gemalto
security to be free

Let's talk **tokenization** for mobile payment security

Mobile payment technology now comes in many flavors. Discover how tokenization accelerates the deployment of secure mobile payment, enabling banks and payment service providers to issue payment credentials – without issuing new cards...

WHY EVERYONE'S TALKING TOKENS...

Tokenization is an **increasingly popular** way to bring additional **security** to digital **payment** processes

Backed by major payment players, including **Visa, MasterCard, Amex** and **EMVCo**

Adopted by Apple as one of the underlying technologies behind **Apple Pay**

Seen as a next step in securing **Android HCE**-based payments

25
MasterCard HCE projects already launched across 15 countries
Source: MasterCard Worldwide

30+
Visa member banks going live with HCE projects by end of 2015
Source: Visa

1.8m
tokens for Apple Pay issued by Chase and Bank of America in first 6 months
Source: Chase and Bank of America (March 2015)

30m
merchants worldwide potentially to accept Samsung Pay, which employs tokenization in the US
Source: Samsung

THE NEED FOR **PAYMENT SECURITY**

$16b **stolen in US by digital fraudsters in 2014**

12.7m **US consumers successfully targeted by digital fraudsters in 2014**

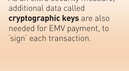
28% **of fraud victims abandon merchants after a security breach**

Sources: Javelin Strategy & Research 2015 Identity Fraud Study

MOST MOBILE PAYMENTS TODAY USE **CARD NUMBERS**

Credit and debit cards carry a 16-digit card number called the **Primary Account Number** (or **PAN**) and a 4-digit expiry date. Together, these important numbers are the **card payment credentials**.

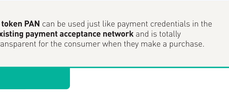
As these card credentials can be used for payments anywhere in the world, they are very valuable – and **attractive to fraudsters**.



As an extra security measure, additional data called **cryptographic keys** are also needed for EMV payment, to 'sign' each transaction.

THE BASICS OF TOKENIZATION

Tokenization consists of replacing card credentials such as the PAN with a substitute value – a '**token PAN**'. It is only the token data which is then stored in the mobile device – protecting the real card number from misuse.



A **token PAN** can be used just like payment credentials in the **existing payment acceptance network** and is totally transparent for the consumer when they make a purchase.

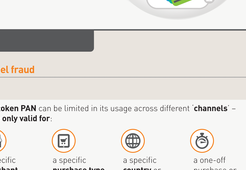
TOKEN **REQUESTORS**

Who can request payment tokens for end-users?

TOKEN **SERVICE PROVIDERS**

Token requestors need to register with a **Token Service Provider** (TSP) to enable their mobile payment service.

Tokens are managed in a secure digital **token vault** by the TSP. Only the trusted TSP who created the token can map it back to the corresponding real card details on their secure database.



WHAT DO TOKENS **ACHIEVE**?

1. Tokens help **prevent cross-channel fraud**

The **token PAN** can be limited in its usage across different '**channels**' – to be **only valid for**:

- a specific **merchant** or chain
- a specific **purchase type** (e.g. in-store)
- a specific **country** or region
- a one-off purchase or restricted **timeframe**

Even if a token is intercepted by **fraudsters**, its re-use will be limited. Fraudsters will not usually know where or how to use a specific token, so it is less attractive to them. Tokens thus help **prevent 'cross-channel fraud'**.

The **transaction keys** needed for EMV payment can also be **replenished** on a regular basis, further reducing the value of illegally obtained tokens.

2. Tokens help **accelerate** mobile payment deployment

INTEGRATES EASILY
Tokenization **integrates easily** into existing acquiring network infrastructure.

BETTER EXPERIENCE
Tokenization enables immediate card activation on mobile, as soon as the cardholder is verified.

USE EXISTING CARDS
Issuers do not need to provide new cards for mobile payment – existing cards can be used with tokenization.

GEMALTO, YOUR TRUSTED PARTNER FOR TOKENIZATION

Digital security leader Gemalto has added new key capabilities to its Allynis **Trusted Service Hub** for tokenization-based payment services, so you can create a seamless mobile payment experience for your end users.

The enhanced Trusted Service Hub offers **simplicity and choice** with regards to available **security models**, covering management of credentials on Secure Element (SIM and embedded), Trusted Execution Environment (**TEE**), and **HCE**-enabled handsets – or any combination of these.

MOBILE PAYMENTS WITH GEMALTO

- **Create a seamless mobile payment experience**, with the most complete and integrated solution – from the mobile tokenization gateway to the client-server architecture for provisioning and processing payment security.
- **Easily deploy mobile payment**, with integration to existing systems, while maintaining flexibility to upgrade security levels at any time to match risks.
- **Digitize your complete card portfolio with one provider**, including all international payment brands, domestic schemes and white-label EMV.
- **Simplify mobile services and on-boarding processes**, and address real-time provisioning needs, – for a better mobile payment experience.
- **Benefit from a future-proof and versatile solution** to maximize reach and performance on all available devices.
- **Launch with confidence** – as we advise and support our customers throughout, on their options, implementation roadmaps, and risk management needs.

CONCLUSION: THE TOKEN TAKE-AWAY...

gemalto
security to be free

- **The future** for **mobile payments** is diverse, and **multiple** payment security methods will **coexist** – including **tokenization**.
- **Tokenization** reduces cross-channel fraud and accelerates mobile payment adoption.
- Gemalto's **Trusted Service Hub** supports all the leading mobile payment **security and technology options**, and will continue to evolve and expand to support new options as they emerge – to deliver a **future-proof best-in-class mobile payments experience**.

Learn more about tokenization, the Trusted Service Hub, and the world of mobile payment.

www.gemalto.com