Trusted Authentication

SCA 2016 Payment Submit. Orlando.
Louis Bianchin
Biometrics is gaining traction within the payment industry

“We want to identify people for who they are, not what they remember.”
- Ajay Banga, CEO, MasterCard, 2015

“As the world becomes more digitally driven, our innovations and investments in things such as MasterPass, EMV and biometrics are helping to redefine the way people shop and pay with convenience and security.”

Source Q3, 2015, Earnings Report
US bears the brunt of global card fraud losses

- The US accounted for 51% or $8.316 billion of gross losses worldwide on plastic cards, in 2014, while generating only 21.4% or $6.187 trillion of total volume.
- In the US fraud losses equaled 12.75¢ for every $100 in total volume in 2014. Fraud in all other regions combined was only 3.73¢ per $100.

EMV Needed to Address Counterfeit Fraud

- As the rest of the world has shifted to EMV, most counterfeit fraud has shifted to the US.
- U.S. travelers increasingly encounter difficulties using magstripe cards internationally.
- Total Fraud
  - Card Not Present 40-45%
  - Counterfeit 35-40%
  - Lost/Stolen 10-15%
  - Other <15%

Source: CSCU. EMV: ARE YOU READY? TRAINING AND REISSUE STRATEGIES. Wednesday, August 12, 2015
Why Smart Card providers should differentiate themselves?

Power is shifting to consumers in their choice of consumer cards

New entrants pose a serious challenge to banks
If these companies offered banking services - how likely would you be to bank with them?

### Percent of customers which would likely bank with each non-bank with which they do business.

<table>
<thead>
<tr>
<th>Non-bank</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Square</td>
<td>50%</td>
</tr>
<tr>
<td>PayPal</td>
<td>41%</td>
</tr>
<tr>
<td>T-Mobile (US only)</td>
<td>31%</td>
</tr>
<tr>
<td>Costco</td>
<td>29%</td>
</tr>
<tr>
<td>Apple</td>
<td>29%</td>
</tr>
<tr>
<td>Google</td>
<td>29%</td>
</tr>
<tr>
<td>Amazon</td>
<td>26%</td>
</tr>
<tr>
<td>AT&amp;T Mobility (US only)</td>
<td>26%</td>
</tr>
<tr>
<td>Sprint (US only)</td>
<td>26%</td>
</tr>
<tr>
<td>Walmart</td>
<td>23%</td>
</tr>
</tbody>
</table>

Accenture 2014: The Digital Disruption in Banking Demons, demands, and dividends

Cyber threats are keeping execs awake at night

The issues that most worry executives?
The privacy of personal data, potential legal risks, and loss of intellectual property.

PwC 2015: Managing cyber risks in an interconnected world
Smart Card providers are facing multiple challenges

Other threats faced by card issuers

Payments wearables are and will be a threat to cards issuers, today

MCX, is considered a threat to Apple Pay, Google Wallet and other mobile payment systems, as well as VISA, MC & others

Mobile wallets are a threat to cards issuers today

Barclays bPay sticker, bracelet, keyfob
Smart Card providers need a solution

CONSUMERS ARE MORE COMFORTABLE WITH THEIR CARDS THAN WITH MOBILE PAYMENTS

HTTP://WWW.MOBILECOMMERCEPRESS.COM/ Stephen | March 8, 2016 |

Smart card providers are seeking a solution with the following characteristics:

1. A highly secure payment card – cannot be cloned, counterfeited
2. Compatible with current Point of Sale devices (contact and contactless) and backend systems
3. Unique technology embedded into an ISO standard payment card form – convenient and easy to carry
4. No PIN to remember, to share, to loose, be annoyed by – only one fingerprint to present
5. Faster and more convenient payment process – sub 1 second identification
6. Users in full control of their personal and financial information – match on card, no databases
Smart Card providers need a solution

CONSUMERS ARE MORE COMFORTABLE WITH THEIR CARDS THAN WITH MOBILE PAYMENTS,

Smart card providers are seeking a solution with the following characteristics:

7. An efficient way of preventing fraud and identity theft – only the genuine cardholder is authorized to buy
8. Banks and merchants reduce their financial loss due to fraud – increased margins
9. Banks and merchants reduce costs associated with PIN and databases maintenance – increased margins
10. Progressive banks seeking a sustainable competitive advantage – will gain additional clients
11. Nurtures customer loyalty to their bank – new client acquisition cost is $200/head, increased margins
12. The “coolness” factor is appealing – Gen Z, Y, X will love its appeal, convenience, speed & no battery
The World’s first biometric payment card

SECURE
- On-card fingerprint scanner
  3D capacitive technology
- No threat with lost or stolen cards
  Only the owner can operate Zwipe
- No external databases
  Your fingerprint never leaves the card

FAST
- Fingerprint ID
  Less than 1 second
- Contactless card
  Just tap the reader
- Just Zwipe and Go®
  Security as easy as it should be

EASY
- No more PIN codes
  Replacing hard to remember easy to loose
  PIN codes
- Works with existing contactless readers
  ISO 14443 compatible
- Easy card programming
  Standard process before fingerprint is enrolled
What makes Zwipe unique?

Zwipe has developed a low-power, high-security fingerprint authentication system that fits into a standard payment card and within a standard infrastructure.
Authentication Methods – Usage & Perceived Strength (by Country)

Why Fingerprint Authentication? Signature is the decaf coffee version of consumer protection!

Fingerprint scanning is a very strong method of authentication in Australia, Malaysia and Singapore, USA.

Signature is almost the least secure form of authentication, and 4 digit PIN is considered only 5 points better in the US.

<table>
<thead>
<tr>
<th>Authentication Method</th>
<th>Australia</th>
<th>Malaysia</th>
<th>Singapore</th>
<th>USA</th>
<th>UK</th>
<th>USA</th>
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</thead>
<tbody>
<tr>
<td>Fingerprint scanning</td>
<td>55</td>
<td>30</td>
<td>69</td>
<td>51</td>
<td>41</td>
<td>39</td>
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<tr>
<td>Eye scanning</td>
<td>32</td>
<td>31</td>
<td>58</td>
<td>32</td>
<td>32</td>
<td>39</td>
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<tr>
<td>Face recognition</td>
<td>41</td>
<td>23</td>
<td>77</td>
<td>22</td>
<td>24</td>
<td>57</td>
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<tr>
<td>Voice recognition</td>
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<td>10</td>
<td>38</td>
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<td>34</td>
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<tr>
<td>Hardware token</td>
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<td>26</td>
<td>45</td>
<td>27</td>
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<tr>
<td>Two-Factor Authentication</td>
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<td>25</td>
<td>50</td>
<td>28</td>
<td>34</td>
<td>32</td>
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<tr>
<td>Proof of ID</td>
<td>34</td>
<td>14</td>
<td>26</td>
<td>13</td>
<td>16</td>
<td>24</td>
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<tr>
<td>Complex password</td>
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<td>14</td>
<td>49</td>
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<tr>
<td>Six-digit PIN</td>
<td>21</td>
<td>6</td>
<td>24</td>
<td>15</td>
<td>9</td>
<td>24</td>
</tr>
<tr>
<td>Four-digit PIN</td>
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<td>3</td>
<td>22</td>
<td>13</td>
<td>9</td>
<td>16</td>
</tr>
<tr>
<td>Proof of address</td>
<td>16</td>
<td>9</td>
<td>20</td>
<td>9</td>
<td>9</td>
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<td>Signature</td>
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<td>7</td>
<td>19</td>
<td>9</td>
<td>11</td>
<td>8</td>
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<tr>
<td>Personal information</td>
<td>12</td>
<td>4</td>
<td>20</td>
<td>10</td>
<td>6</td>
<td>13</td>
</tr>
</tbody>
</table>

Source Telstra Research 2015
Willingness to pay for protection

Consumers are somewhat split over whether they would be willing to pay for such enhanced authentication methods. However, a significant proportion of consumers would be prepared to pay a reasonable fee for such a service. For example, an annual fee ranging between US$3 and US$20 (depending on the market) would be acceptable to many.

Also clear is that the more that consumers ‘have to lose’, the more willing they are to pay a little extra for peace of mind.

Source Telstra Research 2015
Do payment cards have a future in the mobile age?

• While mobile payments are becoming available on a variety of platforms, they are generally accepted and viewed by the finance industry as a supplementary payment platform to cards

• The hacking of on-line and mobile payment systems is rapidly growing, creating a need for a secure, off-line payment method

• The Zwipe energy harvesting technology ensures that you can pay, even when your phone is out of power

• With personal biometric data never leaving the card, Zwipe provides the ultimate secure and trusted solution
So what makes the Zwipe card so attractive?

- Superior secure payment system
- Unique technology embedded into ISO standard payment card form factor
- No PIN code to remember
- Faster and more convenient payment process
- Allows users to control their personal and financial information
- An efficient way of preventing fraud and identity theft
- Helps the banks and merchants to reduce their loss
- It’s a great innovation that gives the banks a competitive advantage
- Bank customers become more loyal to their bank
- The cool factor is important – it will impress other people who would want the same card
The Zwipe business model - 3 different revenue streams

There are *exactly* 608 US firms offering banking fingerprint authentication, Mar 23rd, 2016 | Posted by Dan Latimore

The market is wide open, even more so if we address the Credit Unions. **Zwipe needs partners.**

- **Licenses**
  - Fingerprint algorithm and core IP license
  - World’s most efficient algorithm with 100% power harvesting, MC certified and based on EMV payment logic
  - Customers include manufacturers of payment cards and mobile devices

- **OEM Modules**
  - Self-contained «Plug & Play» modules compatible with any NFC based application (e.g. payment and mobile devices)
  - Customers include manufacturers of payment cards, ID cards and mobile devices

- **Card Products**
  - Complete payment and access control cards with on-card fingerprint system sold to card manufacturers and security system vendors
Thank you!

“The world’s first self contained biometric authentication”

2015 Winner of best authentication, ID, Credential and Management solution, ICS West Show, Las Vegas

2014 American Sesame Award for “Best Innovation” in the Identification category

Nominated 2 awards at the 2014 European Sesame Award presented at Cartes in Paris 3-6 Nov

Best in Biometrics, Identification and Credentialing Honorable Mention, SIA 2014 New Product Showcase

Gartner 2014 Cool Vendor within the NFC category

Nominated for the The Access Control Category price at The 2014 Detektor International Award in Stockholm

Winner DNBs regional innovation award

European innovation award for young enterprises

FERD: Award for highest international potential
Email: louis@zwipe.com
Cell: 508 250 7933