Powered and Next-Generation Cards
New Levels of Security and Convenience

Day 1: Industry Session
Tuesday 17 July 2018

13.30	Arrivals
INTRODUCTION	**Introduction to Industry Session**
14.00	This session is for the payment card and identity card ecosystem to explore how to work together on strategies to develop the market for next-generation cards. The intended audience is card manufacturers, card integrators, card component suppliers (inlay, secure element, biometric sensor, display module, Bluetooth interface, etc.), personalisation bureaus, manufacturing equipment suppliers, test and certification houses. International and domestic payment card schemes, as well as issuers, are welcome to participate.
	Greg Pote, Chairman, APSCA
SESSION 1	**Developing the Market**
14.10 *Creating a volume market for biometric smart cards*	**Success factors for biometric cards** An overview of the status of the biometric card manufacturing business and what will need to happen for biometric cards to escape from their current niche and become mainstream products. The presentation will use case studies of some of the biometric card solutions that have been developed by the industry so far and explore both technical as well as commercial challenges that need to be addressed. **Thomas Decker, Vice President, Business Line Finance, Linxens**
SESSION 2	**Manufacturing Technologies**
14.40 *Manufacturing dual-interface biometric cards*	**Simplified manufacturing of touch and pay dual-interface cards** Cardholders may fear that stolen contactless payment cards can be used by thieves (correct) and/or that their payment account information might be skimmed through the card contactless interface (incorrect). Biometric dual-interface payment cards effectively address both these negative perceptions and contribute to a larger market for contactless payment cards. This presentation explains how card manufacturers can produce biometric contactless payment cards using the inductive coupling technology which eliminates the need for direct connections in the card body. **Vernon Heng, Sales Director Asia, Smart Packaging Solutions (SPS)**
15.00 *How to develop powered card products*	**From a prototype to a production ready card – how to bridge the gap?** Industrialisation is essential to the success of any powered card. New disruptors, entering the card industry as well as existing card manufacturers expanding their product portfolio, face the same issues in taking a product from prototype to production. This presentation talks us through the process – from initial component selection, through to board design and software engineering, and on to flex manufacturers and assembly houses – and aims to offer guidance on how to avoid the common pitfalls in order to successfully industrialise a powered card product. **Ronen Shaul, Managing Director, RES Data Security**
15.20	**Break**
SESSION 3	**Standardisation Activities**
16.00 *Interoperability and compliance for biometric smart cards*	**World Standard Requirements for Biometric Cards** This presentation addresses relevant standards for biometric cards. It starts with taxonomy defining the architecture of a Biometric System-on-Card followed by a brief introduction of the standardisation bodies and working groups developing important inter-industry standards. The Biometric System-on-Card standard is explained in its parts and key requirements before pointing to other relevant standards and system level specifications. The presentation closes by highlighting some of the challenges that biometric card industry is facing in complying with specific standardised characteristics such as flexibility, power consumption and timing. **Dr. Robert Mueller, VP Biometric Solutions, NEXT Biometrics**
DISCUSSION	**Developing the Industry and Market**
16.20 *How industry can cooperate while competing*	In this session stakeholders in the biometric card ecosystem explore how best to drive this new market and accelerate the growth of the business. Suggested subject areas include, but are not limited to, the following: ▪ **Market education - benefits** – all payment card issuers need to understand the value of biometric cards and their potential for customer acquisition, customer retention and delivering greater security for card payments. How can stakeholders effectively communicate the value proposition and benefits of biometric cards to issuers and the market? ▪ **Market education - implementation and rollout** – banks, retail payment companies and payment service providers need to understand the issues involved in rolling out biometric card products as these may be quite different from standard EMV bank payment cards. For example, how will biometric registration of customers be supported?

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DISCUSSION	Developing the Industry and Market	(continued)
16.20 How industry can cooperate while competing	**Supply chain issues** - issuers will need to be confident in a supply chain for biometric card solutions that can support multi-sourcing of reliable and durable products, and that has capacity for growth to meet market demand. Issuers are also likely to be interested in supporting personalization and biometric registration systems that are easy to integrate with existing issuing and IT systems. **Developing industry best practices** - stakeholders in the biometric cards business will always compete on product and service but the industry will need to explore how to cooperate to create a mature biometric card ecosystem that supports customers while facilitating the growth of this new market for next-generation cards. This might include standards compliance and certification of biometric card products. The objective is to develop best practices for issuers and suppliers to work together in strategically driving this new market. Industry participants will need to cooperate while competing. Issuers and payment schemes will need to voice their requirements and recommendations to improve the delivery of biometric card solutions into the market. **Thomas Decker, Linxens** **Vernon Heng, Smart Packaging Solutions (SPS)** **Dr. Robert Mueller, NEXT Biometrics** **Ronen Shaul, RES Data Security**	

CLOSE	Conclusions from the Industry Session	
17.00	Closing remarks and next steps **Greg Pote, Chairman, APSCA**	

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Day 2: Biometric Payment Card Seminar
Wednesday 18 July 2018

08.00	Arrivals and on-site registrations
INTRODUCTION	**Welcome and Seminar Objectives**
09.00 *Cards vs. mobile is not a zero-sum game*	**Cards are back in vogue** After years of predictions that mobile is the future of everything, there is now a renewed focus on cards. Customer preferences today suggest that the future of consumer payments and personal identity is likely to include both card-based and mobile solutions. Today new and innovative technologies from outside the card ecosystem are enabling the development of card solutions that offer differentiated and higher value products for customers. The card business continues to grow in both developed and emerging markets and even Fintechs are seeing the potential of cards. **Greg Pote, Chairman, APSCA**
SESSION 1	**TUTORIAL: Biometric Smart Cards 101**
09.30 *Everything issuers need to know to launch biometric card products*	*In this session an independent expert provides a biometric card tutorial for issuers. The tutorial begins with key definitions and explanations of how different biometric cards operate, leading to guidelines on how to select biometric card solutions. The tutorial provides a basic understanding of supply chain issues, biometric card production and personalization that will be important for evaluating suppliers and their proposals. This tutorial also includes examples from recent pilots and rollouts and a market outlook with adoption trends and risk factors.* **Introduction and definitions** - What is a biometric smart card? - From TOC to MOC to Biometric-System-on-Card (BSoC) - Biometric card applications **Selecting a solution** - Anatomy of a biometric smart card and FPCB - Operating strategies for biometric smart cards - How biometric smart cards are powered - Biometric sensor performance criteria **Technology considerations** - Brief overview of key manufacturing steps - Personalisation of biometric smart cards - Biometric card components & future integration - Standards, testing and certification **Evaluating suppliers** - Understanding the biometric card supply chain - Biometric card solutions providers and card manufacturers - Analysing what the industry is offering - Recent biometric smart card pilots/rollouts **Business outlook** - Forecast for biometric card shipments - Outlook for adoption of biometric smart cards - Potential risk factors for market growth **Antonio D'Albore, Founder and Editor, Embedded Security News**
10.30	**Break, Networking and Exhibition Viewing**
SESSION 2	**Case Studies**
11.15 *The first bank to rollout biometric smart cards*	**Bringing the convenience and security of biometrics to card payments** Biometrics can transform how customers use and value bank-issued cards. As well as offering an improved user experience, biometric cards also allow customers to make high-value contactless transactions without the need to enter a PIN. How can issuers deliver these benefits to payment cardholders and how can biometric payment cards be rolled out while minimizing infrastructure upgrades? How should issuers provide the convenient enrolment and customer service experience that needs to support biometric payment card products? This session provides learning and experience from the first worldwide contactless biometric card pilot launched with Bank of Cyprus. **Didier Dahan, Innovation Program Director, Gemalto**

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SESSION 2	Case Studies	(continued)
11.35 *Japan's first trial of biometric smart cards*	**Potential in Card Form Factor; JCB's Initiatives** JCB will provide its view and recent initiatives on the evolution of payment technologies, including both card form factor and non-card form factors. The presentation will explain why JCB thinks the card form factor is still important and will discuss JCB's initiatives relating to new technologies with card form factor. As a specific example, the highlights and the key findings of the recent pilot with the contactless cards with fingerprint biometrics sensor will be presented. **Tac Watanabe, Executive Vice President, Brand Infrastructure & Technologies Department, JCB**	
11.55 *Creating biometric payment card products*	**What it takes to master biometric payment cards** Biometric cards are getting more market traction, as they enable efficient but Bio-PIN protected contactless payments, as well as financial inclusion of populations to whom governments can distribute welfare or unemployment benefits in a secure manner. But what is "under the hood", and what does it take to master and produce biometric cards? Under a simple concept, we find a wealth of technologies that need to be mastered and pulled together in a very constrained device, the payment card. We will have a look at the ingredients required to "cook a good biometric card". **William Chang, Field Marketing Director for APAC, Financial Institution Business Unit, IDEMIA**	
DISCUSSION	**Go-to-Market Strategies for Biometric Cards**	
12.15 *Best practices for issuers to launch biometric cards*	In this session speakers take questions and discuss how issuers should develop a go-to-market strategy for biometric card products. After defining the target market, the two most challenging issues are likely to be the business model and issuing cards to customers. Are there new business models that issuers should consider to manage the higher ASPs of biometric card products? How should issuers manage the new challenge of customer biometric registration? Is the onboarding process an additional cost or an opportunity? **Antonio D'Albore, Embedded Security News** **Didier Dahan, Gemalto** **Tac Watanabe, JCB** **William Chang, IDEMIA**	
12.45	**Lunch**	
SESSION 3	**Roadmap for Biometric Cards**	
14.00 *Why 2018 is the turning point for biometric cards*	**Biometric payment cards – where are we now** Consumer acceptance of fingerprint authentication on smartphones is paving the way for biometrics in new form factors. The success of contactless payments has created an opportunity for biometric smart cards as the next evolution in payment cards. Biometric cards offer the simplicity and convenience of a contactless tap while also securing every transaction. This session provides details of consumer research, industry experience, supply chain scalability, live trials and payment card product rollouts to illustrate why 2018 will be the turning point for on-card biometrics. **Roger Carriço, Head of Sales EMEA & LATAM, Business Line Smartcards, Fingerprint Cards**	
SESSION 4	**Registering Customer Biometrics**	
14.20 *One touch, high-quality fingerprint registration*	**Why the enrollment process for biometric cards is critical** The most important factor determining the success of biometric payment card products will be the customer biometric enrollment process. Customer fingerprint registration should be an ergonomic and frictionless process that produces high-quality templates to allow for flexibility of customer finger positioning on the sensor when making card payments (even with wet, dry or dirty fingers). Fingerprint registration will also have to be easy, convenient and user-friendly, preferably without requiring customers to go to the bank branch. Self enrollment will be the target objective. **Radek Matyasek, SVP Sales, EMEAI, NEXT Biometrics**	
SESSION 5	**It's All About the Consumer**	
14.40 *What is the consumer looking for?*	**Simple, Secure and Personal** Biometric smart card technology is ready to scale with low power consumption and the required performance, and it can be integrated into cards with current manufacturing techniques, working with existing point of sales terminals. The issue of enrolment can also now be addressed with Mastercard, working with IDEX, recently announcing their remote enrolment device. Here IDEX Biometrics shares their industry knowledge and real-world experience of how the industry can deliver what the consumer is looking for - simple, secure and personal identification and authentication for all. **Brian Roberts, VP of Product Management, IDEX**	
15.00	**Break, Networking and Exhibition Viewing**	

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SESSION 6	Payment Scheme Perspectives
15.45 *The new in-store CVM solution to replace PIN*	**Next generation biometric cards** Surveys continue to show that customers rapidly becoming familiar with biometrics and enjoy this convenient approach to authentication. Here Mastercard discusses the business case for next generation biometric cards which combine chip technology with fingerprint biometrics to conveniently and safely verify the cardholder's identity for in-store purchases, while using existing EMV payment terminal infrastructure. Next-generation biometric payment cards build on fingerprint scanning technology used for mobile payments today and can be used at EMV terminals worldwide. **Nimit Gulati, VP - Authentication & Identity Solutions, Asia Pacific, Mastercard**
16.05 *The future of customer authentication in retail*	**Ready for biometric cards** In a recent Visa survey of 1,000 Americans exploring awareness and perceptions of biometric authentication, a key survey finding was that consumers were most familiar with fingerprint recognition, with 30 percent having used it once or twice and another 35 percent using it regularly. This discusses findings from Visa Ready for Biometrics trials of fingerprint sensor-based payment systems with two partners that offered customers the opportunity to use a fingerprint sensor on their bank cards to verify their identity rather than a PIN number, password, or signature. **Mark Rigby, Senior Director, Global Risk & Authentication Products, Visa**
SESSION 7	**Risk Management**
16.25 *Evaluation, testing and conformance*	**Potential security issues for biometric cards** This presentation compares the card architecture of traditional chip-based versus biometric cards, explores some of the potential security issues arising from biometric cards and proposes how they can be secured. This will examine industry specifications for biometric cards, their different architectures and approaches and how the architecture of biometric cards differs from traditional single-chip cards. This highlights some of the issues and challenges that have been faced in evaluating biometric cards and shares experience based on real situations that have been addressed. **Lin Chee Kheong, Principal Advisor, Transaction Security Division, UL**
DISCUSSION	**What's Next for Biometric Cards?**
16.45 *Impact on contactless payments to launch biometric cards*	Speakers take questions and discuss how the market for biometric smart cards is likely to develop. Will on-card biometrics completely replace PIN as the new CVM for in-store and ATM transactions? What will be the impact of biometric cards on the contactless payment card market? Will the concept of low-value versus high-value, and contactless payment thresholds, disappear? What levels of on-card component integration will be possible and to what extent could this reduce the ASPs for biometric cards? Will biometric cards become the new standard for financial payment cards? **Roger Carriço, Fingerprint Cards** **Radek Matyasek, NEXT Biometrics** **Brian Roberts, IDEX** **Nimit Gulati, Mastercard** **Mark Rigby, Visa** **Lin Chee Kheong, UL**
CLOSE	**Conclusions from the Seminar**
17.15	**Wrap up** - What did we learn? Perspectives from issuers, schemes, industry? Next steps? **Greg Pote, Chairman, APSCA**