Shaping the future of payment technology…and of EMV

Smart Payment Association (SPA)

Cartes 2012

SMART PAYMENT ASSOCIATION

01.

SPA: A short presentation

SMART PAYMENT ASSOCIATION

Who we are

The Smart Payment Association addresses the challenges of today's evolving payment ecosystem. We offer leadership and expert guidance to help members and their financial institution customers realize the opportunities of smart, secure and personalized payment systems and services - both now and in the future.

Since 2004

Members:

AUSTRIACARD read the future

incard

gemalto security to be free

Giesecke & Devrient Creating Confidence.

SAFRAN Morpho

OBERTHUR TECHNOLOGIES

What we do

- The SPA works in partnership with global standards bodies, its own vendor community, and an expanding ecosystem of established and emerging brands; offering an ever-growing portfolio of advisory and support services.

Fig 1
Extending advisory and support across the evolving community, the SPA is addressing today's challenges and shaping the future direction of payment technologies, standards and business models.

How we do it

- By delivering the market's most accurate barometer of payment trends
  - An annual analysis of payment trends based on actual manufacturer sales data
  - SPA members 85% of the total smart payments card market

- By supporting the creation and adoption of standards and best practice
  - EPC-CSG/SEPA: **Card Representative** and **Vendor Sector Spokeperson**, **Chair** of the EPC-CSG Task Force to specify the SEPA functional and security requirements for emergent & remote payments (Internet + Mobile), **Convenor** of the new EPC-CSG Expert Team on Card Innovative Payments, **Member of the Preparatory Committee** of the SEPA Security Certification Management Body
  - EMVCo: **Technical Associate** and **Board Advisor for Card Sector**

- By extending expert advice and support across the payments ecosystem
  - An eye-growing library of expert technical resources and thought leadership collaterals to shape the future of payment
  - Taskforce "The Quadrant" to workout concepts for next payment generation

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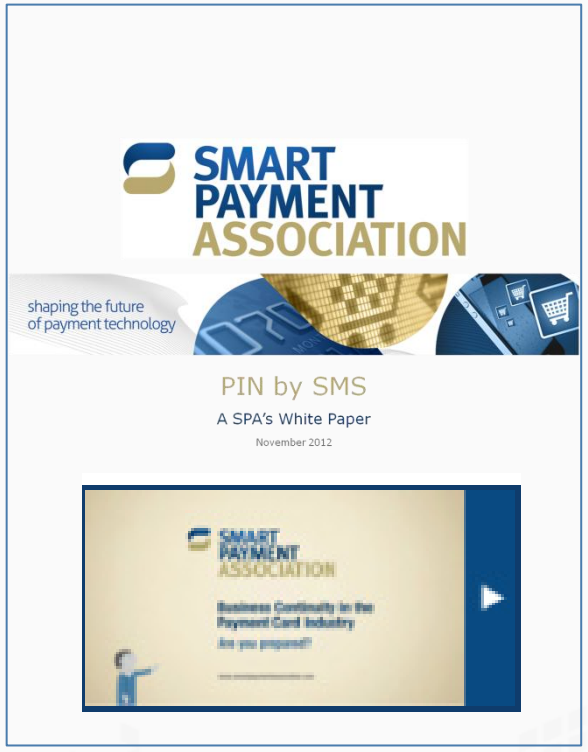
02.
Latest Publications

PIN by SMS

- In stark contrast to today's ultra-connected online lifestyles, the primary method for distributing credit and debit card PIN codes to cardholders remains the postal service. It is slow, inherently insecure and outdated.
- PIN by SMS distribution offers the opportunity for card issuers to get PINs into the hands of their consumers faster, more cost effectively and more securely than ever before.
- PIN by SMS offers a wholly customer-centric solution to this problem – increasing loyalty and enabling an instant response to customer requests.
- From a balance sheet perspective, getting the PIN to the cardholder with the minimum of delay increases the speed of card activations, and eliminates revenue leakage of unused and dormant cards.
- Models within the paper suggest issuers are able to gain additional revenues of up to and above 750,000 USD annually
- This paper delivers all the information you need to make the smart choice.



PIN by SMS – A SPA's White Paper – November 2012

Security for Mobile Payments

- Offers guidance security and fraud protection in mobile payments and outlines the position of the SPA in this most crucial of areas
- Delivers a series of **ten recommendations** aimed at helping member organizations, and the wider mobile payments community, understand and address security concerns to deliver compliant services and solutions.
- Analysis and conclusions contained in this document need to be continually reviewed in the light of expected technical, regulatory and operational innovations.
- SPA would welcome any feedback from the mobile payments community that addresses the content of this document.

Security for Mobile Payments – SPA's Position – June 2012

Business Continuity Management in the Payment Card Industry

- **'Business Continuity in the Payment Card Industry'** delivers a set of guiding principles and best practices for developing and managing business continuity programs.
- Addresses the potential cost implications of an unmanaged catastrophic incident within the supply chain for payment card issuers.
- Uncovers the confusion inherent in the industry regarding the complex, regulatory frameworks and business value of business continuity management.
- Delivers a detailed cost/benefit analysis on which card issuers and their entire supply chains can make measured business continuity investment decisions that offer the necessary protection for their organizations.

Business Continuity Management in the Payment Card Industry – December 2011

Private Label Payment Solutions

- **'Private label Payment Solutions: White Label Systems'** brings greater clarity to the issues and opportunities of this increasingly popular business model.
- Looks at the issues, discusses the different approaches and seeks to offer broad guidance for a Private Label development and implementation solution.
- SPA members help implementing Private Label payment solutions and offer secure products, services and solutions

Private Label Payment Systems – December 2011

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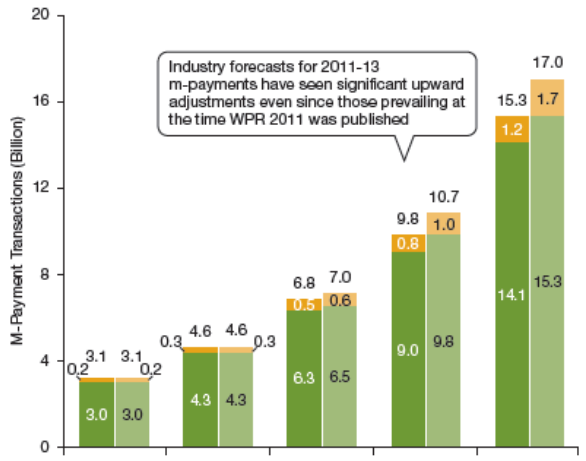
03.

EMV2.0 - Connecting EMV payment to the online world

The payments market is moving online

Figure 1.8 Number of Global M-payments Transactions (Billion), 2009–2013F

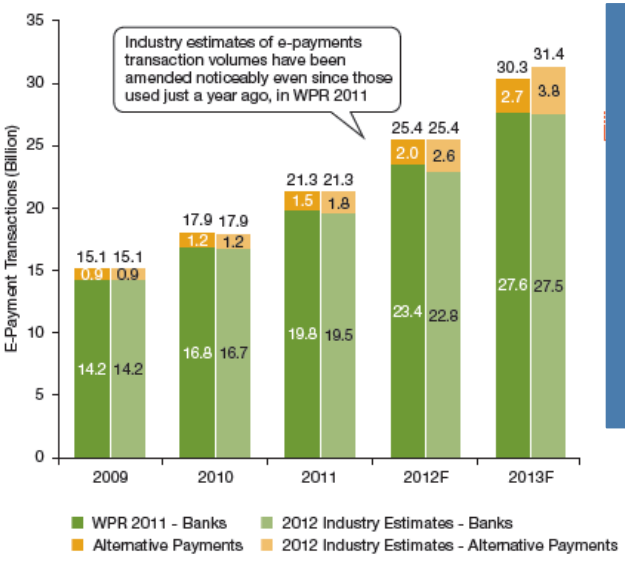


WPR 2011 CAGR 09-13

Non-Bank Provider 67,3%

Bank Providers 47,6%

Figure 1.7 Number of Global E-Payments Transactions (Billion), 2009–2013F



WPR 2011 CAGR 09-13

Alternative Payments 67,3%

Bank Providers 18,1%

- Driven by smart devices ie. Smartphones & tablets
- Driven by connectivity & convenience
- New players & new usages
- Leading to assymetry & fragmentation
- Need for accelerated standardization

Source: World Payments Report 2012

So is the fraud!

Figure 1a: Evolution of the total value of card fraud with cards issued inside SEPA[a,b]

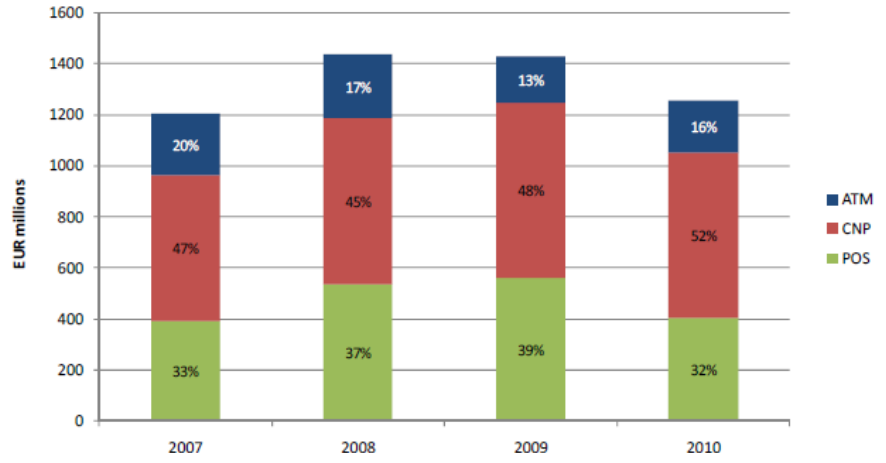
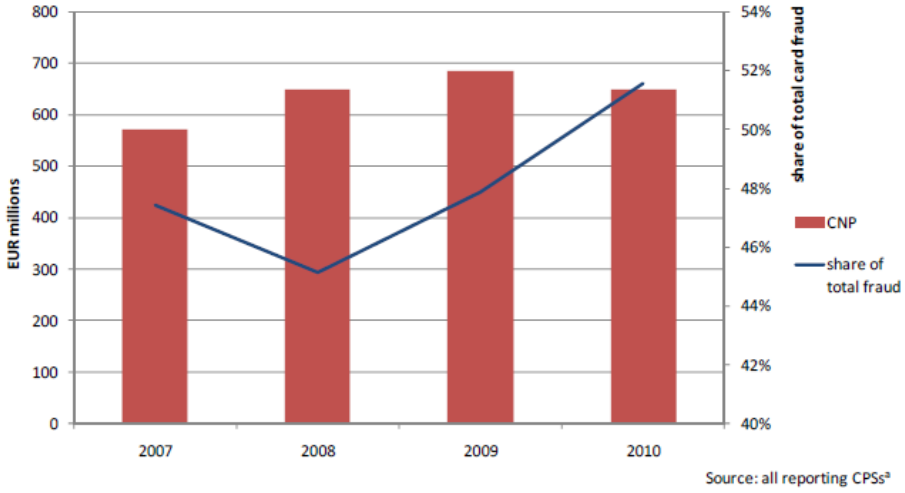


Figure 3: Evolution of the value of CNP fraud and its share of the total value of fraud[a]



- Total level of fraud has overall reduced
- However Card-Non-Present transactions represent now the biggest share and the biggest growth in terms of fraud
- Risk with perception of lack of security of existing standards

Source: ECB Card Fraud Report 2012

The EMVCo Specification

The EMV Specification was developed to:

- **Improve payment security** – This is achieved by Offline Data Authentication/Offline PIN Verification between card and terminal and online Card Authentication between card and Issuer
- **Achieve globally interoperability** - Realized through EMVCo type-approved terminals, readers and ATMs
- **Create an payment infrastructure that would support emerging technologies** – For example, standardizing technology infrastructure for contactless payment and contactless mobile payment.
- **How do we bring these core values to the Online World?**

Source: EMVCo

What does EMV2.0 needs

1. Assess which interfaces for interoperability are most required in order to maximize the number of transactions regardless the card payment channel.

2. Identify those technologies and services to remain in the competitive space

3. Standardize peripherals on-card body to support new card functionalities

4. Establish a well-designed policy to address the ownership and licencing of essential intellectual property for specification implementation

5. A comprehensive risk analysis for new payment instruments and then setting-down appropriate security requirements as well as high-end security evaluation and certification methodologies
   - Reevaluate the security protocols and cryptographic algorithms in the light of vulnerabilities resulting from new channels: wireless (3G, LTE, WiFi, Bluetooth…) and proximity RF contactless using a carrier at 13,56 MHz

What does EMV2.0 needs

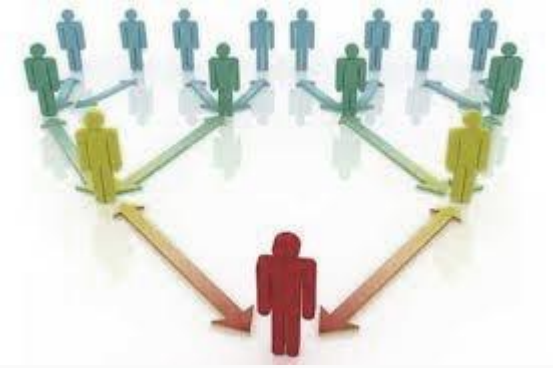
6. Agree on standard mechanisms to enhance the free choice by the cardholder of the payment instrument

7. Carefully plan technology migrations and introduce a card fallback mechanism

8. Facilitate multi-acquiring, central acquiring, by adopting new message structures paying attention to the convergence with the European SEPA for Cards specifications

9. Revisit appropriate Cardholder authentication methodologies in particular a Biometrics profile for Payment Applications is to be considered

10. Revisit Privacy protection practices in the light of mobile payment adoption



EMV2.0: Collaboration needed

- Even if there are/will be alternatives to ISO/IEC 7816, we consider that at present ISO/IEC 7816 is still valuable to:
  - Enable Card/ Terminal interoperability
  - Supports the layer independence for the deployment of applications executed through both contact and contactless applications
  - Support cardholder verification mechanisms
  - Propose a robust card security architecture
  - Facilitate multi-application management
- ISO and the European Payments Council have started work in technical standards that could overlap with EMV2.0.
- SPA considers that multiplicity of competing standards hampers market growth

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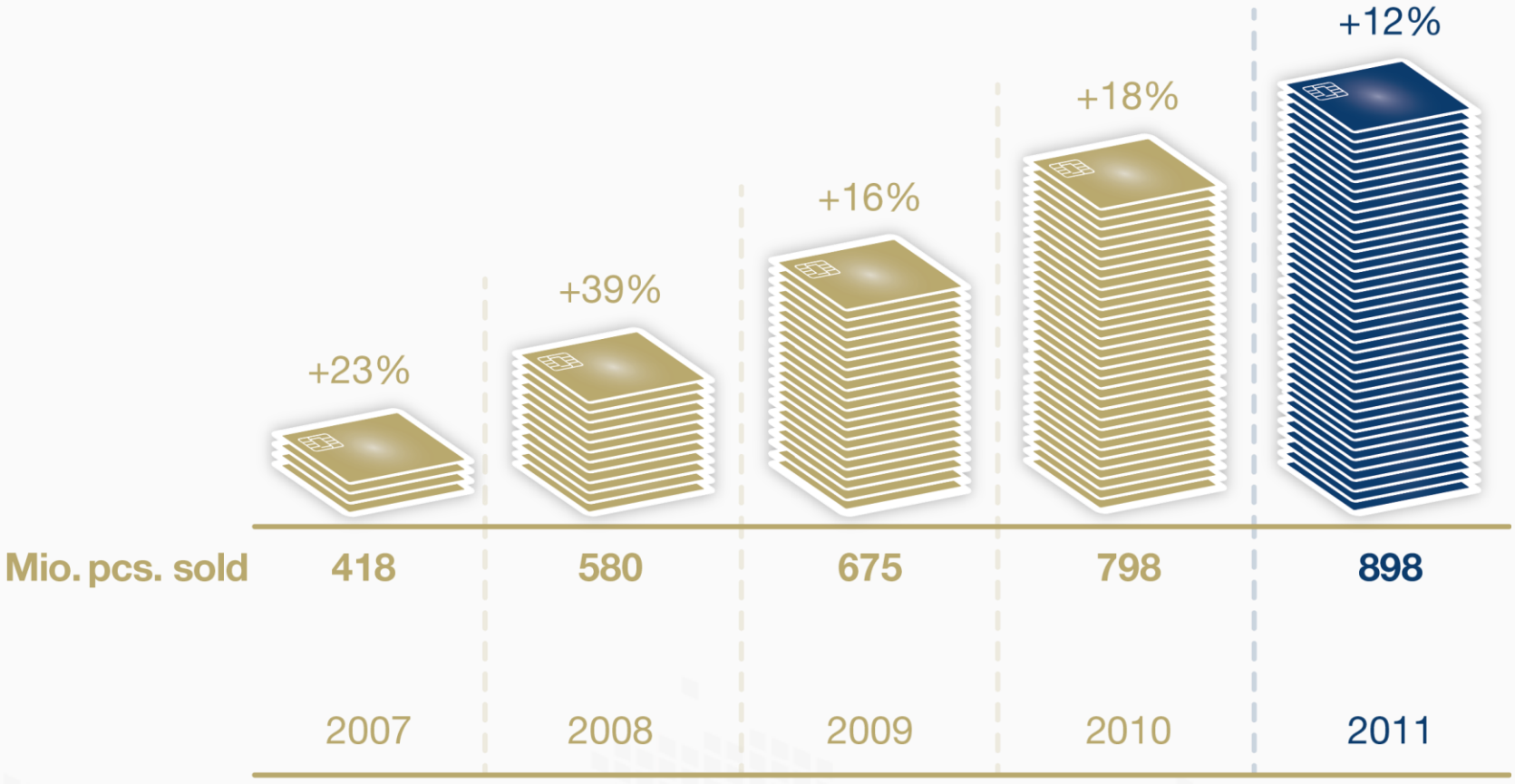
04.
What SPA is doing

We come from the payment card industry



* Includes all chip payment cards - EMV represents more than 90% of SPA shipments

Bring our expertise to the online world

- The SPA works in partnership with global standards bodies, its own vendor community, and an expanding ecosystem of established and emerging brands; offering an ever-growing portfolio of advisory and support services.

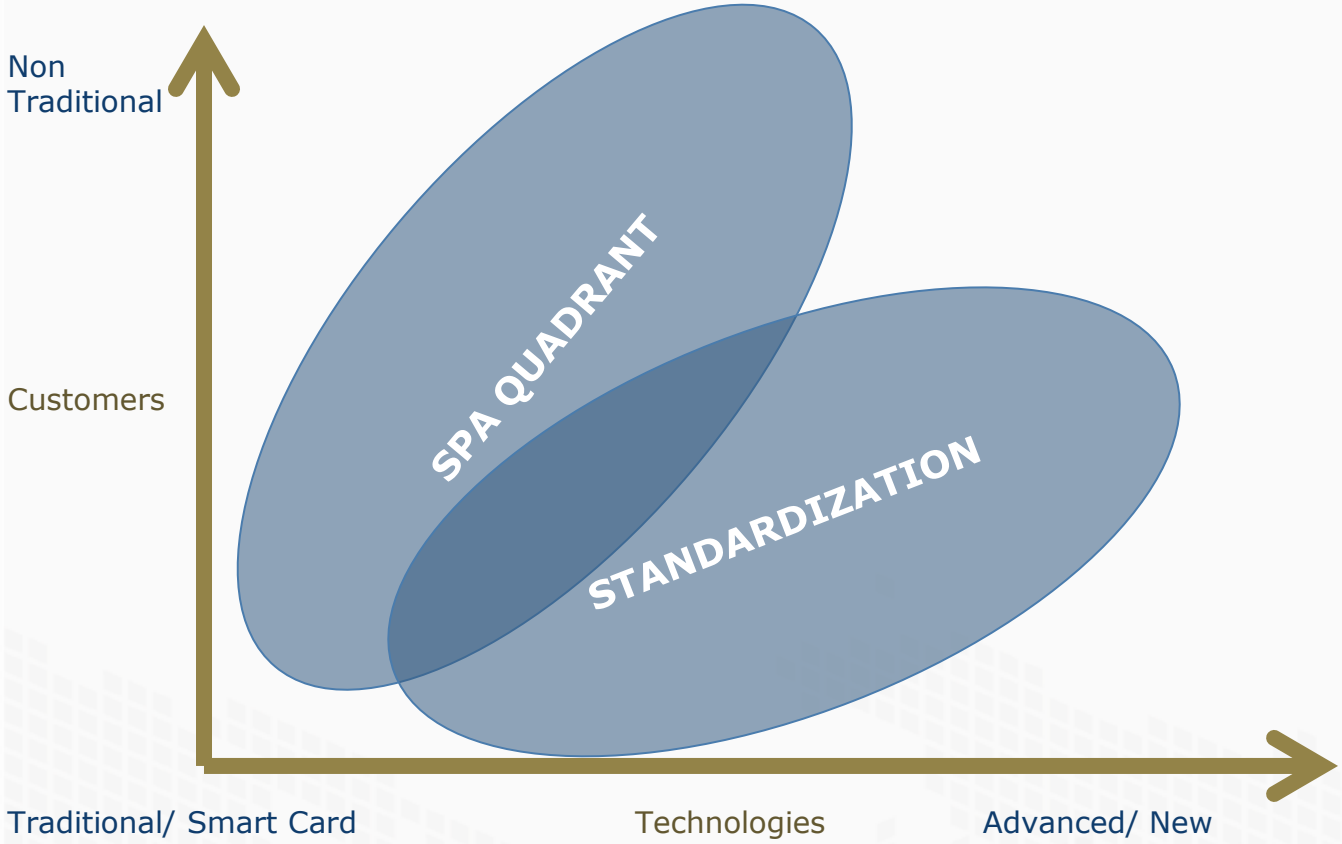


Fig 1
Extending advisory and support across the evolving community, the SPA is addressing today's challenges and shaping the future direction of payment technologies, standards and business models.

Via Standardization (one route)

- By investing in the creation and adoption of standards

EPC-CSG/SEPA:

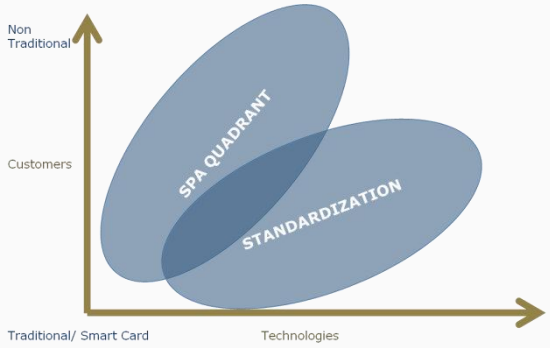
- Spokesperson of the Vendors Sector
- Convenor of the new EPC-CSG Expert Team on Card Innovative Payments
- Member of the Preparatory Committee of the SEPA Security Certification Management Body

EMVCo

- Technical Associate Member
- Elected on the Board Advisor as the representative of the Card Sector

ISO

- **SPA Members members hold responsibility positions on ISO JTC1 SC17 technical committees as well as in ISO TC68 SC7 on Mobile Payments / Mobile Banking**



The SPA Quadrant

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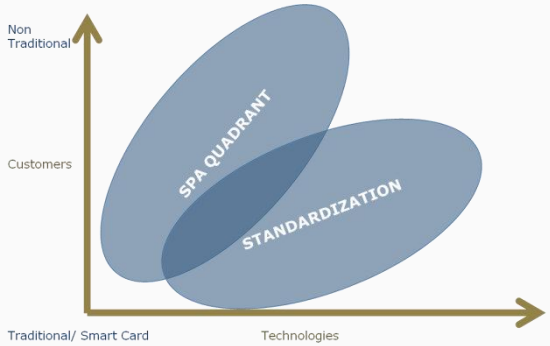
Some SPA on-going standard initiatives

The planned	What happened	What's next
EMV v2.0	Submission of proposal to EMVCo business objectives	Definition of priorities by EMVCo
Submission of SIMalliance Open Mobile API by SPA	Presentation to EMVCo Mobile Payments WG	Questions to be answered EMVCo Board of Advisors
Card Security Evaluation	Presentation letter with position by SPA	Convergence between EMV and SEPA methods
Biometrics Profile proposal by SPA	White Paper + Proposal for EMVCo	Submission of the Profile to EMVCo
EC Green Paper on Card, Internet &Mobile	Response to the whole set of questions	Waiting for conclusions for endorsement by EPC Innovative Payments WG
ECB Consultation Paper for Security of Internet Payments	Formal response with proposals for cardholder authentication	To be endorsed by EPC Innovative Payments WG

SPA initiative: « The Quadrant » (other route)

- Position the Industry Value Chain to other actors than Financial Industry and in the online payment world
- Build use cases
- Map architectures and identify missing technical bricks
- How can the industry bring value to new issuers
  - Ie. Data mining, security incl. Offline, Open Payment migration
- What value could the Industry bring to the ecosystem (processor, issuer, end user, merchant etc.)?
  - ie. Basis EMV transaction, form filling, OTP, data storage/customer profiling/ meta data, authentication , e-banking, transaction log
- Has to work from a web browser!!!



The SPA Quadrant

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05.
Take away

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Take away

- Smart payment card shipments hit one billion in 2011. SPA ships 85% of those and 90% are EMV.
- The card is the entry point of a multi-trillion dollar transactions ecosystem.
- Truly established, global secure & interoperable infrastructure.
- The payments market is going online
- SPA recommends a certain number of features to bridge the gap
- SPA plays a key role in shaping the future of smart payments through involvement in EPC, EMVCo and ISO.
- SPA has launched an initiative to workout new concepts valid for next generation of payments: going beyond EMV and payment

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Thank You

Questions?