found that consumers overall are becoming more open to considering digital payments options. One-in-five consumers are interested in using wearables (21 percent) or smart devices (20 percent) to initiate payments, a two and three percentage point increase, respectively, from 2015. Consumers expressed the most interest in the ability to park their car and have the car automatically pay for parking (30 percent). Today, nearly one-in-five consumers (21 percent) are extremely comfortable linking personal data with different ways to pay for faster authentication and one-step checkout, and nearly two-in-five are comfortable providing online bank account credentials to third-parties.

Methodology

The survey was conducted by Accenture Research among 4,000 adults in the United States and Canada between July 6, 2016 and July 22, 2016. The overall margin of error is +/- 1.55 percentage points at the midpoint of the 95 percent confidence level.

Accenture is a member of ACT Canada; please visit www.accenture.com.



30. ETHOCA WINS 2016 ACT CANADA IVIE AWARD FOR CANADIAN INNOVATION BENEFITTING MERCHANTS

Source: Ethoca (10/21)

Ethoca announced that it has won the 2016 ACT Canada IVIE Award for Canadian Innovation Benefitting Merchants. ACT Canada is the leading stakeholder association driving payment evolution and digital identity. ACT Canada merchant members judged that Ethoca Alerts, which provides merchants with a highly effective early warning on cardholder confirmed fraud and customer disputes transactions, merited the accolade at its third annual IVIEs in Toronto, Canada. This event celebrated innovation and excellence in secure payments and digital Identification. The award recognizes the performance of Ethoca Alerts in tackling rampant inefficiencies in today's chargeback process, which cost card issuers and merchants billions of dollars every year while creating a poor experience for cardholders. Ethoca's flagship service solves this problem and allows merchants to immediately resolve disputes before ever reaching the costly chargeback stage.

"We are honored to be recognized in our home country for the innovation behind Ethoca Alerts," said Keith Briscoe, Chief Marketing Officer for Ethoca, "There is no guesswork on our network, as all flagged transactions have been confirmed as fraud by the cardholder. Because our alerts arrive in near real-time – instead of weeks later – merchants can stop the fulfilment of fraudulent orders, avoid the chargeback and recover the cost of the goods, while saving time and money for issuers." Ethoca's global collaboration network spans more than 40 countries, 555+ card issuer and 4,700+ merchants including the world's largest card issuers and ecommerce brands.

This recent victory adds to a growing list of Ethoca award wins and nominations in 2016. This includes 2016 Merchant Payments Ecosystem (MPE) International Award (Germany), 2016 Card & Payments Award for Best Security or Anti-fraud Solution (UK), 2016 PayFORUM Award for Excellence in Anti-Fraud Solutions (France), Electronic Transaction Association (ETA) 2016 ETA Star Award for Technology Innovation (US).

Ethoca is a member of ACT Canada; please visit www.ethoca.com.

31. FIME AND BSMART PARTNER TO SEAMLESSLY SUPPORT PAYMENT TECHNOLOGY IMPLEMENTATIONS IN BRAZIL

Source: Fime (09/27)

FIME announces its partnership with Bsmart to further enhance its strategic consultancy, implementation support and certification tools and services offering to the Brazilian marketplace. The collaboration will be of particular value to issuing and acquiring banks implementing EMV-based technology in the region. "Brazil is



an important market for FIME and we're pleased to offer extensive implementation support in local language and the ability to bill in local currency," comments Francois Gagnard, Sales Director at FIME America. "While EMV migration is near completion, we have witnessed many customers preparing for contactless and mobile payment deployments in recent months due to the influx of overseas visitors for the 2016 Olympics. We believe this trend will continue. Bsmart's expertise and unparalleled local knowledge means it is the perfect partner to support our customers and drive new business in this region."

Bsmart specializes in helping companies maximize opportunities in Brazil and has extensive experience within the payments and technology sectors. Bsmart will also support FIME in working with local customers to bring card and mobile transaction services to market effectively and confidently using secure chip or cloud-based solutions across the telecoms, transit and identity markets. Karina Prado Freitas Dannias, Managing Partner at Bsmart Consulting & Outsourcing Services, a Bsmart Group company adds: "FIME has been a leading payment consultancy in Brazil for many years. We look forward to working together to offer even more support services to FIME's customers as payment technology continues to evolve and FIME advances its services and product portfolio across vertical markets."

FIME is a member of ACT Canada; please visit www.fime.com.

32. VANTIV FIRST TO OFFER VERIFONE CARBON WITH COMMERCE PLATFORM

Source: Vantiv (10/21)

In an era where connected commerce technologies are transforming consumer behavior, research shows the next several years will see small- to medium-sized businesses (SMBs) increasing adoption of new commerce software and technologies. To help SMBs keep pace and win in the face of this transformation, Verifone and Vantiv, Inc. announced an agreement to bring the Verifone Carbon Commerce Platform to market in the United States as a key feature of the Vantiv SmartFit Solutions. "We found that businesses want smarter, more secure technology to provide advanced payments, create loyalty and grow their business. Verifone Carbon with Vantiv SmartFit Solutions is designed to do that, fitting the needs of small and medium-sized businesses," said Patty Walters, senior leader of Security, PCI, EMV and Terminals at Vantiv. The Vantiv SmartFit Solutions is a flexible, proprietary approach to providing SMBs with a customized solution for payment processing and adaptable applications that meet their unique needs as their business grows. Verifone Carbon will be loaded with Vantiv's tablet-based payments system for retailers and restaurants. Working with partner iMobile3, a leading provider in point of sale and commerce software, Verifone Carbon includes order and inventory management, tools for online analytics and



reporting, and a gift card program, all features that most SMBs desire but often can't afford.

"SMBs are in need of open, agile and intelligent solutions that can help them adapt to change," said Jordan McKee, senior analyst, 451 Research. "These solutions must address key organizational challenges, such as controlling costs and generating customer loyalty, while accommodating the influx of new consumer technologies such as digital wallets." Later this year dozens of businesses across the U.S. will begin piloting their own customized Verifone Carbon. Each business will receive a system designed for their unique needs, with security, support, versatile payment acceptance, and tailored value-added solutions including the freedom to choose applications to manage their business and increase customer engagement.

Designed as a portable countertop with dedicated merchant and consumer facing tablets for optimal business management and consumer engagement, Verifone Carbon is powered by Intel's high-speed chipset for fast processing to run Vantiv's proprietary software and third party applications. Verifone's Commerce Platform enables open, cloud-based and secure solutions. Merchants will be able to access a variety of applications from the worldwide developer community, to manage and grow their business, and reward their best customers. In this pilot, pre-loaded apps will include TruRating, an innovative solution that takes the pulse of consumer sentiment via the Carbon device, asking customers to anonymously rate an aspect of their consumer experience on the touch screen, and Verifone Media App for displaying promos and branded content on the consumer-facing tablet, all in real time. "Which point of sale to buy is a critically important decision for merchants and their service providers to meet changing consumer expectations," said Jennifer Miles, president, Verifone North America. "By offering Vantiv's SmartFit solutions on Verifone's Commerce Platform, Vantiv will enable merchants to drive more stickiness and loyalty, and provide consumers with experiences that are engaging, efficient and relevant to their connected world."

Vantiv and Verifone are members of ACT Canada; please visit www.vantiv.com and www.verifone.com.

33. GIESECKE & DEVRIENT TEAMS WITH RITTENHOUSE PAYMENT SOLUTIONS FOR EVENT-BASED WEARABLE SOLUTIONS

Source: PR Newswire (10/25)

Extending its active participation in contactless-payment-enabled wearables, G&D is bringing a new wearable solution to the market with Rittenhouse Payment Solutions, a leader in the prepaid payments space who offers cutting-edge program solutions. The prepaid smart wristband can be used for payment and access in a variety of everyday environments. With a dramatic increase in the desire for secure cashless solutions from event organizers,



Rittenhouse and G&D are combining their expertise to deliver a full service solution for entry and tap-and-pay wristbands and other wearable form factors. This new offering allows consumers to leave their wallet at home and still have full entry and payment capabilities in a convenient, water and weather proof wristband. It can be a companion device to an existing account or a standalone option with prepaid funds for use at concerts or sporting events, for example. Prepaid funds, coupons or tickets can be one time use or reloadable, giving greater flexibility to secure transactions with any contactless payment terminal.

"We are excited to be working with G&D to drive this fast evolving space in the US market. G&D's innovation and security capabilities are second-to-none," says Todd A. Wrubel, CEO of Rittenhouse Payment Solutions. "By bringing together G&D's product development and security expertise and Rittenhouse's prepaid solutions and channels we will fulfil a market demand for wearables and challenge the prepaid market." "Enabling cashless event participation in a fun and secure way is a great extension of our business in EMV cards and mobile payments and banking," commented Scott Marquardt, President of G&D's US Mobile Security organization. "Working with Rittenhouse means that event organizers will have more options for payment and access - and a better overall experience for consumers."

As a leader in the smart wearables market, G&D has already delivered secure elements for the Swatch Bellamy and Samsung Gear smart watches, as well as payment technology for the Jie Pai smart wristbands. The Fit Pay platform, in combination with G&D's capabilities in embedded secure operating systems, applications and credentials lifecycle management, brings a complete end-to-end portfolio to wearable device partners. The new partnership with Rittenhouse extends G&D's expertise to the event-based market segment.

Giesecke & Devrient is a member of ACT Canada; please visit: www.gi-de.com.

34. NEW PRINT ON DEMAND SERVICES FROM CPI CARD GROUP PROVIDE FLEXIBILITY FOR PREPAID PAYMENT CARD PROGRAMS

Source: CPI Card Group (10/24)

CPI Card Group announced a new globally available set of print on demand solutions that deliver significant flexibility to prepaid program managers and financial institutions. CPI customers can now produce full-image, personalized payment cards and related collateral on a one-by-one, on-demand basis, enabling individualized offerings and eliminating waste. CPI Card Group's services for prepaid programs include card design and production, design and printing of collateral and packaging to accompany cards, and fulfillment services to deliver cards to consumers. The new solutions provide high-resolution card and collateral printing along with vibrant digital CMYK color that does not bleed through the page.



The full range of on-demand production of cards and collateral is now available to CPI's U.S. customers, with on-demand collateral also offered in the U.K.

“The prepaid market is ready to embrace vibrant new personalization services that make both cards and accompanying collateral materials more compelling to consumers,” said Lane Dubin, senior vice president of sales and marketing at CPI Card Group. “Our new solutions lend significant flexibility to program managers, and we are eager to work with them to leverage the new functionality to provide speed, convenience and highly targeted offerings to their customers.” The new services allow for unique customization. A program manager developing an incentive card program can harvest customer buying data to create highly personalized collateral, naming a local store or brand specific to each customer within the note delivering the card. In addition, corporate teams can create tailored materials and pamphlets—using different size card stock—to accompany delivery of reward cards for incentive programs.

By printing on demand, excess card inventory is eliminated. This is especially important for certain programs, such as payroll programs, where regulations commonly stipulate changes to payment cards, meaning previously produced cards must be destroyed. Prepaid managers can use the new services to create both open-loop and closed-loop cards, which – even though they are produced on demand – carry industry-advanced security controls. Cards can be EMV-enabled and build in compatibility with chip readers and contactless POS terminals.

CPI Card Group is a member of ACT Canada; please visit www.cpicardgroup.com.

35. DIGITAL COUPONS NOW AVAILABLE THROUGH SAMSUNG PAY

Source: CPG Matters (10/07)

Samsung Pay is celebrating its first anniversary in the U.S. by enhancing its features to enable shoppers to search, save and redeem digital coupons at select retailers directly from the mobile wallet's app. Quotient Technology, a digital promotions and media company, announced that coupons from its extensive network are now available on Samsung's mobile payment solution. “We're excited to partner with Samsung Pay and expand our distribution network,” said Steven Boal, CEO of Quotient. “With hundreds of manufacturer coupons at your fingertips, mobile payment becomes more than a convenient way to pay at checkout. It also becomes a really easy way to save money every time you shop.”

Adding Samsung Pay is a natural extension for Quotient, whose main consumer property is Coupons.com. Quotient is a leading distributor of digital coupons – powering its own properties plus the apps and websites of many of the country's largest grocery, drug, mass, dollar and club retailers. Shoppers can save at their favorite retailers by linking their membership or loyalty cards to the app,



then scrolling through and selecting the coupons they want to use on their next shopping trip. The savings are easily applied at checkout.

Here is how the program works:

- Download and Launch Samsung Pay: Samsung Pay is currently available on the Samsung Galaxy S7, Galaxy S7 edge, Galaxy S7 active, Galaxy S6 edge+, Galaxy S6 edge, Galaxy S6 active, Galaxy S6, and Galaxy Note5 in the U.S. It is available for download for compatible devices on Google Play. Once downloaded, swipe up on the screen or select the Samsung Pay icon from the home screen.
- Link a Loyalty Card or Account: Select a retailer, then scan the membership or loyalty card barcode, or enter a phone number or account information.
- View and Select Coupons: Browse and view all available coupons by retailer. Clip the appropriate coupons.
- Shop and Save: The coupons are automatically applied at point of sale when using Samsung Pay.
- With Samsung Pay, users can also redeem gift cards from hundreds of the nation's largest retailers, as well as earn rewards through merchants' membership programs. Samsung Pay now also offers users with a cloud storage feature to restore membership, gift, and Samsung Reward cards whenever they sign into a new device.

When Samsung Pay launched in the U.S. a year ago, it supported cards from four banks. Today, Samsung Pay works with over 500 banks nationwide covering over 80 percent of all debit and credit cards in the U.S. Samsung Pay continues to add banking and merchant partners in order to bring the simple, secure digital wallet experience to more customers across the country. "Samsung Pay has redefined what consumers can expect from a digital wallet," said Nana Murugesan, VP/GM of Service and New Business at Samsung Electronics America. "Samsung Pay has led the way for mobile payments in the U.S. by providing our customers innovative services they can use almost anywhere they shop. Our impressive growth shows that we are closer than ever to a world without wallets. We are excited to roll out more services and features that will allow the user experience and build enthusiasm for a safer, smarter and better digital wallet."

36. CYBER SECURITY LEADER WILL COMPLEMENT COMPANY'S CAPABILITIES SERVING INTERNET OF THINGS (IOT)

Source: EWA Canada (10/05)

Intertek, a Total Quality Assurance provider to a range of industries worldwide, has completed its acquisition of EWA-Canada, a leading provider of cyber security and assurance services for products, equipment and networks across multiple industries. The transaction was finalized on October 1, 2016. The addition of EWA-Canada provides Intertek the opportunity to offer a more diverse and comprehensive portfolio of service offerings to its customers, including in-



house data security evaluations, power assessments and connectivity testing. EWA-Canada's portfolio includes IT network security solutions for network carriers, network and product security evaluations, certification testing and advisory services. These services complement Intertek's history of innovation and expertise in assurance, testing, inspection and certification for a variety of electrical and wireless products. Together, the combined companies will offer comprehensive solutions to designers and manufacturers of products including those that integrate smart technology and the Internet of Things (IoT).

"In today's increasingly connected world, it is becoming more important to ensure IoT-enabled products and devices have secure connections, reliable connectivity and dependable power," said Rich Adams, Senior Vice President at Intertek. "EWA-Canada's knowledge and expertise in data security will allow us to bring customers the solutions they need for today's connected marketplace and we are pleased to welcome them to Intertek." "Joining Intertek is a great development for EWA-Canada that we are very excited about," adds Dennis Weiss, President of EWA-Canada. "We look forward to working together to bring our services to new industries and geographies, offering more robust services to the IoT space."

EWA-Canada is a member of ACT Canada; please visit www.ewa-canada.com.

37. RBC INVESTS IN MACHINE LEARNING THROUGH PARTNERSHIP WITH THE UNIVERSITY OF TORONTO

Source: RBC (10/20)

RBC announced two new initiatives in collaboration with the University of Toronto designed to ensure Canada remains a leading centre of development in machine learning and artificial intelligence. RBC Research in Machine Learning will be a state-of-the-art research practice working to push the boundaries of the science around machine learning. RBC is also partnering with the Creative Destruction Lab at the University of Toronto's Rotman School of Management, becoming a Founding Partner of the Lab's Machine Learning Initiative focused on artificial intelligence-enabled companies. "RBC Research in Machine Learning is part of our commitment to the advancement of machine learning and artificial intelligence in Canada," says Gabriel Woo, vice-president of innovation at RBC. "We are not only building our own capabilities, we're also big believers in creating jobs in this space to retain the amazing talent we have in Canada. We're working with leading universities across Canada like the University of Toronto to partner with the best, brightest and boldest minds in the country."

RBC Research in Machine Learning will be housed at the Banting Institute at the University of Toronto, and will be headed up by successful inventor and entrepreneur Dr. Foteini Agrafioti. Dr. Agrafioti is the co-founder and co-inventor of Nymi, the first wearable device to authenticate users using the biometric



technology HeartID. “This has really never been done before in Canada,” says Dr. Agrafioti, who was named “Inventor of the Year” in 2012 by the University of Toronto for inventing HeartID. “We’ve lost so much talent in this country to other companies and institutions, but RBC has both the scale and commitment to ensure Canada remains a centre of excellence in machine learning.” Under the leadership of Dr. Agrafioti, the RBC Research in Machine Learning team will collaborate with academics from the University of Toronto and other institutions, publishing new research in the fields of machine learning and artificial intelligence. They will also be connected to the teams within the bank working on artificial intelligence and machine learning to provide expertise and help solve business challenges.

RBC also extends its close collaboration with the University of Toronto through a new partnership with the Creative Destruction Lab, a seed-stage program for massively scalable, science-based companies. The Lab employs an objectives-based mentoring process led by highly accomplished entrepreneurs and angel investors with the goal of maximizing the equity value creation of its ventures. As part of the agreement, RBC is contributing to the Creative Destructions Lab’s programming fund and will assume a role on the Lab’s Advisory board. “We’re thrilled to partner with RBC on this initiative,” says Rachel Harris, director of The Creative Destruction Lab. “With their support we are able to scale our program. We are now home to 50 AI companies. To our knowledge, this is the greatest concentration of AI companies in any program on Earth.”

“RBC is part of a thriving ecosystem of entrepreneurs, innovators, engineers and market visionaries,” says Gabriel Woo. “We share a strong commitment to the study and advancement of artificial intelligence with the University of Toronto, one of the world’s leading institutions in this space. Our partnership with the university and the Creative Destruction Lab is an extension of our ongoing support of the Canadian digital ecosystem.” Universities and colleges play a key role in driving innovation and fostering entrepreneurship, and the University of Toronto has emerged as a leading institution in creating startup companies based on research ideas. Earlier this year RBC and the University of Toronto announced the creation of ONRamp, a startup accelerator for students, entrepreneurs and startup companies to support them in developing commercial ideas.

RBC is a member of ACT Canada; please visit www.rbc.com.

38. RETAIL PAYMENT TO INTRODUCE CUSTOMER-FRIENDLY, EFFICIENT AND LOW-COST PAYMENT PLATFORM IN NORWAY

Source: Verifone (10/24)

Retail Payment, a Norway-based payment acceptance platform provider owned by leading Norwegian retailers, announces the introduction of an open omni-channel platform making payments customer-friendly, secure and cost efficient. Retail Payment will collaborate with partners such as Verifone, Intel, IBM



and Forgerock to manage the defacto standard infrastructure for future payments. Retail Payment and Verifone will collaborate to deliver the latest Verifone Engage and Carbon series solutions to the Norwegian market, connected to the Verifone Commerce Platform. Norway is one of the world's most sophisticated commerce markets, and Retail Payment and Verifone will deliver a scalable platform that offers open standards and APIs securing payments as well as identification for customer loyalty programs, in a cost efficient and seamless manner.

Retail Payment's team of owners and customers already handle the large majority of the transactions in the Norwegian market. To ensure customer-friendly and efficient payments in store, the payment infrastructure will build on the existing low-cost and secure Norwegian BankAxept payment network, enabling the use of contactless cards and mobile payment solutions. "Norway is already recognized for having the world's most efficient payment system and the highest number of card transactions per capita. Building on this, the Retail Payment platform will offer customer-friendly, secure and unified payment solutions in all stores", says Hans Petter Hoel, CEO of Retail Payment. "Having partnered with leading technology providers such as Verifone, we can easily scale cross-border solutions that offer superior design and engagement capabilities, as well as the flexibility to meet a merchant's needs across countertop, mobile portable and iPOS use cases. This will not only result in better in-store customer experiences, but also increase the efficiency of many countries' payment systems – a competitive advantage for the business sector", Hoel adds.

"Verifone is excited to partner with Retail Payment to provide a secure and flexible platform for payments and value added services. We will deliver a broad array of solutions with payment applications using our Commerce Platform to make both the merchant and consumer experience simpler and more engaging, without compromising security", says Per Kristian Nauste, Vice President and General Manager, Verifone Nordic and Baltic Region.

Verifone is a member of ACT Canada; please visit www.verifone.com.

39. EDGE-TO-EDGE METAL FROM CPI CARD GROUP ENHANCES PAYMENT CARD DESIGN

Source: CPI Card Group (10/24)

CPI Card Group announced the introduction of a new design option for payment cards: an edge-to-edge metal card. CPI's comprehensive design offerings for financial institutions, including expertise in materials, inks, adhesives, printing, collation, lamination, die-cutting, standards/emboss printing and design support were exhibited at Money 20/20. The new EMV-capable metal option, fully available in Q1 2017, adds to CPI Card Group's already wide array of design choices, which creates flexibility for large and small financial institutions. The new card provides a distinct, metallic look and feel that cannot be duplicated with other



print methods, and customers can select full-color, silk-screen, glossy or matte finishes. The card is durable and weighs more than a plastic card, two characteristics that lend a sense of prestige to the cardholder.

“Many financial institutions are exploring different design options for their premier customers, and in response we developed a metal card that provides an ‘elite’ feel,” said Lane Dubin, senior vice president of sales and marketing at CPI Card Group. “To make the cardholder feel special, we considered many characteristics – not only how the cards look, but how they weigh and even how they sound when they hit a hard surface – such as when a card is dropped on a table at a restaurant for payment. Precision and flexibility are key attributes of CPI’s design services.”

Card construction and core material—In addition to edge-to-edge metal, issuers can select a colored or clear core and a variety of ink treatments. Silkscreen applications—Many designers consider silkscreen to add depth and dimension to cards. Customization—Almost every aspect of a card can be architected according to preferences, the magnetic stripe can be a variety of colors, and the EMV chip can be customized.

CPI Card Group is a member of ACT Canada; please visit www.cpicardgroup.com.

40. OT AND ETISALAT LAUNCH THE FIRST MOBILE WALLET SERVICE IN UAE

Source: Oberthur (10/19)

Oberthur Technologies announced the adoption by Etisalat of OT’s digital platforms to introduce the first of its kind mobile wallet service in UAE. With the explosion in the number of smartphones in United Arab Emirates (UAE), the telecoms sector is entering a new era, in which smartphones are daily companions and an interface to offer individuals security and convenience each time they connect, authenticate or pay. Leveraging OT’s proven digital wallet platform, Etisalat is offering the first mobile wallet service in UAE and is transforming its subscribers’ experience by enabling them to use their smartphone to pay utility bills, top up airtime, pay for parking in different cities or purchase a broad range of goods and services.

Accessible through an application, the mobile wallet designed by Etisalat also allows money transfers. The subscriber can control the transactions with automatic reports, notifications and account management features. “Etisalat is a leader in its chosen markets and OT’s long lasting partner. We are delighted to join forces to launch the first mobile wallet service in the country” said Pierre Barrial, Managing Director of the Mobile Network Operators business at OT. “Our platform provides a high level of convenience while remaining very secure, relying on a number of advanced mechanisms, including voice, pin and phone authentication”.

“UAE is at the forefront of digital payment development so it was critical for Etisalat to provide its subscribers with innovative m-commerce and m-banking services” said Rashed Al Abbar, Vice President of Consumer Innovations at Etisalat. “OT, with its track record and expertise in this kind of technology was the best partner to support us in the deployment of our mobile wallet in UAE”.

Oberthur Technologies is a member of ACT Canada; please visit www.oberthur.com.

41. WHAT YOU NEED TO KNOW ABOUT THE IMMINENT THREAT OF IOT BOTNETS

Source: Venturebeat.com (10/01)

What do security analyst Brian Krebs, French hosting giant OVH and famous gaming company Blizzard have in common? They’ve all been the recent victims of massive Distributed Denial of Service (DDoS) attacks, assaults that involve disabling online services by suffocating them with automated requests. Krebs’ blog was brought down by an unprecedented 620 Gbps flood, OVH suffered a 1.1 Tbps traffic, and Blizzard’s Battle.net service went offline after a sizeable DDoS hit its servers. While DDoS is nothing new, attacks of this magnitude are, and what’s making them possible are IoT botnets, armies of compromised Internet of Things devices doing the bidding of malicious actors. This means that any connected devices from CCTV cameras installed in streets to a harmless coffee machine sitting in your home can be secretly involved in attacking websites and servers.

Why the shift to IoT?

Previously, malicious hackers formed their botnets with more conventional computing devices such as laptops and desktop workstations. But more recently, IoT devices have become a much more attractive target for “bot herders,” as botnet owners are dubbed. There are several reasons for this shift of interest. “The sheer number of (ever expanding) IoT devices available to be recruited into a botnet is of great significance,” says Sean Sullivan, Security Advisor at F-Secure Labs. “Most homes will only have a few computers at most. But it’s easily possible to have a dozen or more IP-based devices that can be utilized in a DDoS botnet.”

According to Gartner, more than 6 billion “things” will be connected to the Internet by the end of 2016, a figure that will rise above 20 billion by 2020. And a huge percentage of those devices are suffering from security vulnerabilities. “Unlike personal computers or servers, most IoT devices are not well protected — or even protected at all,” says Igal Zeifman, a senior manager at cybersecurity firm Imperva Incapsula. For the most part, IoT devices lack the resources needed to protect themselves against botnet malware. Many do not possess the capacity to

run antimalware solutions, while others totally run on firmware and don't even have a proper operating system to support them, which makes it much easier for bot herders to find and net them.

"Vulnerabilities in the firmware can be exploited and botnet harvesters can script the process of hunting and collecting devices," Sullivan says. Once a vulnerability is found in a particular type of device, all it takes is a quick query on Shodan to find thousands of potential conscripts for a botnet. And when it comes to patching vulnerabilities, manufacturers are very slow to react. "Vendors often don't have incentives to continuously support the security of IoT devices that are meant to be plug-and-play, set-and-forget," Sullivan adds. "IoT devices are generally cost optimized," says Dave Larson, COO of Corero Network Security, "which is a polite way of saying that security is an afterthought. Furthermore, in the residential space, the average user is incapable or uninterested in security and may never apply an upgrade or security patch to the device. So if an IoT device ships with an exploitable vulnerability, it will likely remain vulnerable throughout its lifecycle."

The fact that the majority of end users will never change factory default settings only makes things worse. In fact, bot herders often won't need to dig out vulnerabilities in the devices they target. "In nine out of ten cases, IoT devices are made vulnerable through negligence," Zeifman stresses, referring to previous reports by Incapsula that showed huge numbers of IoT devices were compromised because their owners didn't change the default login credentials, allowing hackers to break in with ease. And since the compromised devices are not the direct target of attacks but rather the tool being used by attackers to commit their cybercrimes, it's unlikely owners will notice their IoT ecosystem is complicit in a DDoS attack. "People don't monitor their home networks for such network traffic," Sullivan says. Meanwhile, Zeifman warns, many of these devices, such as CCTV cameras and SOHO routers, have untethered access to broadband Internet connections, which makes them particularly suitable for DDoS attacks. "This combination of advanced computing capabilities, high connectivity, and lackluster security makes IoT devices perfect candidates for botnets."

As a matter of fact, according to sources familiar with the recent spate of DDoS attacks, the botnets that staged them were made up of tens of thousands of insecure routers, digital video recorders (DVRs), and connected IP cameras.

What needs to be done?

As the trends show, DDoS attacks based on IoT botnets will only grow in future months, and it will take a collective effort to mitigate the threat. At the manufacturer level, security must become an integrated part of the product development lifecycle. Security updates and fixes must be rolled out periodically after products are shipped, and they must be delivered in an automated and secure way so they don't disenchant and befuddle users. This is not something that

current business models support, F-Secure's Sullivan says. But Sullivan also says consumers are as much to blame as manufacturers for the lack of IoT security. Aside from their lack of security hygiene, "people want low prices," Sullivan says. "They are often unwilling to pay for ongoing security development even if it is an option." Until consumers demand that security is embedded into the hardware development life cycle, manufacturers would feel no pressure to change their methods.

But some devices will nonetheless remain vulnerable due to their limited storage and compute resources. That's why, aside from being addressed at the device level, IoT security needs to be dealt with at the network level, Sullivan suggests, a goal that can be accomplished with a new generation of smarter routers that can monitor inbound, outbound, and inter-device connections in home networks and can identify and isolate malicious traffic and compromised devices. ISPs have an important role to play as well. They must have sufficient visibility into the Internet traffic that is both leaving and entering their networks to identify and block DDoS activity. "Numerous ISPs haven't implemented security protocols that would limit the power of reflection attacks," Sullivan says. "IoT bots are therefore able to spoof their target, which causes servers to get involved, amplifying attacks. ISPs need to be nudged to adopt more secure protocols."

IoT botnets are leveling the cyberattack playground and democratizing destructive forces that were previously at the exclusive disposal of nation-states. Security solutions need to evolve in tandem with the threats in what Zeifman describes as "an infinite cat-and-mouse game."

42. WHEN A PAYMENT IS MORE THAN A TRANSACTION

Source: Let's Talk Payments (10/07)

The role of electronic payments in 2016 goes far beyond basic transactions performed in vast networks to move funds from one person or entity to another. Just like banking is no longer somewhere you go but something you do, payments have turned into an experience rather than an action. FinTech startups offering payments solutions have turned customers into experiential omnivores constantly seeking for a better experience. In modern payments, customers are looking for a seamless experience and unconventional UI rather than for a utility. Agile financial technology companies nowadays are able to turn bill payments (and other services) into a smooth and seamless, almost one-click process.

The idea that the greatest tech companies aren't really tech says a lot about the importance of customer journey as a success factor. Payments services like PayPal, Venmo, Square Cash have raised the bar for new entrants by offering more than an opportunity to send funds. As the UK government fairly noted, "good services are verbs, bad services are nouns," which the abovementioned companies have proven to be true. As the British authority further elaborated, "To

a user, a service is something that helps them to do something – like learn to drive, buy a house, or become a childminder. Notice these are all verbs.” Thinking of payments beyond transactions means understanding the value of transparent, seamless payments services. So, what else do modern payments mean?

Economic growth

A recent report by Moody’s suggests that electronic payments added \$296 billion to GDP in the 70 countries studied between 2011 and 2015, which is equivalent to the creation of ~2.6 million jobs on average per year over the five-year period, or about 0.4% of total employment in the 70 countries. Countries with the largest increases in card usage experienced the biggest contributions to growth. Some of the biggest increases in GDP were recorded in Hungary (0.25%), the UAE (0.23%), Chile (0.23%), Ireland (0.2%), Poland (0.19%) and Australia (0.19%). The increase in electronic payments resulted in almost the same percentage of increase in GDP between 2011 and 2015 for emerging markets (0.11%) as for developed countries (0.08%). However, developed countries were reported to be at a more advantageous position as they experienced a higher percentage of GDP growth per 1% of increase of card usage than developing countries.

In terms of consumption, each 1% increase in the usage of electronic payments produces – on average – an annual increase of ~\$104 billion in the consumption of goods and services, or a 0.04% increase in GDP, assuming all the other factors remain the same.

Financial inclusion for disadvantaged

One of the most important implications of electronic payments (whether domestic or international remittances) is the opportunity for disadvantaged groups of population to plug into the global financial system. A notable example of the way electronic payments are put to benefit the developing world is the joint effort by Stellar, the Stripe-backed open-source payment network, and Oradian, a cloud-based software provider for microfinance institutions in developing countries. Those companies have developed a payment-transfer network inside Oradian – built on top of Stellar’s platform – that allows 300,000 Nigerians (90% of them women) to cheaply transfer money between microfinance institutions over the Stellar network.

International remittance services by FinTech startups are another case. They allow migrants to receive help from families abroad. Global remittances amount to ~\$500 billion every year making it an important ‘tool’ for supporting families and individuals in need.

A different level of operational efficiency for businesses around the world

Security has been reported to be one of the benefits of turning to cashless payments for businesses as cash is more liable to theft, loss and fraud. In fact, 73% of organizations were reported to have experienced actual or attempted fraud, with non-electronic processes being the number one source of fraud.

Among the other important implications listed by the SunTrust Bank are better and faster ability to assess the health of their business operations (cash flows, profit and loss) through synergies with e-payments; ability to generate revenue from new channels and digital financial services (if they keep balances with banks and other PSPs); value-added services that come bundled with payments, or for making or receiving payments (loyalty, credit, marketing support).

Higher transparency and enhanced regulatory opportunities for the government

Electronic payments create a meaningful data for governments and international organizations to have a better control over operations and ensure compliance. A vast stream of data enables the use of sophisticated tools to monitor trends in consumer spending and the retail sector, to decrease the scale of grey areas of business operations and have a more accurate estimation of the tax base. Electronic payments also allow to extract insights on changing consumer behavior and respond to transformations happening in the society in a timely manner. Governments can also take actions to boost social welfare based on the accurate representation of financial activities of the population that electronic payments enable.

43. EUROPEANS EMBRACE MOBILE PAYMENTS

Source: Mobile Payments Today (10/13)

The number of European consumers regularly using a mobile device — whether a smartphone, tablet or wearable — to make payments has tripled in the past year, according to Visa's 2016 Digital Payments Study. Some 54 percent of consumers surveyed said that they regularly use a mobile device to make payments in a range of situations, compared with just 18 percent who were asked in last year's study whether they used mobile payments for everyday goods and services. The study, which surveyed more than 36,000 online consumers in 19 European countries, reveals how consumer adoption of digital payments has shifted dramatically during the last 12 months. One year ago, 38 percent of those surveyed said they had never used a mobile device to make payments and had no plans to do so. Today, the number has dropped to 12 percent.

In the top 10 countries where mobile payments are most prevalent, Visa identified two use patterns: developing markets such as Turkey and Romania have been leapfrogging traditional payment methods to adopt new technologies faster;

developed markets — particularly the Nordics — are evolving to new technologies at differing paces. In the U.K., nearly three-quarters (74 percent) of survey respondents are mobile payments users. More than half (59 percent) of these use their device to transfer money to friends and family; just under half (45 percent) use it to buy takeaway meals. The research also shows that mobile banking activity is increasing across all age groups. For the first time, more than half of European respondents in all age brackets are using mobile banking. While millennials remain the most prolific category, other age groups are rapidly catching up. The fastest-growing demographic is 55–64-year-olds, who drove a 33 percent year-over-year increase. The growth rate for millennials age 18–34 was 24 percent.

"This data is a confirmation that the future of digital payments has arrived, with consumers across the length and breadth of the U.K. and Europe embracing a variety of new ways to pay," Kevin Jenkins, U.K. and Ireland managing director at Visa, said in a statement. "Visa sees smartphones and wearables as the beginning of a broader trend, with millions of new connected devices making it simple, safe and secure to integrate daily commerce transactions into almost any technology. "In Europe, we've recently seen Apple Pay launched in the U.K., France and Switzerland, Samsung Pay has launched in Spain and Android Pay in the U.K.. We've also seen a new era of wearable payments: smartwatches, wristbands and even clothing. It's clear that this trend will continue to accelerate, enabling consumers to choose the connected device that fits with their lifestyle."

Visa is a member of ACT Canada; please visit www.visa.ca.

44. GOOGLE GETS AGGRESSIVE WITH NEW PHONES, OTHER GADGETS

Source: Associated Press (10/04)

Google is ratcheting up its rivalry with Apple and Amazon in unveiling new smartphones and an internet-connected speaker sporting a digital assistant that the company hopes to make indispensable. The devices unveiled Tuesday are part of Google's bold move to design and sell its own hardware, instead of just supplying Android and other software for other companies to make products. Google's previous attempts at hardware have had limited distribution and included such high-profile flops as its internet-connected Glass headgear. This time around, Google is betting big that it has matured to the point that it can design software and hardware to work seamlessly with each other — an art that Apple mastered during the past 15 years as it mesmerized consumers with its iPods, iPhones, iPads and Macs.

Borrowing another page from Apple's book, Google is backing its expanded product lineup with the biggest marketing campaign in its 18-year history. The company isn't disclosing how much it will spend, but made it clear the ads touting products "Made by Google" will be ubiquitous during the next few months. "They have done some advertising in the past, but it's never been with this kind of 'let us

take care of everything for you' way," Gartner analyst Brian Blau said. "This is more like Apple's way of doing things."

GADGETS ON PARADE

Google executives showed off a series of gadgets in rapid succession in San Francisco on Tuesday. The new Pixel phones, starting at a price of \$650, are aimed squarely at Apple's iPhone and could also siphon sales from the biggest manufacturer of Android-powered phones, Samsung. Android now powers more than 80 percent of the smartphones sold around the world. But Samsung has increasingly been adding more of its own software, including its own mobile wallet, on its phones. Analysts warned that Google's increased emphasis on its own branded devices runs the risk of alienating Samsung, as well as LG and other longtime partners that make Android gadgets. Google, though, emphasized it still plans to work with other manufacturers, even as it tries to become a bigger player in hardware.

Meanwhile, Google's new Home speaker represents a counterpunch to Amazon's Echo, a similar device that has become a big hit since its release about 15 months ago. Google Home will cost \$129, undercutting Echo by \$50. Home will be available on Nov. 4 for \$129, with advance orders starting Tuesday. Google also announced a virtual-reality headset called Daydream View, a new Wi-Fi router and an update to the company's Chromecast device for streaming video.

THE PHONE

Available in two sizes, the Pixel phones replace Google's previous foray into smartphones with a Nexus brand introduced six years ago. Google never hailed Nexus as its own phone, but instead positioned it as an example of how it believed the Android system worked best. In promoting the Pixels, Google highlighted a camera it says trumps the latest iPhone, a long-lasting battery and a dedicated headphone jack — a staple that Apple eliminated from the iPhones released last month. And while past Google phones primarily relied on sales through Google's online Play store, the Pixel will also be sold by Verizon in the U.S. The phones come out Oct. 20, with advance orders starting Tuesday.

Analyst Patrick Moorhead of Moor Insights & Strategy said in an email that Google was smart to emphasize the performance of the new smartphone cameras, as "consumers care about this a lot." But he said other features in the new phones didn't seem that much different from what Samsung and Apple have offered in their latest devices.

SMART ASSISTANT

The phones and speaker will serve as a showcase for Google's digital helper, Google Assistant. The helper will respond to spoken questions such as

"How do you remove wine stains out of the carpet?" and commands to control the volume of the television and other home appliances with internet connections. Google Assistant escalates the company's battle against Apple, which offers a virtual helping hand through Siri, and Amazon, whose Alexa concierge resides in Echo and other devices.

Google believes its assistant will be more knowledgeable, more personable and more versatile than the competition. Its confidence stems from the more than 70 billion facts that it has stockpiled in a database that it calls a "knowledge graph," as well as the ability of its dominant search engine to quickly scan the web to retrieve a specific piece of information. Google CEO Sundar Pichai boasts that the assistant will draw upon the company's advances in artificial intelligence to deliver "a personal Google for each and every user." The artificial intelligence programming is designed to learn more about the person using it with each interaction, according to Google.

That's one reason why Google eventually wants the assistant on more devices, though the company currently doesn't have plans to build directly into Android the way Siri is automatically included in Apple's mobile software. Instead, Google will allow other device makers to include the assistant in their products if they want, beginning early next year. "Search has been Google's golden ticket for the past 20 years of the internet, and now they are hoping artificial intelligence will become the next golden ticket," Blau said. Still, while Google showed its new Assistant performing a variety of impressive tasks, Moorhead cautioned that similar services such as Siri and Microsoft's Cortana haven't fulfilled their early promises to ingrain themselves into people's lives.



Since 1989, ACT Canada has been the internationally recognized authority in the market. As the eyes, ears and voice for stakeholders focused on secure payment, mobile, NFC, loyalty, secure identity, and leveraging EMV, we promote knowledge transfer, thought leadership and networking. We help members protect their interests, advance their causes, build their business and grow the market. We take a neutral and non-partisan approach to all issues, facilitating collaboration among issuers, brands, acquirers, merchants, regulators, solution providers, governments and other stakeholders. Over 50% of our members have been with us for more than 5 years, enjoying ongoing value from their affiliation with ACT Canada. Please visit www.actcda.com or contact our office at 1 (905) 426-6360.

Please forward any comments, suggestions, questions or articles to andrea@actcda.com. Please note that articles contained in this newsletter have been edited for length, and are for information purposes only. If you would like to be removed from our newsletter distribution list please follow the unsubscribe instructions at the bottom of the email.

Andrea McMullen
President
ACT Canada
tel: 905 426-6360 ext. 124
fax: 905 619-3275
email: andrea@actcda.com
web: www.actcda.com
mail: 85 Mullen Drive, Ajax, ON, L1T 2B3
<http://ca.linkedin.com/in/andreamcmullen>

Insights • Networking • Visibility

ACT Canada is the place to be to:

Filter the truth from market noise

Understand complex issues

Facilitate problem resolution

Because stakeholder dialogue helps you make profitable decisions.