Welcome to the **July** 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

21. How analytics of things (AoT) will maximize the value of connectivity

22. New version UL cloud-based payments test suite qualified by MasterCard

23. Gamification in banking: from transactions to experiences

24. VISA opens up office in Silicon Valley to spur innovation

25. Bitcoin wallet enables payments via Twitter

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Calendar of Events

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Montreal - Sep 22
Calgary - Oct 4
Vancouver - Oct 6
http://www.actcda.com/calendar/act-canada-events/connections.html
ACT Canada members receive discounts

Trusted Execution Environment (TEE): Connected Device Security for Today and Tomorrow
October 13, 2016
Santa Clara, CA
http://www.globalplatform.org/TEEevent/
ACT Canada members receive discounts (guaranteed early bird rates even after it expires)

IVIES Awards Gala
October 19, 2016
Toronto, ON
http://www.actcda.com/ivie-awards.html - to register or to submit your nominations now!
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Money 2020
October 23-26, 2016
Las Vegas, NV
http://www.money2020.com/
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Articles

1. EDITORIAL - WHAT IS LEADERSHIP?
Source: Catherine Johnston, CEO, ACT Canada (07/28)

It is a lot easier to talk about what it isn't. Leadership is not just getting to market first. It isn't about building a product or service just because there is a market growth projection that looks like a hockey stick, even though Canadians inherently feel a connection with our national sport. And, perhaps more than anything, leadership isn't about cutting a few pennies per unit to boost the bottom line if it is at the risk of reputational loss or financial penalties. We all agree with this, so why do so many corporate leaders fall into these traps? I am not trying to justify any of these scenarios but I will say that it is very hard to know where to invest your resources these days. Part of the problem is social media and the internet. These are breeding grounds for unbridled enthusiasm about every new technology – enthusiasm that rarely leads to self-fulfilling prophecies. Nonetheless, it fosters market buzz and countless organizations then spend money to "take a look".

Research and innovation are both good things and I encourage everyone to invest in them to the extent that makes business sense. It is also good to look back at the past ten years to see how many of your investments had a positive payback. Likely some will and some won't. The key question to ask is which ones, if any, you regret. I can think of some of my own. Good leaders know what problem they are trying to solve and base their investments on that. Bright shiny objects are only interesting when they solve a problem for someone who is willing to pay for the solution. In a world awash with information overload, ACT Canada creates clarity by connecting people, enabling dialogue and driving insights. We support good leadership.

2. WALMART CANADA LAUNCHES SHOPPING APP AS MOBILE BECOMES BIGGEST TRAFFIC-DRIVER
Source: IT Business (07/21)

Ask Rick Neuman, executive vice-president of technology and ecommerce at Walmart Canada what his favourite feature of the retailer's new mobile app is, and he'll tell you it's the "favourites list." At one point in the process, beta testers felt the feature was too overcomplicated. But after simplifying it, the experience really shines, he says. "The other day I made a favourites list, handed it to my wife and she was able to get a $120 basket together in four minutes for a great camping weekend with my girls," he says. Released on Wednesday for iOS and Android, Walmart's Online Shopping app was built through a collaboration with Razorfish Canada. It was developed based on a Canada-wide survey probing what people wanted from a Walmart app. It was also beta-tested by hand-picked customers and the retailer's employee base as the final version was ironed out.

Mobile trending up

But perhaps most notably, it comes at a time when Walmart's reached a tipping point. Up until last month, most web traffic was coming from desktop users, Neuman says. But in June, mobile-based traffic overtook it. "That's a huge shift for us," he says. "Naturally, the dollars side is growing as well… we see massive potential." With more than 400 stores across Canada, the bulk of Walmart's sales are still taking place at bricks-and-mortar locations. But offering a digital option to consumers is just part of doing business in today's marketplace. "The whole definition of omnichannel is the realization that you can no longer, as the retailer, ask the customer to shop in one particular way," Neuman says.

The app also complements the website, which supports a responsive design for mobile users, by offering a more convenient channel to loyal customers, he adds. "The importance of mobile is becoming higher on our priority list," he says. Aside from the favourites list, the app features weekly "flyer features" that are geo-located to the app user. If a favourite item goes on sale, the user can be notified with a Rollback Alert. In the Toronto area and Ottawa, customers can complete a shopping list on their app and book a time to pick it up in-store. A barcode scanning app works in store to provide shoppers with more product information and user reviews and provides a price check. But even outside of the store, it has its applications, Neuman says. If you empty that box of Cheerios, scanning the bar code is a fast way to add it to your next shopping basket. "We envision our customers using that to replenish products they use up in their home," he says. "It allows for incredibly quick interaction and takes searching and browsing out of the equation."

Developing an app for a mega-retailer

Walmart developed the application with an agile methodology. While Razorfish focused on the front end, Walmart's own in-house technology team did

the work on the backend, leveraging the same infrastructure used to run Walmart.ca. Walmart has a technology team both in California that focuses on the Canadian market, as well as a local group that is based in Canada and identifies the features customers want to see. When it came time to beta test the app, many Walmart associates volunteered to help.

"They were not shy with their feedback," Neuman says. "One of the things they told us was on the product pages, some of the information was hidden behind these 'accordions' and that made it hard to understand exactly what you were buying." As a result, the 'accordion' user experience aspect was cut in favour of a cleaner approach. Walmart.ca has become one of the top-trafficked retail sites in Canada, Neuman says, and its numbers compare well against even major media brands. The site services the same needs as a physical store, and in some cases even more – for example a store can only put five different patio sets on display, while there's no limit to the number of sets shown online.

While the retailer's focus remains on setting low prices, digital convenience also ranks highly on Neuman's list of favourite priorities. "As more Canadians move into the digital space, the demands on IT become higher," he says. "My goal is to be able to step into that, to provide customers the style of life they're looking for."

Walmart is a member of ACT Canada; please visit www.walmart.ca.

3. MASTERCARD INTEGRATES IN-STORE MOBILE PAYMENTS INTO MASTERPASS DIGITAL PAYMENT SOLUTION
Source: CardNotPresent.com (07/19)

Late last week, MasterCard unveiled plans to expand its Masterpass digital payment solution to include support for in-store purchases using an Android device. Masterpass, the evolution of MasterCard's digital wallet, has been available as an online and in-app payment method for more than two years. It enables consumers to load payment details from the credit cards of participating issuers and make one-touch payments at participating merchants. For the first time, however, the company said it will compete with Apple Pay, Samsung Pay, Android Pay and others that enable contactless payments at the point of sale. Purchase, N.Y.-based MasterCard is positioning the addition of in-store mobile payment capability as the final piece to a complete omnichannel payment solution for merchants.

"With billions of cardholders across the globe, we are working with our issuers and merchants to ensure that we're delivering digital payments that support consumer expectations for a familiar and secure payment experience both now and in the future," said Craig Vosburg, president of North America for MasterCard. "The expansion of Masterpass represents an important evolution of our business.

We're packaging the intelligence and insights generated by digital payment solutions to power a wide range of merchant and consumer experiences."

MasterCard partnered with more than a dozen issuers for the initial rollout of the service including Bank of America, Capital One and Citi. Customers of those FIs can add their card information to Masterpass and begin using their Android devices to make contactless payments in stores later this month. The company highlighted BJ's Wholesale Club as one of the more than 5 million merchant locations globally where the in-store service already works. MasterCard also said JetBlue, Saks.com, Lord and Taylor.com, the Subway app and the Cheesecake Factory app would roll out Masterpass payments "in the coming months," but did not indicate if in-store payments would be available at these outlets.

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

4. VISA/PAYPAL AND THE FUTURE OF PAYMENTS
Source: PYMNTS.com (07/25)

There's no doubt that the announcement of the Visa/PayPal partnership shook the payments world more than a little bit last Thursday. Over the last year, PayPal CEO Dan Schulman made a point, every chance he could, to let everyone know that he was the chief of a decidedly different PayPal, post its eBay independence. That PayPal, he said, was one that embraced partnerships and consumer choice. The network that started life steering consumers to ACH, he emphasized, was now indifferent to tender type. The consumer ruled. Over that same year, Visa CEO Charlie Scharf made it perfectly clear that players in the payments sphere fell into two distinct camps: they were either with Visa or against it. Frenemy, schenemy he as much said – this co-opetition stuff doesn't reflect the reality of how the payments ecosystem and the issuer-centric network model that's been the cornerstone of the payments industry for more than 50 years operates. And since PayPal's ACH model was still alive and well — with a chunk of accounts transacting that way — Scharf made it clear that PayPal's business model was a concern.

So, what generated the collective industry gasp last Thursday was the public affirmation that those two players had buried that hatchet. But, like most any big announcement in payments — and this really juicy one — it has led to many different interpretations. Some immediately remarked that the partnership will give in-store NFC payments a real boost. Analysts have expressed concerns that it will totally crater PayPal's business model (an opinion that saw its stock take more than a 9 percent hit on Friday – it ended the day down 6.75 percent). And some of the more sinister soothsayers suggest that Visa now has the benefit of having PayPal under its watchful eye as it simultaneously scales its own digital competitor, Checkout.

All things that make for nice headlines and clicks, but they are observations that are also somewhat off base. They all miss the potential that both Visa and PayPal have to use the next 12 months of exclusivity of their multi-year relationship to change the dynamics of the payments landscape in the U.S., and the actions of every single player in it. If they can execute. So, here's my take on what this partnership is — and isn't.

IT'S NOT ABOUT NFC

One thing's for certain: when NFC is the hammer, every in-store payments announcement is a nail. Yes, the deal with Visa and its access to Visa's token services, VDEP, is big. At the jump, it gives PayPal an easy and immediate onramp as a token requestor to enable contactless in-store payments where Visa contactless payments are accepted and Visa methods of payments are used. As a refresher, VDEP eliminates the bi-lateral contractual rigmarole that makes it hard for other contactless payments schemes that require those individual contractual negotiations to achieve commercial scale. It also sets out parameters for how token requestors and issuers will play together, including rules that forbid token requestors from imposing fees. This partnership gives issuers the chance to opt-in to becoming a digitized, tokenized credential in a consumer's PayPal account for use in-store under that program. And opt-in is a whole lot easier and faster than negotiating commercial terms.

Instead of getting bogged down in negotiating the T's and C's of a commercial agreement, the work between the issuers and PayPal is about enabling accountholders to use their Visa cards in the PayPal account. Things like who owns what data (the data for any PayPal/Visa transaction will be shared exactly as if a Visa card was presented and swiped), how Visa accounts will be positioned at signup (equal positioning with ACH options) and when transacting (visible and digitized card credentials in the transaction flow) has already been negotiated. Merchants will also probably get favorable pricing as part of this deal, too, because PayPal gets negotiated economic incentives which will pass along in part – more on that later.

And, yes, while VDEP surely does give PayPal the ability to check the in-store payments box and allows its app and Visa issuers who opt-in to have parity with the other in-store "Pays" at those places that accept NFC payments, there are a couple of big "buts" that offer some big clues into where in-store may be headed with this partnership. "But" No. 1 is that VDEP, at the moment, only extends to PayPal apps running on Android phones. So that limits the in-store capability to the unknown number of Visa credentialed PayPal accountholders who own Android phones capable of making an NFC payment who also walk into merchant locations with NFC. And while that number may be unknown, it's probably small and maybe even too small to get people all fired up about.

Which brings me to "but" No. 2.

Of the 2 million merchant locations that are NFC-enabled, 400k or so are vending machines. According to Visa's latest EMV stats, there are still 72 percent of merchants without EMV terminals – and that means that there are still 72 percent of merchants that aren't equipped to enable NFC anytime soon. There's also no guarantee that 100 percent of the 1.2 million EMV terminals are also NFC enabled and at the places that consumers shop regularly enough to develop a digital in-store mobile payments habit. It is therefore unlikely that either party perceives the Visa/PayPal VDEP capability as the in-store NFC payments' silver bullet even though it was a nice bullet in the presser. For digital payments to play at scale and ignite, the solution must be cloud-based, cross platform/cross OS and cross-channel. I think just about everyone knows this now – or at least I hope so.

More likely, VDEP is the tip of very big digital payments iceberg that could transform in-store payments in a material way. When I chatted with Visa's Global EVP and Head of Innovation last year, Jim McCarthy, at the launch of VDEP, he mentioned that VDEP was technology agnostic. In fact, he said that Visa's token service "gives the merchant the ability to choose whether at the point of sale the consumer presents a QR code or an NFC radio signal or a BLE beacon-enabled transaction, because VDEP is agnostic in that respect." Now that's interesting.

PayPal owns Paydiant, which has its own portfolio of in-store payments technologies. And Braintree, which has put in market what Schulman described as the most "rapidly adopted product in PayPal history" – One Touch. VDEP's technology-agnostic, efficient issuer integration platform would seem to give the folks at PayPal and Visa the opportunity to fine tune a slick, in-store customer experience that goes well beyond subbing a tap for a swipe to unlocking new value for merchants and consumers. That's where I'm placing my bets.

IT'S ABOUT THE TRANSACTION VOLUME

Investors did not like it when PayPal CFO John Rainey suggested that 2017 would deliver increased transaction expenses as a result of changes to its funding mix. PayPal's stock price ended Friday (July 22) down more than 6 percent, recovering a bit from being down more than 9 percent earlier in the day. I, though, focused on three other comments that I believe round out the story: the tail end of Rainey's comments on transaction costs, a very pointed phrase that Schulman emphasized several times in his own remarks and Scharf's own description of the deal terms. Rainey spoke of gaining "certainty over cost control," Schulman said the deal with Visa eliminated the "threat of any targeted pricing actions" and Scharf remarked that the deal affords PayPal "greater longer term fee certainty."

Taken together, this suggests that absent a deal, PayPal might have been facing onerous cost-side increases of another kind that could have had a material impact on the business. Eliminating that uncertainty via this partnership means that

everyone can get on with the business of business – growing the digital payments footprint for consumers, issuers and merchants. Which is all about increasing transaction volume. Although details are scant, as one might expect, both Schulman and Scharf acknowledged during the earnings call that economic incentives are being extended to PayPal in exchange for increased volume.

There are a few ways that the partnership is designed to drive transaction volume. There is a 12-month exclusivity period for Visa issuers to promote their own, branded digital credentials within the PayPal account. I would imagine that issuers would jump at that chance to ride the "top of digital wallet" with the largest digital payments player in the market, worldwide. I can also imagine that such efforts might be accompanied by some creative marketing initiatives to drive account enrollment and usage – with maybe Visa even kicking in a few bucks of its own. And since PayPal is accepted at more than 14 million merchants, all of these consumer incentives actually give consumers the opportunity to use those digital account credentials at the places they like to shop around the digital ecosystem. And giving PayPal the chance to drive usage from 29 transactions to something that's more like once a day.

Those marketing activities will also be linked to a few things also stipulated as part of the agreement: PayPal agreeing to position Visa equally with ACH account options at signup, incorporating digital images of Visa cards into the payments flow so they are prominently featured as the top of wallet option, and working with issuers to help convert PayPal's Visa ACH customers to Visa debit customers should the consumer wish to make the switch. It's that last part that has everyone worried, but maybe it shouldn't. We don't really know – and PayPal does not disclose – how much of their volume in the U.S. is ACH-driven. PayPal suggests that it's not as straightforward a calculation, given the mix of P2P volume inside of their numbers. So, we don't really know how much of the PayPal volume is really a target for the switching – but it's obviously enough to have Visa concerned. But whatever that number is, now, thanks to Durbin (and it's rare that we ever say "thanks to Durbin") that revenue hit won't be as huge as it once might have been. There's a gap between ACH and debit, of course, but it isn't as wide as the days before Durbin. The size of that gap depends on those negotiated incentives that PayPal and Visa have worked out and what PayPal pays for ACH today.

But what I take away from the "economic incentives" narrative is that both sides will work together to do something that should have been baked into every preceding mobile payments ignition scheme: giving issuers – and by default consumers – incentives to activate digital accounts and use them. TPV – total payments volume – after all, is the name of the game. A volume game, played by meeting and serving consumers across every channel and every payments use case they encounter.

IT'S ABOUT DEBIT

One aspect of the announcement that I think got lost in the in-store and no more tender-steering news is the additional value-add that this relationship brings to PayPal's P2P users and Visa's debit business. And the pretty big hole that it blew in the set of initiatives that banks are – and have been – undertaking to make P2P a ubiquitous reality via its own schemes. Venmo users, who sent $4 billion between people in Q2, can now get instant access to that money if they use a Visa debit product. This instant accessibility of funds is also available to PayPal P2P users. This does a few things for Visa and PayPal/Venmo. First, it provides a huge incentive for PayPal/Venmo users to attach their Visa cards to their accounts.

Second, it provides Visa issuers with a new opportunity to market real-time availability of funds via this P2P capability and use it as a way to acquire and retain debit card users. Since millennials are Venmo's prime demographic, this could become crucial to competing for the millennial demographic that issuers so covet – adding even more deposit accounts to the mix for issuers and P2P volume for PayPal/Venmo. Third, it eliminates the friction and uncertainty issuers have with their current bank-driven P2P initiatives. Ubiquity is what's needed to really put teeth into P2P and make it a friction-free experience. That doesn't exist today with any of the schemes. Visa debit rails + Venmo and PayPal can get pretty darn close. That means that, fourth, this capability also opens up a potentially whole new series of use cases for real-time payments between people and between businesses and people — from paying insurance claims, to paying contract or gig workers, to disbursing royalties using those rails. Those same use cases that the faster payments folks have been advocating that banks invest in expensive new sets of rails to support.

IT COULD BE ABOUT A NEW WHOLE DIGITAL PAYMENTS PARADIGM

The one unanswered question for most payments peeps is where Visa Checkout now sits in the midst of this announcement. Visa Checkout was launched just about two years ago – in July of 2014 – as the replacement for V.me. Checkout shifted Visa's focus from a wallet that aggregated a variety of digital payments artifacts to just making checkout online simple and fast. When asked about Checkout on the earnings call, Scharf said that Visa Checkout is chugging right along, although he declined to offer stats on users and merchants. The last time Visa reported Checkout numbers – March 2016 – it stood at 11 million users across 16 countries and more than 250k merchants. Scharf spoke instead to the enhancements to Checkout – a streamlined user experience and new ways for issuers to be branded inside the app. There's a short-term and a long-term way of looking at Checkout's future vis-a-vis the Visa/PayPal partnership.

If I'm a Visa issuer and what I really want is volume on my cards and sticky digitally transacting customers, I'm going to want to be present in a variety of digital checkout scenarios as long as I don't have to do much to get there. But what I'm

going to probably spend the next 12 months of exclusivity with PayPal doing though is blasting out a series of incentives that get consumers using cards with the digital network that's already accepted widely online and in-app and very likely cooking up a cool cloud-based in-store experience. If volume is what I want online and use of my own branded digital credentials in that channel, this is probably one of my best shots at achieving that.

And if I'm Visa, I'm also going to use those next 12 months to maybe even fast-track getting digital Visa credentials in as many places as PayPal and Braintree and Venmo and Xoom can get them. Using all of those next 12 months to mobilize a digital payments plan that puts some distance between Visa, its issuers and what everyone else is pursuing. So that, long term, Visa and PayPal could be well-positioned to rewire the digital payments ecosystem. Maybe that's by using the combined assets of the Visa cardholder base and 188 million PayPal accountholders to help merchants capitalize on the digital payments experience in ways that have not been explored before. Maybe that's by tapping the Braintree payments veins deeply including the clever application of capabilities like Braintree Auth, which allows permission-based sharing of tokens across eCommerce endpoints, to expand acceptance and usage.

Or by using the economic incentives that both sides have spoken about to extend favorable terms to merchants and incentives to cardholders to select and use Visa accounts on PayPal's digital network. Or really thinking deeply about how to improve the shopping experience by banking intelligence into the consumer's digital accounts in order to further drive adoption, usage and preference across all channels, platforms and devices. Maybe even positioning PayPal as a digital layer that connects digitized issuer-branded credentials with any platform, any shopping channel and any device enabled at those various endpoints.

WHO'S CHOMPING AT THE BIT AND SHAKING IN THEIR SHOES?

Your reaction, of course, depends entirely on where you play and what assets you bring to the digital payments party. Three days is a relatively short amount of time to absorb this news and 12 months a relatively short amount of time to execute, although as both sides point out, it is a "multi-year" partnership agreement. If you're one of the "Pay" players, it remains in Visa's and PayPal's interest to make their products attractive to everyone so that consumer choice can really be delivered. But, both of them have also made a decision to allocate their own resources – time, people and money – to making sure that the partnership lives up to the terms of the deal and maximizes the 12-month exclusivity for Visa issuers.

Those who could hurt the most beside the many smaller "Pay" players who will struggle to get any merchant attention now? Apple Pay and Samsung Pay. Apple Pay, since issuers will be given an incentive to put their muscle behind a scheme that's more widely accepted and used across a variety of shopping

channels. And Samsung Pay given its very narrow user potential (just Android, then just Samsung, then just new Samsung devices) despite having a pretty slick technology. Like Apple Pay, they are device and OS dependent but unlike Apple Pay, they have a much smaller and seemingly less attractive user base to offer merchants. Google, on the other hand, could make for a very interesting partner if they take off their Android Pay hat and put on their Google Commerce hats. I can imagine lots of clever scenarios in which a Visa/PayPal and Google mash-up could drive volume to Google's various commerce platforms, including YouTube, Maps and Search.

Chase will be an interesting one to watch. As one of Visa's largest issuers, they should be thrilled and very motivated to provide top of digital wallet status to their PayPal users. As Chase Pay, the new mobile wallet "Pay" to be launched later, they might face some new and unanticipated competition from the newly combined PayPal/Visa capabilities in-store and online – depending on how each partner takes that part of their offer to market. American Express and Discover – well, they've been pretty invisible in the digital world so far and this partnership has the potential to make that invisibility even more so. It also puts tremendous pressure on both of them to make a move, which could even include an acquisition of some kind or to put themselves in play to be acquired, depending.

MasterCard, of course, made an announcement of its own last week when it acquired U.K. payments system VocaLink. The once bank-owned system that's a dominant player in the U.K. payments market and enables real-time/faster payments in multiple countries, including a contract to do the same here in the U.S. with The Clearing House, is a way for MasterCard to extend consumer choice via its own payments network through direct debit access. While many have suggested that MasterCard and VocaLink is simply a way for MasterCard to beef up its base in the U.K. where Visa is already quite strong, I think there may be more to it than that. When put alongside its newly enhanced MasterPass cross-channel, cross-platform, and cross-device strategy unveiled two weeks ago, I think that it's a signal that MasterCard is looking to operate a global set of real-time rails that move money between people and businesses using any payment tender across any connected endpoint. The now have assembled network assets – they now need merchants and consumers to hop on board.

And that's what's so interesting to me about Visa and PayPal. They each bring network assets and consumers to the party. Visa, as the largest card network in the world, brings 14k FIs and the consumers they have in tow. PayPal, as the largest digital payments network in the world, brings 188 million active users who've developed a habit of using PayPal – and are increasing that usage. PayPal also brings lots more "dormant" PayPal accounts that this partnership could "wake up" with new incentives for accountholders to use them. It also has digital merchant acceptance and an engine that can enable a lot of new technology deployments on top of a powerful Visa and its network assets. But as I said earlier, everything always looks good on paper. The hard part now is execution. That is what will

decide whether this is the sizzle that it appears to be or another great announcement whose best days were behind it the day the press release dropped.

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

5. BITCOIN NOT THE SAME AS MONEY, MIAMI-DADE COURT RULES
Source: PYMNTS (07/26)

In a closely followed case focused on bitcoin as a currency, a Miami-Dade judge on Monday (July 25) ruled bitcoin doesn't count as money when declining to pursue charges against a man that law enforcement alleged illegally sold the digital currency. In the ruling, Miami-Dade Circuit Judge Teresa Mary Pooler found that, because bitcoin isn't backed by a government or a financial institution, it's not considered "tangible wealth" that can "be hidden under a mattress like cash and gold bars." She went on to say that, while the court isn't an expert in economics, it's clear that bitcoin has more work to do before it can be considered the same as money. "This court is unwilling to punish a man for selling his property to another, when his actions fall under a statute that is so vaguely written that even legal professionals have difficulty finding a singular meaning," she wrote in the ruling.

The case centers on defendant Michell Espinoza, who was charged with illegally selling and laundering bitcoin valued at $1,500 to undercover detectives. The detectives told the defendant they wanted to use the bitcoin to buy stolen credit card numbers. The case was an important one for both sides. Law enforcement has been having a tough time trying to figure out how bitcoin falls into illegal activities, and this was the first case pursuing money laundering with the digital currency. Back in May, Charles Evans, a Barry University economics professor, told the court that bitcoin isn't money because it's not backed by a government or bank. The professor called it "poker chips that people are willing to buy from you."

While bitcoin can be used for nefarious things, it is also gaining in popularity among mainstream companies, merchants and consumers. Bitcoin is used in greater than 200,000 transactions online per day, and a slew of online retailers accept it as payment. Plutus Tap & Pay, the upcoming Android-only mobile app that will let people make bitcoin and Ethereum contactless payments at any merchant with a compatible device, recently raised more than $1 million in crowdfunding in nine days.

6. GIESECKE & DEVRIENT COMMERCIALLY DELIVERS AIRON VERSION 4 FOR ESIM MANAGEMENT
Source: Giesecke & Devrient (06/29)

With the highest share of commercial implementations and partnerships worldwide, Giesecke & Devrient (G&D) has been leading the global market for eSIM management from the beginning. With its AirOn version 4, G&D is commercially operating the next generation system that supports the GSMA M2M specifications as well as the new standard for Remote SIM Provisioning for consumer devices. At the MWC Shanghai, G&D will showcase the latest live eSIM management service. "We are proud that leading mobile network operators have selected G&D for the worldwide first commercial eSIM management solutions", said Stefan Auerbach, Group Executive Mobile Security. "The services have been commercially rolled out into more than 100 Point of Sales in Europe. AirOn is a high-performance solution, ready to cope with peak requirements, for example around launches of a new device, when millions of people switch on their new e-book readers, wearables, or tablets and request an operator profile to be installed on these devices."

The fast growth of connected devices is indisputable changing the way we are living and communicating. Market forecasts indicate that handsets with embedded SIMs will reach several hundred million units globally by 2020. For asian players in the mobile industry, e.g. in the arena of mobile device manufacturing or mobile network operators, in addition to big populations with a strong sense and curiosity on new technical developments, this new connected world will have an immense impact. This means that devices like smartwatches, tablets and fitness-bands are shipped with an embedded SIM (eUICC) and can immediately get cellular-enabled with network operator profiles e.g. via Bluetooth from a smartphone. "At MWC Shanghai G&D will present this first commercial rollout of an eSIM Management solution with a smartwatch," says Carsten Ahrens, Head of the Telecommunication Industries division at G&D. "For the end consumer, it is really fast and simple: The user starts a smartphone app to connect the smartwatch with the smartphone and to request an operator profile to be activated in the embedded SIM of the watch. The profile is securely transferred by the G&D eSIM management service AirOn version 4 through the smartphone to the smartwatch."

As an answer to the market needs of being capable of managing eSIM enabled devices, G&D operates the eSIM management solution AirOn version 4. This solution has been developed in accordance with the Remote SIM Provisioning specification by the GSM Association (GSMA) to secure a common and interoperable solution, which in turn counteract fragmentation of this young market segment. eSIMs managed by AirOn open up a large variety of new use cases for consumers and MNOs. They will support the connection of more devices to the network and help boost new flexible tariff schemes. AirOn provides the highest security and scalability with an intuitive and easy to use service engine.

7. CANADIAN NFC MOBILE WALLET SURETAP TO CLOSE DOWN
Source: NFC World (07/15)

The SIM-based NFC Canadian mobile wallet SureTap is to be discontinued in August 2016 due to "ongoing changes in the market", the mobile wallet provider has announced. Rogers Suretap "With ongoing changes in the market and an increasing number of mobile payment and banking options available from CIBC, Desjardins, Scotiabank as well as other wallets such as Ugo, we at Suretap have decided that we will no longer offer Suretap after August 26, 2016," the company says. "After August 26th, 2016, all Suretap wallet data will be securely stored in accordance with applicable law. Suretap does not and will not store any sensitive information such as credit card information. As of today, Suretap is no longer available for download from the Google Play Store or the Blackberry World Apps Store." "Gift cards are no longer available for purchase from the Suretap card store and balance inquiries can no longer be performed through the wallet app," Suretap continues. "Users are encouraged to spend down the balance of any gift cards in your Wallet before August 26, 2016. After this date, gift cards will no longer be accessible."

Remaining balances

"While we encourage you to spend down the remaining balance of your gift cards before August 26, you will still be able to redeem your gift cards by presenting a screenshot/photograph of the gift card number and PIN (if applicable), directly at the retailer. You must take your screenshot/photograph before August 26," the company adds. "Loyalty cards will be available up to August 26th, 2016. After this date, the loyalty card program will no longer be accessible." Mobile network operator Rogers launched Suretap in partnership with CIBC in November 2012 and went on to launch a second and separate Suretap mobile wallet service in 2013. The company span off its Suretap mobile wallet service as a separate company in June 2015, opening it up to other mobile network operators. It then launched with Bell, Telus, Koodo and Virgin.

CIBC, Desjardins and Scotiabank are members of ACT Canada; please visit www.cibc.com, www.desjardins.com and www.scotiabank.ca.

8. MOBEEWAVE COLLABORATES WITH NXP TO BRING IN-PERSON MONEY COLLECTION TO OEMS WORLDWIDE
Source: PRNewswire (07/12)

Mobeewave announced it will collaborate with NXP Semiconductors to offer original equipment manufacturers (OEMs) the capability to collect money from a

contactless card or mobile wallet using a phone. Combining NXP's expertise in high-performance mixed-signal electronics with the Canadian FinTech company's innovative mobile payment solution, Mobeewave will provide a key differentiator technology for manufacturers of next-generation mobile devices. Mobeewave's patented technology enables individuals to conveniently and securely accept money in person using a phone's NFC capability. This innovative mobile solution ensures sensitive information related to a transaction is encrypted in a device's hardware and software security.

In the constantly evolving smartphone market, OEMs no longer simply require siicon to compete, they need solutions. With NXP, Mobeewave will address this need by providing a key differentiator solution for OEMs: the ability to enable their users to collect money in person using a mobile device. This solution will become a standard feature of smartphones in the future as mobile devices continue to play a greater role in users' daily lives. "Allowing payment transactions between two mobile devices over NFC technology requires a highly secure setup. As a one-stop-shop for integrated NFC and embedded Secure Element solutions, NXP provides high level of data protection and encryption to manufacturers and end users alike," said Charles Dachs, senior director of mobile transactions at NXP. "Enabling this level of convenience and security for in-person money transfers will help grow the use of tap-and-pay in China and beyond."

"This global collaboration with NXP Semiconductors represents a tremendous opportunity for Mobeewave," said Benjamin du Haÿs, CEO and co-founder of Mobeewave. "NXP's expertise will enable us to provide a truly innovative solution to original equipment manufacturers around the world."

Mobeewave and NXP are members of ACT Canada; please visit, www.mobeewave.com and www.nxp.com.

9. GEMALTO FAST-TRACKS LTE ADOPTION FOR IOT IN JAPAN
Source: Gemalto (07/11)

Gemalto announces its Cinterion LTE Cat.1 specific M2M module has completed the interoperability testing by NTT DOCOMO, INC., Japan's largest mobile network operator1. The ELS31J and ELS51J wireless modules are engineered for IoT applications and helps to drive innovation to IoT device makers. Gemalto Cinterion provides the vital communication links between a wide range of IoT devices, such as consumer wearables, smart meters, and remote sensors to the enterprise back-end enabling new services and new business models. The module's ruggedized and future-proof design further offers manufacturers a highly efficient and cost-effective LTE connectivity, as well as easy migration from existing to future telecommunication standards. One of the most advanced nations in the world, Japan is constantly at the forefront of technological innovation, including IoT with key Japanese companies2 investing heavily in this sector. Last

year, an estimated 624 million3 IoT devices were deployed across the country, contributing to US$103 billion4 in market revenue. By 2020, these figures have been forecast to reach over 1 billion units and 176 billion, respectively. The transformative impact of IoT is evident in all industries, from connected cars to smart factories.

"We continue to collaborate with Gemalto, a trusted and long-time partner, to deliver LTE connectivity to our M2M and IoT enterprise customers," said Toshiyuki Futakata, Vice President and Senior Manager of Radio Access Technology Group, Communication Device Development Department at NTT DOCOMO. "Given that this wireless module has already been successfully deployed in the U.S, we are confident that businesses and consumers in Japan will also enjoy the same highly efficient LTE connectivity, harnessing Gemalto's field-proven expertise." "Gemalto and NTT DOCOMO share the same vision of accelerating IoT and LTE adoption and innovation in Japan," said Thothadri Sashidhar, VP M2M Sales APAC at Gemalto. "Our Cinterion family of wireless modules is the world's first to support LTE Cat.1, and being qualified, means device manufacturers can shorten the time-to-market for their products."

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

10. APRIVA TEAMS WITH STAR MICRONICS ON MPOS DEVICES
Source: Mobile Payments Today (07/15)

Star Micronics, a POS and customer engagement technology manufacturer, has announced an integration with Apriva to incorporate support for Star Micronics' TSP650II BTi desktop printer, and the SM-S220iand SM-S230i portable printers into Apriva's white-labeled mobile payments application, AprivaPay Plus. Apriva's AprivaPay Plus solution turns Apple, Android and Amazon Fire devices into mobile points of sale, according to a company press release. Star Micronics' SM-S220i and SM-S230i portable Bluetooth receipt printers are equipped with a sleek, compact and lightweight design and are compatible with all operating systems including iOS and all Bluetooth devices, according to the announcement.

"Easy, seamless mobile payments are increasingly essential for SMB merchants, and increased capabilities such as receipts, are crucial for this market," said Benjamin Hurley, senior director of mobile product management at Apriva. "AprivaPay Plus can turn any mobile device into a fully integrated mobile point of sale system, providing a low-cost solution ideal for smaller merchants. By integrating with Star's Bluetooth printers, we have made upgrading to an EMV-compliant mPOS easy for small business owners."

Apriva is a member of ACT Canada; please visit www.apriva.com.

11. MASTERCARD ACQUIRES VOCALINK
Source: Mobil Payments Today (07/21)

MasterCard Incorporated announced that it has entered into a definitive agreement to acquire 92.4 percent of VocaLink Holdings Ltd. for approximately $920 million. VocaLink operates some payments technology platforms on behalf of U.K. payment schemes, including the Zapp mobile payments app. The transaction is subject to regulatory approval and other customary closing conditions. Under the agreement, a majority of VocaLink shareholders will retain 7.6 percent ownership for at least three years. "We're excited about the opportunity to play a bigger role in payments in the U.K., a very strategic market for us," Ajay Banga, president and CEO of MasterCard, said in a statement. "VocaLink is a unique company with outstanding technology, assets and people. We look forward to investing in and maximizing the technology, and embedding it in our products and solutions, both in the U.K. and around the world."

Vocalink is primarily known for operating the following services:
- BACS: the Automated Clearing House that manages direct credit and direct debit payments between bank accounts;
- Faster Payments: the real-time account-to-account service that enables payments via mobile, internet and telephone; and
- LINK: the U.K. ATM network.

"Today's announcement is positive news for our partners, customers and employees," said VocaLink CEO David Yates. "We will continue to focus on ensuring that the U.K. systems perform seamlessly, maintaining the highest levels of quality. At the same time, we'll invest in further innovation to power competitive payments solutions for consumers and businesses around the globe." Upon closing of the transaction, Yates will join the MasterCard management committee. MasterCard expects the transaction to be dilutive for up to 24 months after the deal closes. If the deal closes in early 2017, the company currently estimates the transaction would be 5 cents dilutive to each of 2017 and 2018 earnings per share. The dilution would be due to continued levels of new product investment, transaction and integration costs, as well as amortization of intangibles, according to the announcement.

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

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12. INGENICO GROUP AND ADVAM SUCCESSFULLY PARTNER IN AUSTRALIA AND EUROPE TO EQUIP PLAYERS IN THE UNATTENDED MARKET WITH STATE-OF-THE-ART CASHLESS PAYMENT SOLUTIONS
Source: Ingenico (07/07)

Ingenico Group have been partnering to provide ADVAM customers with a unique, flexible and secure cashless payment solution, which fulfils the

requirements of PCI Level 1 and EMV standards. The UnattendedPayments solution combines ADVAM's proprietary payment gateway with Ingenico Smart Terminals' iSelf payment devices for unattended markets. Customers thus benefit from a PCI Level 1 and EMV certified solution as well as from the proven processing capability of the ADVAM Gateway which handles dedicated links with acquirer banks in over 20 countries and offers multi-currency acquiring and access to global markets.

ADVAM started to partner with Ingenico Group's ePayments business unit in 2014 to facilitate one-time and recurring parking payments in Europe. With this new jointly-developed solution, ADVAM and Ingenico Group have expanded their relationship to offer a truly unique omni-channel experience which has been successfully implemented in the parking sector and several innovative unattended vending sectors around the world. John Tait, Managing Director of Ingenico Group Australia, believes, "Through the partnership with ADVAM, the UnattendedPayments solution is achieving true value to businesses in Australia, UK and Europe. This is in part due to the flexibility of Ingenico's iSelf range that supports all payment types (EMV Chip and PIN, contactless notably), to suit a variety of deployment scenarios. Combined with ADVAM's expertise and integration with vending partners, access control and the secure processing of payments through to the clients preferred bank, the jointly developed solution has assisted clients to remove the burden of handling cash and also increase sales."

"You can see the success of the Ingenico Group and ADVAM partnership when global parking and vending operators are choosing our EMV compliant end-to-end solution", says ADVAM's Global Channel Partner Director, Paul Sidwell. He also explains that "cashless payment and the increasing use of contactless NFC technology perfectly fit with the needs of merchants and consumers. ADVAM has recently undertaken major roll outs of the solution at Westfield, Wilson Parking and NCP, assisting the companies to realise their efficiency gains and help guide them through their EMV journey. This can be a big challenge for some organisations, so it's vital that they have the right partners in ADVAM and Ingenico."

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

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13. WALMART PAY GOES LIVE NATIONWIDE AS RETAILER SEES EARLY GAINS FROM SYSTEM
Source: Mobile Payments Today (07/06)

Walmart's fledgling mobile-payments system is now active in all its stores nationwide and you can expect the retail giant to push its availability to new and existing customers in a big way after seeing what it believes are significant early returns. As of today, Walmart Pay is available at the chain's 4,600 locations after months of staggered rollouts throughout the U.S. While Walmart did not reveal specific data, the company said it saw a 45-percent lift in Walmart Pay transactions

in the last week alone. And since the retailer first launched the system, some 88 percent of Walmart Pay transactions come from repeat users. Based on those numbers, it's clear Walmart is not in a rush to integrate third-party mobile wallets with Walmart Pay, or activate NFC at the physical point of sale to accept Android Pay, Apple Pay or Samsung Pay.

"Our investment in mobile and digital [efforts] is paying off," Daniel Eckert, senior vice president of services for Walmart U.S., told reporters Wednesday during a conference call. Eckert said Walmart has no plans to turn on NFC in stores, but that the retailer is still in negotiations with third-party mobile wallet providers. When Walmart first introduced its system in December, Eckert said the retailer designed Walmart Pay in a way that allows for the integration of other mobile wallets in the future. He reiterated that stance Wednesday. "We built Walmart Pay with flexibility in mind, and that includes the anticipation of [adding] third-party wallets," Eckert said. "We continue to have discussions with third-party wallets now that we have a nationwide rollout." Meantime, Walmart already was advertising Walmart Pay's nationwide availability before Wednesday's official announcement. The retailer revealed the news earlier this week in a weekly circular that reaches some 40 million customers nationwide.

"Now that we have the nationwide rollout, you're going to see a robust advertising effort to get more customers to use Walmart Pay," Eckert said. Walmart already has some 22 million-plus consumers using the Walmart app each month across different Android and iOS devices. As it was developing Walmart Pay, the retailer wanted a system its customers could access on almost any device as opposed to mobile wallets such as Apple Pay and Samsung Pay that work only on select smartphone models from those companies. Consumers who have any payment information stored in their Walmart.com account can link those credentials to the mobile app and Walmart Pay. Walmart will allow consumers to use credit or debit cards as a payment option. Consumers also can use the retailer's own gift cards as a funding source. When a consumer is ready to pay, they open the Walmart app and activate the camera function from within the app. The consumer then scans a QR code at the register which in turn connects to the payment card on file with Walmart.

The retailer then sends an electronic receipt to the app that the consumer can view at any time. One small, subtle way Walmart is pushing Walmart Pay at the physical point of sale is that the QR code is present on the terminal's screen at the start of the transaction as the "default" payment method. Consumers have the option to decline Walmart Pay on the screen and complete their transaction using a payment card. Walmart also has signage near the terminal reminding customers about Walmart Pay. In addition to official marketing plans, Eckert said Walmart will also rely on store employees to be well-versed in Walmart Pay. He said it helps that a good portion of its 1.2 million employees also are customers who use the new system. But employee education about Walmart Pay will be a constant mantra for the company. "Education is going to be an always-on-type-of-thing with our

employees," Eckert said. "It's something that we will consistently lean on going forward."

Walmart is a member of ACT Canada; please visit www.walmart.ca.

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14. UL'S BRAND TEST TOOL HOST SIMULATOR QUALIFIED BY UNIONPAY
Source: UL (07/08)

UL is pleased to announce that its Host Simulator Module for UL Brand Test Tool is now officially qualified by UnionPay. UL Brand Test Tool is the all-in-one brand certification tool for the major payment brands. It helps to simplify and speed up testing in your terminal certification process. With the ability to simulate contact and contactless test cards, UL's Brand Test Tool takes away the need for using physical cards that can get corrupted or lost. The tool has a dedicated, qualified module to simulate UnionPay cards for the certification of contact and contactless terminals within the Chinese domestic market. This module allows you to validate the configuration of your EMV terminals, both Automated Teller Machines (ATM) and Point of Sale (POS) terminals, and offers the required tests to ensure acceptance of UnionPay contact and contactless EMV cards.

Now also the Host Simulator Module for UL Brand Test Tool has been qualified by UnionPay. The Host Simulator Module allows you to have more flexibility in your testing. With this module, the UL Brand Test Tool can be set up by simulating the Card at one end and the Authorization Host at the other. It allows you to perform terminal tests using your own test scenarios and to set the host configuration parameters at your discretion. Now the module has been officially qualified by UnionPay, test results can be used for pre-certification. Saving you valuable time and money by having analyzed and solved issues found during pre-certification testing, prior to applying your test results to UnionPay for certification. UL is the first acquirer certification test tool provider with UnionPay's qualification for the domestic terminal integration testing within China and the UL Brand Test Tool is the first acquirer test tool for international UnionPay acceptance.

UL and UnionPay are members of ACT Canada; please visit www.ul-ts.com and www.unionpay.com.

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15. MOBILE PAYMENT USE CONTINUES TO INCREASE IN CANADA
Source: Mobile Syrup (07/05)

It's been a whirlwind year for mobile payments. Canada's digital wallet has been touched by multiple institutions, including both Canadian initiatives and the infamous Apple Pay. From the looks of it, Canadians have no intention of slowing down. New research indicates that more Canadians will likely increase their use of mobile payments this year compared to last year. According to a study by

eMarketer, 33 percent of those surveyed said they planned to make more mobile payments over the coming year, up from 26 percent in a 2016 survey. While a wide variety of payment apps are used by Canadians, PayPal is the most popular, being used by 70 percent of mobile payment users and primarily by men. Coming in a distant second at 42 percent of mobile payment users is the Starbucks' app, which is used primarily by women.

Since widening its capability in Canada a few months ago, Apple Pay has become Canada's third most popular mobile payment option at 26 percent. Further down the line are others which include the Canadian-based app Ritual, Google Wallet, and payment apps specific to a particular store. It's also important to note that while PayPal is the most popular payment app among millennials and non-millennials, it's also the only one to be more popular among non-millennials than their younger cohorts. In general however, Canadian men are adopting mobile payments faster than Canadian women, and millennials are adopting mobile payments faster than non-millennials. However, non-millennials did intend to increase their mobile payments by a higher margin (10 percent) than millennials (four percent) between 2015 and 2016.

16. OT PARTNERS WITH SWATCH TO OFFER CONTACTLESS PAYMENT IN BRAZIL
Source: Oberthur (07/18)

OT (Oberthur Technologies) announces a key partnership with Swatch, the renowned Swiss watchmaker and one of the world's most popular brands, to provide contactless payment to customers in Brazil. They will be able to pay with speed, security and convenience, just waving their stylish Swatch Bellamy watch close to contactless terminals enabled for NFC (near field communication) technology. OT will provide its FlyBuySE (secure element) – NFC chip embedded in the watch – and the personalization of the product credit card data. OT's FlyBuySE is fully integrated within Swatch Bellamy watches and provides a high level of security while enabling contactless payments and transactions. After buying the Bellamy Swatch, the owner automatically gets an account and an associated debit card with Brazil Pre Pagos. To activate it, owners just need to enter their data in the bank's website – which is done quickly and easily – and credit the account following the rules defined by the bank, to then be able to make contactless transactions.

"Partnering with a brand as well-known as Swatch to launch this innovative product is strategic for OT. As the acceptance of contactless payment grows, more and more end-users are looking for this type of wearable so that they can pay quickly and safely" said Eric Duforest, Managing Director of the Financial Services Institutions business at OT. According to Carlo Giordanetti, creative director of Swatch International, OT is the ideal technology partner to the Swatch Bellamy project. "OT knows how to adapt its portfolio of products and solutions to the latest trends and is the ideal partner to offer this innovative watch. We look forward to

presenting the Swatch Bellamy in Brazil, a country that is characterized by having an open minded public for new technologies".

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

17. CENTRAL 1 ACCELERATES OMNI-CHANNEL SERVICES STRATEGY IN COLLABORATION WITH CGI
Source: Central 1 (07/05)

Central 1 Credit Union and CGI have entered into a 10-year agreement to deploy omni-channel solutions to manage account and loan originations for Canadian credit union customers coast to coast. This agreement gives Central 1 exclusive Canadian credit union access to CGI's Liberty origination and digital banking software and has CGI providing ongoing software application development and management to ensure continuous digital innovation over the term of the agreement. "We think this is the right approach to help our members address a complex and dynamic environment and help them gain market share," said Chris Dickin, AVP Business Development & Delivery at Central 1. "This long term agreement with CGI will enable us to provide online and in-branch member origination and loan origination in one package, and be completely integrated with MemberDirect."

This omni-channel solution is already available for some key systems, including CGI's RFS and Horizon, Wealthview and Ovation, with other banking systems expected to be added in the coming months. "CGI is excited to be working with Central 1 to help them transform the way credit unions engage with their members who demand digital services," said Paul Mackley, Vice President, Services to Credit Unions, CGI. "Collaborating with Central 1, we will dramatically transform the way that consumers transact now and in the future." A partner to more than 110 credit unions, CGI supports approximately 3 million members. Core offerings include solutions such as integrated banking, customer relationship management, loan origination and delinquency management as well as application services and management consulting.

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

18. MONERIS DELIVERS NEW TOOLS AND RESOURCES FOR DEVELOPERS
Source: Moneris (07/20)

Moneris Solutions Corporation ("Moneris") introduced new and improved resources for eCommerce and mobile application developers seeking payment integration tools. The Moneris Developer Portal provides easy access to information and tools businesses need to add payment capabilities to their

applications. The Moneris Developer Portal complements Moneris Gateway, a payment processing platform that allows businesses to securely complete transactions. The improved Developer Portal offers easier access to information, full search capabilities, interactive knowledgebase and regular blogs. Existing Application Program Interfaces (APIs) have been improved to support payments from across North America and a new Software Development Kit (SDK) offers more flexibility to developers when integrating in-app payments.

"As more businesses move online and into mobile applications, payment integration has to be made easier for developers. Our goal with the Moneris Developer Portal is to provide effective tools and resources that make their work easier. Giving developers flexibility in how they can add payments to their applications means they can get solutions to market faster to meet their customer needs." Rob Cameron, Chief Product Officer at Moneris. With the redesign of the Developer Portal, Moneris now supports in-app payments by offering API and SDK information for Apple Pay integration. This type of payment support is critical to companies like Tacit Innovations, the creators of maegan, a mobile ordering platform designed for restaurants and other hospitality venues. Using the tools within the Moneris Developer Portal, maegan is able to integrate into point-of-sale (POS), Payment and Loyalty solutions for seamless operation.

"Developing a custom restaurant solution that improves the customer experience while making it easy for operators means it has to cover all aspects of their encounter with a business, including payments. Moneris is the biggest processors in the country and used by many of our customers, so being able to easily integrate payments through their gateway was critical to maegan's success. The Developer Portal gave us the right tools and resources to add these capabilities in our app and we're excited to start using new tools like their SDK for in-app payments." Cris Jucan, CEO of Tacit Innovations.

The redesign of the Moneris Developer Portal goes beyond the portal itself. As one of the most trusted brands in payments in Canada, Moneris is committed to delivering tools and resources for businesses and developers in a convenient and effective manner. As part of the update, APIs and the SDK are now available on GitHub, making access to critical development tools more open and easier to find. Additional improvements include:
- Interactive knowledge base where the developer community can collaborate on solutions with input from Moneris technical resources
- Updated APIs that offer unified payment integration for North American-focused payment acceptance and improved shopping cart plug-in instructions
- Support of Apple Pay in-app payments with more payment options to be included as they are introduced to market
- Developer Portal blog offering tips and advice on new features and how best to take advantage of them

- Personalized user experience that delivers API information in preferred programming languages, country preference and more
- Individual testing environments where developers can leverage reporting to track test transactions

In addition to these enhancements, Moneris will host events such as training boot camps for developers focusing on best practices for payment integration, fraud prevention and more.

Moneris is a member of ACT Canada; please visit www.moneris.com.

19. THE LATEST BLOCKCHAIN TRIALS AND PROJECTS: THE RACE FOR ADOPTION IN ON
Source: Let's Talk Payments (07/22)

The race has been on for a while actually, but the speed has been surging with every other week. Since the end of May when we last looked at the latest blockchain pilots and the latest open-source blockchain projects, a lot has happened. A range of new players has launched blockchain trials to find the best application case and bank on blockchain application.

ATB Financial, SAP and Ripple send the first real-time international blockchain payment from Canada to Germany

ATB Financial, the largest Alberta-based financial institution, has collaborated with SAP, financial technology startup Ripple Labs and ReiseBank AG in Germany to send the first real international blockchain payment from Canada to Germany, as reported by SAP. ATB successfully transferred CA$1,000 (EUR 667) to ReiseBank using a network built on SAP technology and Ripple's network of enterprise blockchain solutions. The payment, which would typically have taken between two to six business days to process because of requirements such as settling with the counterparty bank and reconciling accounts, was completed in around 20 seconds. The technology prototype connects SAP HANA Cloud Platform, the open platform as a service from SAP, and the SAP Payment Engine application, which centralizes payment processing in one solution, with Ripple's network. For the demonstration, SAP provided a mobile user interface through which the payment was executed.

IBM and Credit Mutuel Arkea complete the trial of blockchain for managing customer identity

IBM and Credit Mutuel Arkea recently announced the completion of their first blockchain project to improve the bank's ability to verify customer identity. The result of the pilot is an operational permissioned blockchain network that provides a view of customer identity to enable compliance with KYC requirements.

"Blockchain is a transformative agent in our operational application, as proven by this project – the first of its kind in France. This pilot offers a complete view of customers' documents across our distributed network," said Frederic Laurent, COO Innovation & Operations, Credit Mutuel Arkea. "The project helped us to understand and master blockchain for other client uses. Now, we are ready to incorporate this technology in our ecosystem."

Banco Bradesco to trial blockchain digital wallet and mobile finance app in Sao Paulo

One of Brazil's largest banks and the latest member of R3CEV consortium, Banco Bradesco, was reported to be working on a trial of blockchain digital wallet and mobile finance app that leverages distributed ledger technology for payments and money transfers. Developed by domestic startup eWally, the trial will take place in the southern area of Sao Paulo. The solution developed by eWally lets users send and receive money conveniently using their smartphones, facilitating remittances, donations, loan settlement, disbursement of salaries or bill payments. As Bradesco Executive Vice President Maurício Machado de Minas commented, "Innovation plays a crucial role at Bradesco and we are committed to better serve our customers and add value to our shareholders. Distributed ledger technologies can help us to achieve these objectives and we are excited about joining R3 so that we can work together and discover the full potential of this new technology." In addition to eWally, Banco Bradesco will trial another blockchain solution designed by Bit.One for cross-border payments.

UK Government and GovCoin Systems to implement Social Welfare Payments distribution trial for the Department for Work and Pensions

GovCoin Systems has been named as the London-headquartered financial technology company trialing new technology to support UK's government aims in the distribution of benefits. Minister for Welfare Reform at the Department for Work and Pensions Lord Freud highlighted the ongoing trial saying, "We have been working with GovCoin Systems (and their partners, Barclays, RWE npower and University College London) for this trial. "Claimants are using an app on their phones through which they are receiving and spending their benefit payments. With their consent, their transactions are being recorded on a distributed ledger to support their financial management." The key to the proof-of-concept trial, which commenced in June, is to develop a secure and effective technology that users adopt and use to handle payments. As Jeremy Wilson, Vice Chairman, Corporate Banking at Barclays, commented in the press release, "This initiative focuses on adding an additional layer of richer data and identity onto payments so that a deeper and more effective relationship can be established between the government and claimants. We are keen to see how the positive potential of this service develops and adds to our wider efforts to explore the uses of distributed ledger technology."

Santander Bank introduces internal blockchain-based remittance app using Ripple

Santander Bank launched a new app to facilitate live international payments (foreign remittances). At present, the bank claims to be the first bank in the UK to leverage blockchain for international payments. Santander introduced the new app as a pilot program, powered by blockchain technology which is backed by Ripple. The app uses core technology provided by Ripple (Santander InnoVentures owns a stake in Ripple). The app connects to Apple Pay, where users can confirm payments using Touch ID. It lets users transfer between £10 and £10,000, and payments can be made from British pounds to euros and US dollars. In October 2015, Santander InnoVentures raised $4 million in Ripple's Series A funding round as an investor, bringing the round's total to $32 million.

7 financial institutions including BNP Paribas Securities Services and Societe Generale are developing infrastructure for SME post-trade

BNP Paribas Securities Services, Caisse des Depots, Euroclear, Euronext, S2iEM and Societe Generale, in collaboration with Paris Europlace, recently announced that they have signed a Memorandum of Understanding to explore together the development of a post-trade blockchain infrastructure for SMEs in Europe. Open to other international partners, this pilot agreement aims to improve SMEs' access to capital markets while facilitating secure and transparent post-trade operations. It is part of the development of a new regulatory environment in France that allows the issue and circulation of securities using blockchain technology. The partnership's main objective is to combine its members' financing capacity and expertise to promote innovation through a new, independent company whose mission will be to harness blockchain technology in the design, development and deployment of innovative solutions for post-trade. By reducing transaction costs while maintaining a high level of security, the company would help SMEs raise funds more easily on capital markets.

Raketa Watches trials blockchain to fight counterfeiting

Blockchain Engine and Petrodvorets Watch Factory have introduced blockchain technology into the manufacturing process of Raketa watches, making Raketa one of the first companies in the world to record the production of physical goods in the blockchain, as reported by the Bitcoin Magazine. Petrodvorets Watch Factory, one of Russia's oldest businesses, in collaboration with an international team of Blockchain Engine developers will use blockchain for the confirmation of the authenticity of each watch, which will drastically reduce the possibility of forgery. As each luxury watch will have a serial number associated with it at the production stage, they make the perfect items for a digital registry.

As Blockchain Engine spokesman Ivan Kuznetsov commented to Bitcoin Magazine, "Among the applicants were car manufacturers, jewelry manufacturers,

unique luxury objects, and smartphones. We have carefully examined the information about products most often counterfeited, and it turned out there is a whole market of watch imitation, with the most falsified brand in Russia [being] the Rocket."

<u>KBC and Cegeka trial blockchain application for SMEs</u>

KBC together with IT specialist Cegeka and various companies were reported to successfully test Digital Trade Chain (DTC), a blockchain solution that facilitates secure international trade between SMEs. KBC's new Digital Trade Chain application is a digital platform for managing, tracking and protecting domestic and international trade transactions between SMEs and simplifying trade finance. DTC links parties, i.e., buyer, seller, KBC and the counterparty's bank. The app registers the entire trade process from order to payment, displaying it in an at-a-glance flowchart and guaranteeing payment when all contractual agreements have been met. The platform is fully automated and available 24/7, so the order-to-payment process is much quicker than the traditional exchange of documents. It also requires far less back-office administration.

<u>Mizuho Financial Group to trial blockchain for cross-border payments using Ripple</u>

Mizuho Financial Group (MHFG), one of the largest financial groups in Asia, recently became one of the first Japanese banks to pilot blockchain technology for cross-currency settlement using Ripple. Mizuho will use Ripple's technology to address the most common pain points in cross-border payments: high costs and settlement delay. Ripple's solutions lower the total cost of settlement by enabling banks to transact directly with real-time certainty and provide greater transparency and control through the process. MHFG and SBI will use the consulting services of R3CEV to launch this joint project using Ripple's tried and tested solutions to move toward cost-efficient, real-time settlement.

20. DAI NIPPON PRINTING SELECTS GEMALTO TO OFFER CLOUD-BASED AUTHENTICATION FOR SECURE MOBILE PAYMENTS AND INTERNET BANKING IN JAPAN
Source: Gemalto (07/14)

Gemalto will deliver its Ezio Mobile Suite to Dai Nippon Printing (DNP), a leading provider of financial solutions in Japan, to help them secure mobile payments, internet banking, and related services. With Gemalto's solution, DNP can offer a strong and scalable cloud-based authentication platform - supporting a wide range of authentication and transaction signing methods, including biometric, One Time Password and Out-of-band. DNP's banking customers can now rapidly deploy secure authentication across diverse online and mobile channels, in a cost-effective way.

Cyber-attacks are a growing problem in Japan, with nearly 90% of locals worried about the risk. The financial sector is a major target, with cybercriminals stealing up to $1 billion in the past from banks worldwide. As consumer preferences shift towards mobile banking and payments, banks will need to address security with utmost priority. This solution will allow DNP to be a single stop for its customers' various digital security needs such as banking and transaction services, online or on mobile devices such as iPhone and Android phones. "Gemalto has been our esteemed partner for a long time, and we trust their expertise in cutting-edge technology," said Kunimitsu Sato, General Manager of Information Innovation operations at Dai Nippon Printing, Japan. "This solution offers low cost of ownership to our customers, while giving them the flexibility to choose any authentication scheme or a combination for their diverse base of users. Even small and regional banks can now go to market quickly, with enhanced security."

"DNP has been at the forefront of bringing innovative solutions in Japan," said Michael Au, President South Asia and Japan at Gemalto. "With an unparalleled combination of trusted services that can secure access and online transactions in a variety of scenarios, this solution will complement DNP's recently launched secure mobile payments. Dai Nippon Printing's banking customers can now leverage the one-stop offering to better engage their users with a mobile-first strategy."

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

21. HOW ANALYTICS OF THINGS (AOT) WILL MAXIMIZE THE VALUE OF CONNECTIVITY
Source: Let's Talk Payments (07/22)

By 2021, out of 16 billion IoT devices, 1.5 billion will have a cellular subscription and will be generating an infinite amount of complex data that will require a different approach for efficient analysis and use. As Cheryl Wiebe, Partner at Teradata, explained, "As products become increasingly sophisticated as computing devices in their own right, so does the data they produce—the connected car, the connected wind turbine, the connected train, the connected oil rig—each producing accelerating amounts of data." Operations of Things and the Analytics of Things (AoT) are distinguished by Wiebe as the two pillars of IoT aimed to maximize the value of the world of connected devices. According to Wiebe, "The Analytics of Things subsystem of IoT is an extension of the company's analytic ecosystem" that includes:

Acquisition and management of sensor and other third-party data

The complexity and variety of data increased over time with advanced sensory technology adopted across industries (wearables, cars, buildings, mobile

devices, etc.). The tools traditionally used by businesses to analyze the data flow are no more valid as the stream widens and diversifies. According to some estimations, 2.5 quintillion bytes of data are created every day with 90% of it being unstructured. For businesses to be able to make effective business decisions, the ability to manage the stream of meaningful data is crucial. Intelligent management of sources of data from various divisions of organization, its assets and partners can enable managers to make efficient data-driven decisions and see organizations succeed in the competitive environment.

Digital device models that mirror, predict and prognosticate the behavior of things

Tom Davenport, the President's Distinguished Professor of Information Technology and Management at Babson College, distinguishes predictive analytics as one of the four (along with descriptive, diagnostic and prescriptive) typology of analytics of things. Among the examples of predictive analytics for the IoT, Davenport brings up predictive locational analysis, which happens every time the smartphone or car GPS are used to plan a route. Another example lists increasingly common predictive maintenance on industrial machines, which alerts companies that their equipment is about to break down so that it receives service in a timely manner. Predictive analytics as a typology of AoT can also have a significant impact on the healthcare industry. As Davenport explained, "Predictive health is another area with a lot of potential, but not much actual, value. Applications could take your daily steps, weight, and calorie consumption (that's the toughest data point at the moment, since it relies on self-reporting), and predict things like your likelihood of getting Type 2 diabetes, or even your lifespan. More prosaic predictions could involve your likelihood of losing weight in time for your class reunion, or you beating your best time in an upcoming marathon."

Ability to provide intelligent feedback and simple analytics (or rules) to edge devices for improving actions

No technology or company can survive without keeping up with the pace of innovation in the relevant industry and without improvement. The same is true for the evolution of AoT that will translate into the same for the IoT industry and its capabilities. The idea is close to one of the topologies distinguished by Davenport – prescriptive analytics. As he states, "prescriptive analytics are those that provide specific recommendations based on predictions, experiments, or optimizations." The optimization is a vital part of the efficient functioning of the world of IoT devices. Just like Google applied one machine to manage the energy consumption of its other machines, the same can be made for a range of other connected systems and devices. An interesting example by Davenport with smart cities explains the benefits for human and urban environment, "In some IoT environments, such as "smart cities," analytics will need to provide automated prescriptive action. It's useful to look at a dashboard and know which streets are congested in Singapore, for example, but the real value comes when a system can change traffic light durations and block off freeway entrances based on IoT data."

22. NEW VERSION UL CLOUD-BASED PAYMENTS TEST SUITE QUALIFIED BY MASTERCARD
Source: UL (07/19)

UL is pleased to announce that the new version of the UL Cloud-based Payment Functional Test Suite for MasterCard MCBP has been officially qualified by MasterCard. The UL Cloud-based Payment Functional Test Suite for MasterCard MCBP helps MasterCard card issuers to test MasterCard mobile payment applications as well as to prepare for formal approval by MasterCard. It includes all the contactless test cases as defined by MasterCard and allows testing of a MasterCard cloud-based payments compatible application installed on an NFC-enabled mobile device using a contactless reader. Detailed analysis of all APDU-level communication with interpretation of the data elements involved gives a tester great insight and helps in debugging the application under test. Apart from that, for the first time also testing of Digital Remote Secure Payments is supported.

The latest version of the test suite supports importing test plans in the new MasterCard specific RegTool Syntax v2 format. This allows mobile payment application developers, card issuers and test labs to test payment application implementations based on the HCE and cloud-based specifications from MasterCard and to obtain global interoperability.

MasterCard and UL are members of ACT Canada; please visit www.mastercard.ca and www.ul-ts.com.

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23. GAMIFICATION IN BANKING: FROM TRANSACTIONS TO EXPERIENCES
Source: Let's Talk Payments (06/30)

As Brett King said, banking is no longer somewhere you go but something you do. Over the past decade or so, the banking industry made a tremendous shift from financial services as services to financial services as experiences. The modern customer is an experiential omnivore and constantly seeks for a better experience. But let's admit it, banking was never the sexiest experience until agile financial technology companies came into the picture to offer a whole new way to turn bill payments (and other services) into a smooth and seamless, almost one-click process. After some time, we got used to it as well and are looking for the next level, which gamification can very well become. Gamification is not a brand-new idea in banking. Loyalty programs, earning bonuses and points is also kind of gamification. The idea of gamification is to bring the elements, design and principles of a game into non-game environments in order to engage, educate and bond with customers. In addition to increasing engagement, establishing loyalty and improving financial literacy, gamification is believed to be one of the ways of painless and cost-effective transition to intensified usage of digital channels instead of physical. As a result, banks can significantly reduce operational/processing costs.

Given that some estimates suggest that 70% of young people playing a game from time to time and 80% of them expecting their workplace to be 'social' and 'fun,' appropriate and sophisticated application of gamification has a great potential to improve relationships between banks and customers. As Yvonne Dunn from law firm Pinsent Masons, recently commented on the application of gamification in financial services, "Banks can look to the buzz that has surrounded fitness technology for encouragement in relation to how to gamify the customer experience. Fitness technology has allowed people to measure things like how many steps they take, how much sleep they are getting and how they exercise and is used by many as a motivational tool to get healthier or improve performance.

"These concepts translate into the financial services world. For example, banks gamify the customer-facing tools to enhance customers' understanding of their own financial health and allow them to monitor progress towards personalized savings targets, among other examples. Gamification could also be used as an educational tool to inform people about financial products, and therefore go some way to meeting regulatory compliance obligations on things like risk disclosures."

Who brings gamification to banking?

Among the interesting examples of banks that applied gamification in their services is Robobank, which brought fun into the not-so-fun mortgage application process through Rabobank Mortgage File. The bank decided to divide all the steps the client has to go through into a number of sub-topics, such as 'income', 'mortgage type' and 'interest'. Each segment was given its own icon and as soon as the client completes one segment, a 'tick' appears beside it and the next icon is activated. ICICI is another interesting case with an array of games aimed to improve financial literacy in areas like depositing, savings, money management, and others. Through its ICICI Bank Games platform, the bank provides information about its various products and services in a fun and interactive way. The platform indicates a leaderboard with names of the players that have earned the most points. Barclays recently announced the launch of its Launchpad Business Challenge to bring together bright entrepreneurs to answer the question: How would you use gamification to enhance the mobile and online banking experience for our customers? The bank is exposing sandbox banking APIs and a sandbox mobile banking app and asking participants to "challenge what's possible." The Launchpad will allow Barclays customers to try out and give feedback on new features and ideas developed by startups. Given that the bank has 16 million customers worldwide out of which 5 million use mobile banking apps, the challenge has a strong appeal for startups.

Other examples often brought up by professionals are BBVA Game, Axis Bank Gamification Hackathon, CIMB Youth Saver and others. There have certainly been more examples of gamification of banking services over the past years, and it triggered the growth of such service providers that allow banks to seamlessly integrate games into their products. Gamification-as-a-Service, if you may call it

so, has its leaders and interesting companies. Among them are SaveUp, SmartyPig, AchieveMint, GameEffective, Mindspace, Bobber Interactive and others. These companies enable banks to efficiently deploy gamified solutions easily into their online channels. The Global Marketing Lead at Infosys Finacle, noted, "Multi-tenant, multi-application gamification platforms can not only eliminate some of the capital investment and implementation challenges of large-scale deployment but also help reduce the complexities that many banks currently face when it comes to "productionizing" their gamification programs. The "platform as a service" model allows banks to quickly configure gamification principles and structures and deliver them across operating systems, devices and form factors while ensuring a consistent and unified experience for all users."

24. VISA OPENS UP OFFICE IN SILICON VALLEY TO SPUR INNOVATION
Source: PYMNTS.com (07/26)

In an effort to accelerate digital commerce globally, credit card company Visa announced plans to open an office in Silicon Valley. The new office will be a 62,000-square-foot facility located in the heart of Silicon Valley in Palo Alto and will be a mix of office and collaboration spaces for about 300 Visa employees. The employees to be housed in the new facility are ones who are focused on technology research, business intelligence, data security and merchant services. The office in Silicon Valley is the latest in a string of new offices and facilities that Visa opened last year. Visa said it has new technology development centers in Bangalore and innovation centers in Dubai, Miami, San Francisco and Singapore. At these facilities, Visa employees and clients work alongside Visa payment experts to come up with future technologies for commerce.

"We continue to expand our research and development capabilities globally and are investing in facilities that enable our teams to collaborate in the creation of digital commerce solutions," said Rajat Taneja, executive vice president of technology for Visa, said in a press release. "Our new Palo Alto office allows us to draw on the diversity of the Bay Area talent pool and build an even stronger connection with the Silicon Valley community of data scientists, engineers, entrepreneurs." Visa said the new office will expand its presence in the San Francisco Bay Area, where it already has offices in Foster City and other locations in San Francisco.

The move on the part of Visa comes just days after it announced a strategic partnership with PayPal to give consumers more choice about how they pay when using a PayPal account. Under the deal, both companies will work more collaboratively to accelerate the adoption of digital payments for consumers and merchants that are safe, reliable and convenient.

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

25. BITCOIN WALLET ENABLES PAYMENTS VIA TWITTER
Source: Mobile Payments Today (07/14

The bitcoin wallet iPayYou has launched its "Pay-by-Twitter" feature. With this tool, users can make peer-to-peer payments on Twitter, according to a press release. The company already enables users to send bitcoin through email. Former Amazon executive Gene Kavner founded the company as a response for the need for a simple bitcoin wallet, according to the announcement. With Pay-By-Twitter, users now can send bitcoin by entering the recipient's Twitter handle instead of an email or bitcoin address. The recipient can choose to hold the bitcoins in an iPayYou wallet, send the bitcoins to someone else, or sell the bitcoin for dollars to be deposited into their bank account.

"Twitter is one of the most widely used social media networks worldwide and despite the speed of technological innovation in the 21st century, no other full-service bitcoin wallet offered this feature until now," Kavner said. With the new Pay-by-Twitter feature, iPayYou continues to offer consumers with easy ways to use bitcoin as a payment method in everyday life, which has been our mission from the start." "iPayYou is one of the most exciting new companies in the bitcoin industry which is directed at consumers," said Roger Ver, iPayYou investor and bitcoin evangelist. "Their new Pay-by-Twitter feature is just one example of how iPayYou are paving the way to promote the mass adoption of bitcoin."

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