



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

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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.

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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

Money2020 Europe

Jun 26-28, 2017

Copenhagen, Denmark

www.money2020europe.com

ACT Canada members receive discounts

Money2020

Oct 22-25, 2017

Las Vegas, NV, USA

www.money2020.com

IVIE Awards Gala

Nov 8, 2017

Toronto, ON, Canada

Help us celebrate the best in innovation in payments and digital identity!

Nominations now open at www.actcda.com/ivies.html

1. EDITORIAL: AN INDUSTRY IN TRANSFORMATION

Source: Andrea McMullen, President, ACT Canada (09/27)

At our recent Board meeting, we had a lively discussion about the state of the market. Never has there been so much change happening on so many fronts, nor has it been so challenging to keep on top of it all. Examples include: navigating through data breaches; AI and the transformation of digital banking; payments modernization opportunities; the security risks of PIN on glass; cyber security and IoT; the regulatory considerations of ICOs; open banking and the implications of new partnerships; balancing customer authentication and the customer experience; cryptocurrencies and KYC. Decisions are being made without the input of all impacted stakeholders.

How do you keep afloat with so much change? How do you track what's important versus market noise? What role can you play in navigating these issues? Where do you go for the information and insights you can't google? Watch over the coming weeks as we make some exciting announcements!

2. BIG BANKS BACK CANADA'S \$150M DIGITAL ID SYSTEM

Source: BankingTech.com (09/25)

Canada's big banks have joined the charge for a CA\$185 million (\$150 million) digital identity supercluster bid that plans to solve the identification challenges of the digital economy. According to IT World Canada, Royal Bank of



Canada (RBC), Bank of Montreal, Scotiabank, CIBC, TD Bank and National Bank of Canada – are on board, along with the nation’s three largest telcos – Bell Mobility, Rogers Communications and Telus Corp. Also in the mix are academic institutions such as Ryerson University in Toronto and the University of British Columbia, and the provincial governments of Ontario, British Columbia, Saskatchewan and New Brunswick.

The bid is in response to the federal government’s Innovation Supercluster Initiative (ISI) that was first announced in the 2016 budget. IT World Canada says leading the charge is the Digital Identity and Authentication Council of Canada (DIACC), “which has put together a nationwide public-private consortium of large and small innovators to create a digital identity ecosystem that will make transacting and sharing personal data online easier and safer”. For example, for people renting a house, they won’t need to provide paper-based banking information to a potential landlord.

“The overarching goal of this supercluster is to set Canada up for success in a digital economy, but in order to do that, we need a safer, more efficient system of identifying people online and confirming that they are who they say they are,” Joni Brennan, president of DIACC, tells IT World Canada. Brennan says if the DIACC is chosen to move on to the second phase, it will have “no problem” hitting the CA\$250 million (\$202 million) mark of matchable funds set by the federal government.

She adds: “We raised all this funding and it just proves the type of commitment that the private sector is making in this space. The best part is that no one asked for a return on their investment, which means that if we are chosen to be one of the five official superclusters, all of that money will go into research and development programs to benefit Canada’s workforce and grants for small and medium-sized enterprises to help us build a digital identity ecosystem for this country.” It’s not quite the same, but as Banking Technology reported in May, Singapore is piloting a new initiative to let people apply for a bank account without needing to submit supporting documentation.

CIBC, Royal Bank of Canada, Scotiabank and TD Bank are members of ACT Canada; please visit www.cibc.com, www.rbc.com, www.scotiabank.com and www.td.com

3. GOOGLE AIMS TO LEVERAGE ITS MILLIONS OF CREDIT CARD CREDENTIALS FOR MOBILE COMMERCE

Source: Digital Transactions (08/30)

Google plans soon to give merchants access to the vast trove of credit card credentials it has in its databases to speed customer checkout for mobile and online payments. The search-engine giant, however, is not putting itself in



competition with payment card networks, a Google executive said this week. The service is called Pay With Google, and it could tap data on the “hundreds of millions” of customers Google has on file, including payment card account numbers and related customer information, according to Jack Connors, head of commerce partnerships at Google, the main subsidiary of Mountain View, Calif.-based Alphabet Inc.

Google first disclosed the planned feature among the 101 announcements it made at its Google I/O conference for software developers in May. The service will launch in about a month, Connors said at the Mobile Payments Conference in Chicago. Pay With Google uses the new Google Payment application programming interface (API), through which merchants will be able to retrieve payment credentials securely and then pass them to their payment gateway or processor, which will decrypt them and do their normal processing. Consumers who have provisioned Android Pay tokens to their phones will see these at the top of the list, but for those who have not yet done that, the cards they have used at Google properties like the Play Store will be offered. The consumer will never see a legacy order form to fill out.

The rationale is to use the card data and related information that Google already gathers from consumers for purchases involving its own products and services, such as the Android Pay mobile-payments service, Chrome browser, YouTube, or the Google Play app store. With that data, third-party merchants could generate more sales by making the mobile or online purchase process more convenient, according to Connors. Counting card numbers, addresses, and all the other information needed, not to mention typos that require correction, a typical new customer making a mobile purchase has to tap the phone about 120 times, said Connors.

“On a mobile phone, buying something with a credit card is a real hassle,” he said, later adding: “We can streamline conversion pretty much anywhere globally.” Abandoned purchases, many caused by tedious checkout processes, are one of the biggest fears of online and mobile merchants. Connors claimed that tests with some merchants showed conversion improvements of as much as 3.5 times through Pay With Google.

The initial processor partners announced include: Braintree, Stripe, Vantiv, First Data, Worldpay, Adyen, and ACI Worldwide, with many others expected to update soon, sources say. There is no fee for this service. The merchant uses its existing processor and pays its contracted processing fees. Connors mentioned that the Amazon.com Inc. model of providing payment services for other retailers became successful because merchants concluded it’s easier to use the card and personal data already on file with Amazon rather than require their customers to enter it again. But he insisted Google aims to improve merchant sales and is not making a run at Visa Inc. or MasterCard Inc., both of which offer streamlined online



and mobile checkout through their respective Visa Checkout and Masterpass services.

Google has announced partnerships with PayPal, Visa Checkout, and MasterCard MasterPass in addition to its own efforts with Android Pay and now Pay With Google. “We’re not actually viewing this as a payments thing primarily,” Connors told the conference attendees. “We’re actually not looking to compete with the networks. We’re looking to work in conjunction with them ... we’re doing it in a way that’s ecosystem-friendly.” Online-commerce payments researcher Rick Oglesby, president of Mesa, Ariz.-based AZ Payments Group LLC, says an account on file is necessary for one-click checkouts, and merchants increasingly want one-click checkouts even with first-time customers.

“A third party that does know the consumer is needed to facilitate the transaction, and Google is well-positioned to play there,” Oglesby tells Digital Transactions News by email. He also says Google can use account-on-file data to facilitate purchases through fast-growing venues like wearables and voice-based systems such as Google Home and Amazon’s Alexa.

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

4. SELF-SERVICE PAYMENTS SIMPLER THAN EVER THANKS TO ACCEO AND DESJARDINS’S CONTACTLESS SOLUTION

Source: ACCEO Solutions (09/14)

ACCEO Solutions Inc and Desjardins Group, one of the top payment solution providers in the world – processing 3.3 billion transactions annually through its Monetico brand – are the first to bring unattended contactless payment to Canada via certification of Ingenico’s iSeries of smart terminals namely the iUC180B.

Faster and secured payment option introduced

This new solution by ACCEO and Desjardins ushers in a new era in payment processing. Perfect for self-service markets (such as parking, supermarkets, restaurants, and vending machines), the Ingenico payment platform is designed to cut complexity in payment and security, and allow merchants to process more transactions in less time. Consumers will benefit from unprecedented ease of use, with no PIN required and no waiting in long checkout lines. ACCEO Tender Retail technology, together with Desjardins’s unattended contactless payment, revolutionizes point-of-sale transactions. The solution supports contactless EMV payment and protects cardholder data with secured, end-to-end encryption.



Desjardins Group is the first to have certified the iUC180B with ACCEO Tender Retail in Canada, and has also certified other ACCEO Tender Retail powered smart terminals part of the iSelf series including the iUN250 (comprised of 3 components: iUP250, iUR250 and iUC150B).

ACCEO Solutions Inc, Desjardins Group and Ingenico are members of ACT Canada; please visit www.acceo.com or www.tender-retail.acceo.com, www.ingenico.com and www.desjardins.com.

5. FITBIT'S NEWEST FITNESS TRACKER SHOWS HOW THE CARD BRANDS ARE PUSHING CONTACTLESS

Source: Digital Transactions (08/29)

Consumers have a new option when choosing a fitness device that's capable of making a contactless payment. Fitbit Inc., a San Francisco-based maker of fitness trackers, announced its Ionic smart watch Monday that includes Fitbit Pay, the company's first foray into contactless payments. Fitbit Pay, which will be available when the Ionic ships to U.S. consumers in October, supports American Express Co., Mastercard Inc., and Visa Inc. branded cards. It also is the fruit of Fitbit's 2016 acquisition of Coin's wearable-payment assets. At the time, Fitbit said the deal accelerated "Fitbit's ability to develop an active NFC payment solution that could be embedded into future Fitbit devices, broadening its smart capabilities." The Ionic device uses near-field communication.

Initially, Fitbit Pay will be available in the United States, and expand into other nations in coming months. Supporting issuers include ANZ, Bank of America, Capital One, HSBC, Royal Bank of Canada, and U.S. Bank, among others. Users add their credit or debit cards via the Fitbit Pay app. Consumers enter a card number and billing address and verify their identity through a one-time password or through a bank's call center to use the service. The bank verifies enrollment and, upon approval, the consumer's card appears in the Fitbit Pay app. Card data is tokenized within the app. The card brands view contactless payments, especially in a personal device like a smart watch, as beneficial and rife with potential.

"We know health and wellness is a top priority for our card members, so we are excited to be part of Fitbit's first payment-enabled device," Matt Sueoka, AmEx vice president of digital partnerships, tells Digital Transactions News in an email. "This gives American Express card members a convenient checkout experience while they are on the go." The card brands also see potential in the growing use of wearables. "Consumers are leading an increasingly connected, digital lifestyle—where the digital and physical blend seamlessly together—changing the way they interact, engage, and transact," says Kiki Del Valle, Mastercard senior vice president for Commerce for Every Device. "This convergence is due in large part to the continued adoption of wearable devices."



She points to the Kleiner Perkins Internet Trends 2017 study as evidence. In 2015, 82 million wearables shipped globally, a total that increased to 102 million in 2016. The Fitbit deal is MasterCard's first entry into the fitness space, Del Valle says. Similarly, Visa views wearables as moving beyond the novelty stage. "Not having access to quick and easy payments can eliminate countless buying opportunities and we see the opportunity to work with partners, such as Fitbit, to enable payments in fitness devices, phones, watches, and so much more," says Avin Arumugam, Visa senior vice president of the Internet of Things.

"We see the future of payments as cashless," he says. Switching to contactless payments benefits consumers and merchants. According to Visa's Global Market Research on Contactless report from March, 94% of U.S. merchants that enabled contactless payments have seen a positive impact from their customers, he adds. Yet, consumers have been reluctant to adopt contactless payments on a broad scale.

"Despite limited consumer traction, card brands continue to push full steam ahead on their contactless strategies," Jordan McKee, principal analyst for payments at 451 Research, tells Digital Transactions News in an email. "Contactless is important to the card brands because it protects their position in the value chain. Simply put, contactless maintains the status quo at the point of sale." Contactless payments can be a bit more for companies like Fitbit, he contends. It is attractive "because it's a high-frequency activity that can increase user engagement with their hardware and ultimately build out the utility of the product," McKee says.

Still, consumers aren't fully sold on this concept. 451 Research's 2017 Wearable Technology Trends Survey shows just 12% of respondents cite "making mobile payments" as a functionality that "impacts their purchase decision." The top function, at 64%, is health/fitness monitoring.

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6. APPLE USERS LIKELY TO REJECT FACIAL RECOGNITION – JUNIPER SURVEY

Source: BankingTech.com (09/19)

A new survey conducted by Juniper Research has found that more than 40% of Apple iOS users in the US consider themselves unlikely to use facial recognition as a payment security technology. This suggests that a core use case for the iPhone X's main security feature may struggle to gain traction among consumers, the consultancy says. Paybefore (Banking Technology's sister publication) reports that an analysis of contactless payment users considered

fingerprint sensors and voice recognition more appealing authentication methods, with 74% and 62%, respectively, saying they are likely to use these technologies.

The survey asked 500 US and 500 UK smartphone users about mobile banking and contactless payments.

- Overall the number of contactless payment users grew by only 2% year-on-year in the US, with most deployments coming from smartphone OEMs (original equipment manufacturers).
- Contactless user numbers in the card-first UK grew by 12%.

The survey shows that while mobile contactless payments usage will grow in both markets, existing users will fuel most of that growth:

- In the US, 73% of OEM-Pay users (Apple Pay, Samsung Pay, Android Pay etc) expect to increase their usage, but only 39% of non-users expect to start using mobile contactless payments.
- This proportion is even lower in the UK, with only 26% of non-users reporting that they will start to use these services.

Security still big obstacle for many

The survey found that, while contactless payment non-users have fewer concerns overall, 32% are worried about transaction security, a far higher proportion than users (14%). Mobile banking has a similar pattern, with 30% of non-users concerned about the security of transactions, compared with 10% of users.

“Transaction security is a key barrier for mobile financial services adoption,” says research author James Moar. “Addressing these concerns will bring many consumers to the point where they will consider using such services.”

7. G+D MOBILE SECURITY PROVIDES MOBILE PAYMENT SOLUTION FOR THE DUTCH DE VOLKSBANK GROUP SUPPORTING BOTH MASTERCARD AND VISA

Source: Giesecke + Devrient (08/31)

G+D Mobile Security provides a HCE (Host Card Emulation) mobile payment solution as a managed service for de Volksbank. The Dutch bank group includes the brands SNS, ASN Bank, Regio Bank and BLG Wonen. The solution provided by G+D Mobile Security supports both MasterCard (Maestro) and Visa (Vpay) debit products and the related token services (MDES and VTS), to enable a convenient and flexible NFC-based mobile payment experience for the bank’s customers. Based on G+D’s Convego CloudPay solution, de Volksbank will provide mobile wallet applications for its customers using Android NFC phones. The mobile wallet supports all MasterCard and Visa branded debit cards issued by the banks of the group. Users can apply for a mobile card for the wallet. The cards



are then tokenized by the payment scheme (i.e. MasterCard or Visa) and delivered securely over-the-air by the G+D Convego CloudPay service to the mobile phone of the customer. Users can pay with this mobile card at any contactless enabled POS terminal.

The combination of MasterCard and Visa branded cards in one solution is one of the first implementations of this kind worldwide. Consumers benefit from the quick enrolment and speedy delivery of the mobile payment card – independent of time and place - in only a few seconds.

“G+D Mobile Security operates a service, integrating and connecting de Volksbank and its wallet to the token services of the payment schemes,” said Carsten Ahrens, CEO of G+D Mobile Security. “With our solution for the different brands of de Volksbank group, G+D Mobile Security is pioneering a project where both MasterCard and Visa token services are enabled for the bank’s HCE wallet at the same time.”

Giesecke + Devrient and MasterCard are members of ACT Canada; please visit www.gi-de.com and www.mastercard.ca.

8. P2P PAYMENTS COMING TO APPLE WATCH IN THE FALL

Source: PYMNTS.com (09/19)

Peer-to-peer payments are coming to the Apple Watch this fall with the release of iOS 11 and watchOS 4. On its website, Apple said that Apple Pay users will be able to send and receive money quickly, easily and securely via its peer-to-peer payment platform. The feature will be available right in Messenger, or users can tell Siri to pay someone using a virtual debit card or credit card already loaded into the digital wallet. When users get paid, they will receive the money instantly in the new Apple Pay Cash card that will reside in the Apple Wallet.

The move on the part of Apple to include P2P payments with the new iOS 11 and watchOS 4 comes at a time when the company is trying to get Apple Pay in the hands of more users. Earlier this month, Didi, the Uber of China (and, in fact, the local service that gobbled up Uber China last August) announced it has added Apple Pay support to its Didi Premier, Didi Express and Didi Luxe personal mobility services, in addition to its partner station-less bike rental service ofo, according to a TechCrunch news report.

Apple Pay is standard fare on any iOS device, allowing users to authenticate payments biometrically – today, with their fingerprints, and soon using Face ID on the forthcoming iPhone X. That’s on top of other iOS features Didi already supported, including Siri-powered ride hailing from within the Maps app or via the Apple Watch. With the addition of support by Didi, Apple Pay joins the likes of WeChat, Alipay, QQ Wallet, international credit cards and CMB all-in-one net



payment, all of which power Didi's core services. It also comes at a time of increased competition from Fitbit, which recently launched the Ionic smartwatch.

9. CPI CARD GROUP WHITE PAPER PROVIDES THREE KEY INGREDIENTS FOR A SUCCESSFUL METAL CARD PROGRAM

Source: CPI Card Group (09/14)

CPI Card Group released "Built to Shine: 3 Ingredients for a Differentiated Metal Card Program," a white paper examining the rising popularity of metal cards in consumer markets and presenting key areas of focus for financial institutions to secure sustainable success for metal card programs. The consumer credit card market has seen a considerable increase in demand for metal cards. As a result, issuers are creating new metal card programs or building on existing premium portfolios to capitalize on the trend. CPI estimates the U.S. target audience for metal cards is nearly 40 million-strong – a ripe opportunity for financial institutions to expand their high value cardholder-base. Given the cost difference of producing metal cards compared to plastic cards, it is critical that financial institutions incorporate elements into their programs that strengthen the promise of return-on-investment.

"Consumers will soon have a variety of choices in metal cards to add to their wallets. Being able to offer them a metal card that is different, distinct, and cost-effective will be key for issuers interested in a successful program," said Lane R. Dubin, Senior Vice President of Sales and Marketing, CPI Card Group. "Through this white paper, we hope to help financial institutions pave the road to a metal offering that uniquely reflects their brand and extends versatile card design features and capabilities to their customers. The content captures the innovation we are enabling for the issuers we serve as the market for metal cards grows."

"Built to Shine: 3 Ingredients for a Differentiated Metal Card Program," deconstructs the components contributing to the favorable consumer perceptions of metal cards and explores the innovation behind the aesthetic elements to deliver a differentiated final product. CPI's Steel Hybrid Cards and Encased Tungsten Hybrid Cards, part of an expanding suite of unique metal card solutions, provide a new standard of customizability, personalization, plunk factor and functionality, equipping financial institutions with the tools to offer a premium metal card program.

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

10. GEMALTO ANNOUNCES DATA PROTECTION SOLUTIONS FOR VMWARE CLOUD ON AWS

Source: Gemalto (08/29)

Gemalto announced its SafeNet data encryption and key management solutions are now available to customers of VMware Cloud on AWS. VMware Cloud on AWS brings together VMware's enterprise-class Software-Defined Data Center (SDDC) software and elastic, bare-metal infrastructure from Amazon Web Services (AWS) to give organizations consistent operating model and application mobility for private and public cloud. Gemalto's SafeNet solutions enable VMware Cloud on AWS customers to deploy client-side encryption, centralized key management and tokenization to simplify security operations such as data visibility, compliance auditing and policy execution and enforcement.

Gemalto's SafeNet data encryption and key management solutions help organizations protect their data in the cloud, applications, data centers, networks and virtual environments. VMware customers running workloads in AWS can easily integrate Gemalto's cloud-ready security technology to:

- Boost cloud security - customers can store and manage keys in central, hardened appliances, and gain the visibility and control they need to consistently and effectively enforce security controls.
- Ensure key ownership - through secure key storage, high availability, and scalability, organizations ensure they retain total control of their encryption keys and data.
- Streamline key management - administrators can centrally manage keys, permissions and policies with more speed, ease, and efficiency.
- Simplify compliance – the centralized platform enables customers to ensure and demonstrate compliance with stringent security policies and compliance mandates.

VMware Cloud on AWS technology partners enable customers to deploy the same proven solutions seamlessly in both the public and private cloud. VMware simplifies the deployment and eliminates the need for partners to refactor solutions for VMware Cloud on AWS. If a partner solution works on-premises in a VMware vSphere environment, it will easily support VMware Cloud on AWS. VMware technology partners complement and enhance native VMware Cloud on AWS service and enable customers to realize new capabilities.

"Companies gain elasticity and speed to market with the cloud, but often want to maintain control over the security of their data. With Gemalto, VMware Cloud on AWS customers have one data protection solution making it easier to monitor and track all of their activities," said Todd Moore, senior vice president of Encryption Products at Gemalto. "Working across multiple cloud services is becoming the norm. Using a centralized system helps companies take a preventative approach to security instead of reactive one by getting a better understanding of where the data resides, how it is being used and the current threats to privileged users."



"VMware Cloud on AWS provides customers a seamlessly integrated hybrid cloud offering that gives customers the SDDC experience from the leader in private cloud, running on the leading public cloud provider, AWS," said Mark Lohmeyer, vice president, products, Cloud Platforms Business Unit, VMware. "Solutions such as SafeNet KeySecure and connectors enable IT teams to reduce cost, increase efficiency and create operational consistency across cloud environments. We're excited to work with partners such as Gemalto to enhance native VMware Cloud on AWS capabilities and empower customers with flexibility and choice in solutions that can drive business value."

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

11. B2 PAYMENT SOLUTIONS INTRODUCES NEW EMV AND CONTACTLESS TEST CARD SETS TO HELP ORGANIZATIONS TEST AND DEMO THE INTEROPERABILITY OF EMV CONTACT AND CONTACTLESS CARDS

Source: B2 Payment Solutions (09/13)

B2 Payment Solutions Inc. (B2), an organization providing best-in-class products and services for the payment industry, announced that they have introduced new test card sets into their product portfolio – including JCB Card Set, China UnionPay Card Set, a UAT EUR Card Set; and a UAT UK Card Set.

B2's new test card sets are ideal for training, testing and demonstrating EMV contact and contactless payment solutions. They can also be used to perform User Acceptance Testing (UAT) to ensure interoperability with existing systems. The card sets are available for merchants, POS (point-of-sale) developers, value-added resellers (VARs), independent software operators (ISOs), processors and acquirers. These new cards work with the major processors. B2 cards can be white-labelled with company branding or custom cards can also be created on demand.

Features of the new card sets include:

- UL UAT EUR EMV Test Card Set: Developed for the European market, this test card set includes 16 cards – including contact, contactless and fallback cards. This set includes test cards from the following payment brands: Amex, Discover, Diners, MasterCard (Credit, Debit, Maestro), Visa (Credit, Debit, VPAY, Electron); and are interoperable using a variety of issuer Country Codes, Currency Codes, Preferred Languages, and Cardholder Verification Methods.
- UL UAT UK EMV Test Card Set: Developed for the United Kingdom market, this test card set includes 14 contact and contactless cards, from the following payment brands: Amex, Diners, MasterCard (Credit, Debit, Maestro, domestic cashback), Visa (Credit High Value, VPAY, Electron, Debit, domestic cashback).



“B2 continues to respond to our customers’ needs to ensure that we provide the broadest product portfolio on the market today, and we are happy to now offer our customers an expanded portfolio of test cards that now include card sets for the UK and European markets,” said Bruce Murray, president of B2. “Physical test cards are extremely helpful to all parties within the payment transaction process. It’s very important that acquirers, POS software developers and merchants test their interoperability of their systems to ensure that these payment acceptance devices work within the changing payment infrastructures before launching solutions into the market for consumer use.”

B2 also provides a range of card, POS, ATM and host test tools that will guide any stakeholder in the payment industry towards a smooth, efficient and trouble free go-live of their EMV and contactless infrastructure. In addition, B2 is an exclusive payment test tool distributor for UL in North America. B2 also has additional card sets available for the U.S. and Canada. These card sets are recommended by many processors for user acceptance testing of middleware or semi-integrated solutions.

American Express, B2 Payment Solutions, China UnionPay, Discover, and MasterCard are members of ACT Canada; please visit www.americanexpress.ca, www.b2ps.com, www.unionpay.com, www.discover.com and www.mastercard.ca.

12. BRITISH SUPERMARKET OFFERS 'FINGER VEIN' PAYMENT IN WORLDWIDE FIRST

Source: The Telegraph (09/20)

A UK supermarket has become the first in the world to let shoppers pay for groceries using just the veins in their fingertips. Customers at the Costcutter store, at Brunel University in London, can now pay using their unique vein pattern to identify themselves. The firm behind the technology, Sthaler, has said it is in "serious talks" with other major UK supermarkets to adopt hi-tech finger vein scanners at pay points across thousands of stores.

It works by using infrared to scan people's finger veins and then links this unique biometric map to their bank cards. Customers' bank details are then stored with payment provider Worldpay, in the same way you can store your card details when shopping online. Shoppers can then turn up to the supermarket with nothing on them but their own hands and use it to make payments in just three seconds. It comes as previous studies have found fingerprint recognition, used widely on mobile phones, is vulnerable to being hacked and can be copied even from finger smears left on phone screens. But Sthaler, the firm behind the technology, claims vein technology is the most secure biometric identification method as it cannot be copied or stolen.



Sthaler said dozens of students were already using the system and it expected 3,000 students out of 13,000 to have signed up by November. Finger print payments are already used widely at cash points in Poland, Turkey and Japan. Vein scanners are also used as a way of accessing high-security UK police buildings and authorising internal trading at least one major British investment bank. The firm is also in discussions with nightclubs, gyms about using the technology to verify membership and even Premier League football clubs to check people have the right access to VIP hospitality areas.

Fingerprint technology could be coming to a supermarket near you

The technology uses an infrared light to create a detailed map of the vein pattern in your finger. It requires the person to be alive, meaning in the unlikely event a criminal hacks off someone's finger, it would not work. Sthaler said it take just one minute to sign up to the system initially and, after that, it takes just seconds to place your finger in a scanner each time you reach the supermarket checkout.

Simon Binns, commercial director of Sthaler, told the Daily Telegraph: 'This makes payments so much easier for customers. "They don't need to carry cash or cards. They don't need to remember a pin number. You just bring yourself. This is the safest form of biometrics. There are no known incidences where this security has been breached. "When you put your finger in the scanner it checks you are alive, it checks for a pulse, it checks for haemoglobin. 'Your vein pattern is secure because it is kept on a database in an encrypted form, as binary numbers. No card details are stored with the retailer or ourselves, it is held with Worldpay, in the same way it is when you buy online."

Nick Telford-Reed, director of technology innovation at Worldpay UK, said: "In our view, finger vein technology has a number of advantages over fingerprint. This deployment of Fingopay in Costcutter branches demonstrates how consumers increasingly want to see their payment methods secure and simple."

13. ALIPAY EXPANDS TO NORDIC REGION WITH RETAILER PACTS

Source: Mobile Payments Today (09/22)

Alipay has signed separate memorandum of understandings with Finpro (Finland), Svensk Handel (Sweden) and the Scandinavian Tourist Board, which will enable merchants across the Nordic region to accept payment via Alipay and reach Chinese customers before, during and after their visit via Alipay's in-app marketing platform.

"As part of our globalization strategy, we are focused on working with local partners to bring this smart lifestyle to Chinese tourists, no matter where they go," Douglas Feagin, president of the international business division for Ant Financial Services Group, said in a press release. Over 500 merchants in Finland already



accept Alipay and are searchable on Alipay's Discover Platform, including well-known brands in Helsinki such as Marimekko, Iittala and Marja Kurki.

Finland's latest addition to the Alipay ecosystem is retail giant Stockmann. ePassi, a leading e-payment company in Europe, and the largest e-wallet in Finland, has been working with Finpro, a government owned organization promoting trade, investment and tourism in Finland, to promote Alipay among merchants in the country, according to the release.

14. OT-MORPHO LAUNCHES WITH CMBC THE FIRST PAYMENT CARD FEATURING MOTION CODE DYNAMIC CVV2 IN CHINA

Source: OT Morpho (09/21)

OT-Morpho announced that Chinese bank CMBC's new Visa Signature credit card is the first one in China to feature MOTION CODE™, a technology developed by OT-Morpho to provide a higher security for internet transactions, considerably reducing the risk of online fraud. Traditional payment cards feature a static cryptogram (CVV2) used to pay online, printed on the back of the card next to the signature panel. This data, as well as the card number (PAN) and expiry date, may be stolen and used to pay online fraudulently.

With MOTION CODE™, the CVV2 becomes dynamic: the 3 digits appear permanently on a mini screen embedded within the card, but they change automatically every hour, without the need for the cardholder to press any button. That way, any stolen data becomes rapidly unusable online by a fraudster. This genuine technological prowess was made possible by OT-Morpho's expertise in "powered cards", which are high-tech payment cards that contain additional electronic components, mini screens, LEDs or even fingerprint sensors, and that are powered by super thin batteries, yet keeping the same 0.8mm thickness and flexibility as a normal payment card.

E-commerce has become a daily habit for millions of Chinese people who are shopping both locally and internationally. CMBC together with OT-Morpho is targeting the cross-border e-commerce transactions providing this unique Visa Signature credit card to its cardholders addressing their specific needs:

- Protection against online fraud with MOTION CODE™ cards provided by OT-Morpho
- Specific discounts for international travelers (hotels & airlines)
- Additional Insurance on goods purchased online internationally

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



15. MASTERCARD ENABLES GARMIN USERS TO RUN AND SHOP AT A PERFECT PACE

Source: MasterCard (08/31)

MasterCard announced that it is adding payment capabilities to the newly launched Garmin vivoactive 3 to provide active customers a watch that frees them from having to carry their phone or wallet around. MasterCard will be enabling fitness enthusiasts to make contactless payments and pay by simply tapping their device at a contactless terminal at nearly 6.6 million merchant locations globally.

How It Works:

- Garmin users will enter payment information in the Garmin Connect Mobile app (available in Apple and Android app stores) by scanning a card or manually entering their information.
- Once the cardholders details are validated and app has synced with the smartwatch, the card is available for use.
- The user can quickly launch their wallet from the controls menu and tap at a contactless terminal whenever they wish to make a payment.

“Technology is enabling fitness companies to provide athletes with the most comprehensive performance trackers we have seen in our time,” said Kiki Del Valle, senior vice president, Commerce for Every Device, MasterCard. “Adding payment capability to these devices is a natural next step to make training and fitness experiences more relevant, personal, and convenient.”

Bringing secure payment functionality to the Garmin vivoactive 3 is the latest initiative within the MasterCard Commerce for Every Device program that is designed to provide consumers a safe and secure way to pay from any device of their choice. Simplicity and security are at the core of the Garmin Pay capability. By using MasterCard’s industry-leading token service, the 16-digit card number found on the front or back of a payment card is replaced by a unique alternate number or “token.” The token number is not only different from the card number but is also, on its own, useless, when trying to perform a transaction via a different device – making each transaction secure.

“We want to be true training partners and support the active lifestyles of our users,” said Dan Bartel, Garmin vice president of worldwide sales. “With MasterCard technology, our users no longer need to be tethered to their physical wallets and can pay for things in a safe, simple, and secure way. This partnership enables us to empower our consumers to use the device that is most convenient to them, with a high level of security.”

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

16. BITCOIN'S VALUE NOSEDIVES AS CHINESE REGULATORS APPLY PRESSURE

Source: Mobile Payments Today (09/15)

BTCChina, a major Chinese bitcoin exchange has announced that it will stop all new user registration and trading on Sept. 30 due to increasing regulatory pressure from the Chinese government. The result of this announcement, in conjunction with the Chinese government's decision in recent weeks to ban ICOs, caused the virtual currency's value to plummet nearly \$1,000 within 72 hours. The price settled at around \$3,300 this afternoon, down from around \$4,300 early Tuesday morning, according to data from BTC Ticker.

As of this afternoon, the price of bitcoin has dropped approximately one-third since Sept. 1 when it peaked at \$4967.32 on the ticker. On top of developments in China, the virtual currency's value was also dinged by the comments of Jamie Dimon, chairman, president and CEO of U.S. banking behemoth JP MorganChase. At a conference on Tuesday, Dimon declared bitcoin a 'fraud' and said he would fire any JPMorgan trader found to be trading in the currency. A CNBC report quoted Dimon as saying, "It's worse than tulip bulbs. It won't end well. Someone is going to get killed," in a reference to the spectacular rise and collapse of tulip bulb prices in Holland during the early 17th century, an economic bubble that ruined some European investors.

17. TURNING SMARTPHONES INTO PAYMENT TERMINALS

Source: MasterCard (08/30)

MasterCard unveiled a pilot project in Poland, making a smartphone the only necessary device for accepting contactless payments. The solution is aimed at small and micro merchants that have traditionally taken cash payments, providing them with a simpler and more secure way to run their business. Tap to Pay GS7A recent study commissioned by the Polish Foundation for Development of Cashless Payments (FROB)[1] shows that among entrepreneurs that gave up card or mobile payments, 36 percent did so because of the associated costs. The solution to be piloted aims to address this. Participating businesses only have to install a dedicated mobile app and create a merchant account in it – no separate payment terminals nor other peripheral equipment will be needed.

The pilot is expected to start this autumn and to last until the summer of 2018. The first stage will involve 200 small and micro businesses from all over Poland, with the number ultimately expected to grow to 500. In the pilot phase, the limit for each transaction accepted by a mobile device will be PLN 50 (USD 14), which is the contactless payment limit in Poland without the need to enter a PIN. "MasterCard is committed to enable every connected device to accept payments – and I am delighted that Poland is the first country where this latest innovation in payment technologies is being tested. Poles have proven many times that they are



open to innovations in trade and finance, and Poland needs such solutions on its way to become a cash-lite economy. I am proud that together with our partners we can contribute to making yet another technological leap in payments,” commented Bartosz Ciolkowski, country manager Poland, MasterCard.

“Innovations such as this can help streamline processes, increase service availability, and reduce time and costs, benefiting small merchants and consumers. As our customers are enthusiastic about adopting new technologies, we work together with our partners to create a digital payment environment using mobile devices,” said Rafal Golebiewski, country manager Poland, Elavon.

“This project is an important step in widening the possibilities in merchant card acceptance in Poland through innovations in the hardware itself, which offers convenience and ease of use for both merchants and consumers. As a Polish company focused on innovative payment solutions for SMEs, Polskie ePlatnosci is pleased to be a partner in this pilot. Over the next years this will have an influence on the roadmap leading to supply Polish retailers with cashless payment acceptance supporting the government’s plan to fully digitalize the country,” added Janusz Diemko, president, Polskie ePlatnosci.

“We’re delighted that through our partnership with Mastercard and Samsung, and with the support of OT-Morpho, we will be able to provide our mobile contactless payment acceptance solution in Poland. As more and more mature and emerging markets call for the wider adoption of electronic payments, mobile contactless payment acceptance is a great fit for banks and merchants looking to best serve consumers in this increasingly cashless age,” said Benjamin du Hays, CEO and co-founder of Mobeewave. MasterCard has the responsibility to balance any emerging solution with the highest security standards. To this end, Mastercard has developed specific security principles that need to be adopted by all pilot participants.

Poland at the forefront of payment innovation

Poland is one of the worldwide leaders in contactless payments. More than 2/3 of transactions with MasterCard cards in Poland are already contactless. Moreover, according to the National Bank of Poland, Poles carry 29.4 million contactless payment cards in their wallets, which already accounts for nearly 78 percent of all cards. There are 514,000 contactless terminals in Poland, which represents 91 percent of all terminals accepting cashless payments.

This initiative is in line with the different activities of MasterCard to expand cashless payments and to include a growing number of entrepreneurs and consumers in the digital economy. The solution meets the expectations of Polish consumers who want to have a choice between card and cash payments. As shown by a recent study[commissioned by MasterCard, 61 percent of Poles would



like to be able to use cashless payments anywhere, including in small convenience stores, at stalls, marketplaces etc.

Elavon, MasterCard and OT-Morpho are members of ACT Canada; please visit www.elavon.ca, www.mastercard.ca and www.oberthur.com.

18. DIGITAL PAYMENTS AUTHENTICATION REQUIRES AGILITY AND ADAPTABILITY, A REPORT SAYS

Source: Digital Transactions (09/19)

As more consumers make more digital payments, financial institutions and merchants face an increasingly complex challenge to better authenticate these transactions. That requires looking at ways to keep pace with criminals and staying in step with consumers, says Aite Group LLC in its latest report, “Digital Authentication: New Opportunities to Enhance the Customer Journey,” released this month. It’s a challenge compounded by consumer willingness to conduct more financial services online and criminal access to billions of pieces of consumer data. “Financial fraud is a big business that generates billions of dollars in illicit revenue every year for international organized crime rings,” says Julie Conroy, Aite research director, in the report, which was sponsored by Visa Inc.

For example, criminals use stolen credentials to commit account takeovers, where they pose as legitimate consumers. Aite forecasts that account-takeover losses for U.S. financial institutions will surpass \$1 billion by 2020. Contending with this and other fraud efforts, however, must also factor in the consumer experience, Conroy notes. “The impact on the customer experience is also a key consideration—the digital customer experience is a competitive factor for both [financial institutions] and merchants, so any new fraud or authentication solution will be closely examined to understand the degree of friction that it introduces,” she writes.

Her assessment cites behavioral biometrics, behavior patterns, and device identity as the ideal for enabling a seamless authentication process. Behavioral biometrics measures how a person interacts with a device, such as the speed and pattern of typing or the way she holds the device. Behavior patterns monitor user activity to detect suspicious activity or patterns. Device identity encompasses identifiable hardware and software elements associated with a computer or mobile device. As for biometric authentication technology, fingerprint-based payment authentication will soon be joined by facial recognition on a smart phone when Apple Inc.’s iPhone X debuts in November with facial-identification technology.

Aite found that younger consumers are more apt to view facial recognition as effective or very effective. Of Millennials, 71% thought the technology is accurate at identifying them and preventing others from accessing their accounts. That compares to 64% of Generation X, 59% of Baby Boomers, and 53% of seniors. With that knowledge, a bank or merchant that offers a mobile app that

uses biometrics to log in may find it easier for their customers to use than requiring a keyed password, Conroy says.

“Financial institutions and merchants should look for solutions that can enable them to tailor the responses to the risk of the transaction,” she writes.

19. THE WORLD OF CRYPTOCURRENCIES: A REALITY CHECK ON WHY THEY ARE YEARS AWAY FROM REPLACING FIAT CURRENCIES

Source: Let's Talk Payments (09/18)

Bitcoin and the underlying Blockchain technology was invented/created over eight years ago as an alternative means of payment through the mining of digital currency (Bitcoin) by solving cryptic equations. The rhetoric was that it eliminated the need for a third-party intermediary, hence giving the power of choice back to the people in a peer-to-peer system which no longer had to rely on trusting a third-party custodian or central authority.

Initially, cryptocurrencies were consigned to a small community of techies who wanted to be part of the decentralized world. However, following the spectacular collapse of Mt. Gox in 2014, a major Bitcoin exchange that handled nearly 70% of Bitcoin volumes, along with the use of Bitcoin in nefarious activities, Bitcoin came into focus in the mainstream. A lot of people in the financial services industry stayed away from the cryptocurrencies owing to the notoriety it had gained, but the underlying structure, i.e., Blockchain, started to attract interest from technology players and those looking to innovate in financial services.

With increasing PoCs and actual use cases of Blockchain in the last two years, more cryptocurrencies started to be created, through the process of Initial Coin Offerings (ICOs). In the last month or so, major financial news headlines have centered around cryptocurrencies and its fundraising processes of ICOs and token sales. These fundraising activities have topped over \$2 billion in 2017. As of the last count on September 16, 2017, there were 1109 cryptocurrencies with a total market cap of \$127.5 billion. Another factor for the uptick in interest in cryptocurrencies was the development of Ethereum, which brought with it the ability to execute smart contracts and transfer software via the Blockchain. A large number of the recently launched ICOs are based on an Ethereum platform.

With a boom in capital being raised through ICOs and ITOs, it was inevitable that most regulators around the world, including the SEC, PBoC, SFC and MAS waded in on the possibility of coins being securities to outright banning them. There are guidelines issued on how one needs to treat ICOs and token sales, cautioning investors to be very careful in investing in these highly volatile, and in some cases, bogus currencies. Besides regulators stepping in to protect average investors, one factor that has gotten a bit lost in all the hype is about how central banks and governments are dealing with the impact of cryptocurrencies on their monetary



systems. Secondly, many cryptocurrency enthusiasts and investors believe that the cryptocurrencies will overtake the world of transactions replacing fiat currencies and achieve financial empowerment.

This rhetoric is a folly and, in many ways, showcases a lack of understanding of the global monetary system and its dynamics. Additionally, it fails to take into account the initiatives that central banks around the world are taking to completely digitize their fiat currencies. In 1944, the Bretton Woods agreement adopted a monetary policy that tied a currency's exchange rate to gold, following which paper currency was created to replace the need to carry bullion and make it easier to transact. However, with the abandonment of the Gold Standard, governments around the world moved to printing their own currencies backed by the trust in their central banks that have relative value against each other, thereby creating fiat-currency economies. The value changes due to a host of factors, including relative interest rates, terms of trade and inflation.

The money is printed and volumes in circulation are regulated by central banks. Through many measures from M1 to M3 and beyond, the central banks gauge the money supply and accordingly print more money if the supply is tight or absorb from the system if they feel there are inflationary pressures due to easy availability. In normal economic conditions, this is largely driven by interest rate hikes/cuts which impact the supply: If the interest rates are higher, less money flows in the system and vice versa. Now having had a look at the fundamentals, let us now take a look at why cryptocurrencies are many years away from making a significant mark on the way most of the world uses money.

Adoption & acceptance

While over 85% of the world's transactions are conducted in cash, cryptocurrencies are digital currencies. The total market cap of all cryptocurrencies in use is only \$127.5 billion – a drop in the ocean when compared to the \$81 trillion of all currencies in circulation worldwide. One might argue that cryptocurrencies are currently in their infancy and over time they will be able to gain ground. There are two flaws in this argument. There are over 1110 cryptocurrencies in circulation vs. only 180 fiat currencies recognized by the UN. There are way too many cryptocurrencies in circulation and these will only increase in the future, making it harder for ease of use, exchange and enough exchange vehicles.

All token sellers believe that their coin will be widely used and accepted to buy any service and product but in reality, only a few of them will succeed. Secondly, the world is dominated by two major currencies, the US dollar with 43% and the euro with 30% of transactions. The yuan, which represents the world's second-largest economy and in use by over 20% of the world's population, has only 1.6% of market share – further showcasing that cryptocurrencies are very unlikely to reach a significant scale of market cap in the coming decades as they are not likely to be widely used for all types of transactions.

Need for central authority during crisis

When there are financial crisis or problems with major financial institutions, the central banks might support their financial eco-systems through various measures to bring stability to their currencies and exude confidence. These can vary from the standard ways of cutting interest rates and/or printing more money, to measures of quantitative easing. A cryptocurrency is as much an investment as it is a utility to perform transactions. A vast majority of the world's population deals in only one currency – their local currency, and the intention of using this currency is purely as a payment utility and not as an investment instrument. If one were to use a cryptocurrency, there is no central authority to execute stability measures and bring things into control when there is a crash. There is no centrally covered insurance on the accounts/wallets. The users will see their wealth erode quickly and will have no backstop or insurance to save their monetary assets.

Need for effective governance and controls for governments and monetary authority

Most, if not all, governments want to be in control of how money is exchanging hands in their countries – from the need to control things blowing up and crisis being created, to being able to control the outflow of funds during tough economic times like in the case of China in 2015 and 2016. The central banks want to be able to follow and keep control of their M1, M2 and M3 so that they have a pulse of the economy. They are unlikely to let a decentralized system run amok and would not let the new currencies to take over. A lot of currencies in the world are not even fully convertible against more than one currency, which is usually the US dollar.

This again comes with the need to keep a tight ship and control over their money supply. Secondly, in the new world, economies are largely linked and central bankers are closely co-operating to ensure that the impact of one large central bank's action on other countries is limited, or provides scope for the other central banker to adjust their monetary policy. However, in the cryptoworld, there is no central authority and can't have a coordinated action. Even in the case of the Bitcoin Blockchain upgrade, there were differences in opinions leading to the formation of an additional currency, Bitcoin Cash, highlighting the instability and lack of coordination among players.

Anti-money laundering & KYC

With cryptocurrencies, it is harder (not impossible) to track the flow of funds and to know who is holding how much of these currencies. In the current world dynamics, high-street banks are spending a lot of money and will continue to do so on their KYC and AML processes due to regulatory demands and risk of massive fines. With cryptocurrencies, these costs are even higher, and worse still, the movement of funds cannot be realistically controlled or monitored making the

authorities even more likely not let them proliferate. Additionally, the key point for KYC/AML is to ensure money is not used by terrorists and criminals and being able to track the users.

Stability in value

It is rare for a recognized currency to have high volatility of over 5% in its value and for a currency to lose more than 10% in a day. Most moves tend to be in the 1-2% range, unless there is a massive crisis that erupts, such as a fall in government or if the central bank prints a massive amount of new currency, like in Zimbabwe causing hyper-inflation. Cryptocurrencies are highly volatile and with a significant change in value, people cannot perform reliable transactions in them owing to the significant market and liquidity risks. A similar pattern is can be seen in the usage of fiat currencies that are highly volatile, such as the Argentinean pesos.

Digitization of fiat currencies

Lastly, some of the world's biggest central banks have been running PoCs on adopting digital currencies of their own. From the PBoC to the MAS and E-Estonia, many are looking to have their currencies go digital. In Sweden, they have already declared cash dead and India recently had a massive demonetization drive, part of which was driven by the need to make cash transactions digital. Through a digital currency, central banks can trace funds more easily, hence be able to tax them. Secondly, they will be able to impart interest rates more effectively, especially negative interest rates which can be dampened if people hoard their physical cash. It also reduces the costs of printing and maintaining paper currencies, which according to some estimates costs up to **1.5%** of GDP. Additionally, the cost of handling physical cash reduces for banks consequently reducing the need to operate physical bank locations.

This is not to say that cryptocurrencies will die down or will cease to exist in use in a few years. The major currencies, led by Bitcoin and Ether, will be very much in use and their market capitalization is likely to increase. They will have their place in the world of transactions especially in peer-to-peer (P2P); however, one needs to be realistic in their expectation of growth of these currencies and their wide use which will be on a small scale and not as widespread as suggested by some of the hype and hoopla in the recent weeks.



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