

Build a Secure Cyberspace 2017  
“Smart Home, Safe Living” Seminar

# Mobile Payment - Paying with Ease and with Piece of Mind

PRINT\_VALUE\_OSRN  
TRACE\_USER\_STATUS  
X509\_GET\_VALUE  
CONNECT  
LOCATE\_SYSTEM\_FOLDER  
EXECUTE\_COMMAND

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THE GLOBAL DIGITAL SECURITY COMPANY

*Evolution*

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# Evolution Security Consulting

- Founded in 1999 in the UK, Evolution is a specialised network and Internet system security firm.
- Headquarters of the group is located in London, and with offices in 8 locations worldwide. Hong Kong is the regional quarter for APAC.
- Two 24x7 PCI Monitoring Datacenters in Channel Islands and Derby, UK.
- Provides full range of Professional Security Consultation and Compliance services.



# Evolution PCI DSS Qualifications



- Evolution is an accredited PCI QSA (Qualified Security Assessor)
- Providing full-cycle PCI-DSS services, (security assessment, remediation, professional consultancy service)
- Hong Kong's Most Valuable Companies Awards 2015 and 2016
  - *Most Trusted Compliance and Security Solutions*
  - *Best Compliance and Corporate Security Services*





# *Mobile Payment*





## Digital Wallet

- A Digital Wallet is a secure place that contains one or more currency purses
- Shoppers can fund a Digital Wallet in several different ways
- Once funded, shoppers can use Digital Wallet online to buy goods or services



## Digital Wallet

- HKMA has granted a total of 13 SVF (Stored Value Facility) licenses
- In Q1 2017, the total number of transactions by SVF was 1.35 billion, with the transaction value at HK\$29.4 billion



## Multi-purpose SVF

SVF as a payment means for many products and services  
(e.g. prepaid cards, mobile and internet payments)

Need a licence

SVF with limited usage and risk  
(Schedule 8 to the PSSVFO)  
(e.g. cash reward schemes, etc.)

Exemption

## Single-purpose SVF

Bilateral contractual arrangements for payments between users and SVF issuers  
(e.g. cake shop coupons, etc.)

No licence needed

## Non-SVF

Payment facilities without stored value functions  
(e.g. credit cards, Apple Pay, etc.)

No licence needed

*\*Source: Hong Kong Monetary Authority*





# *Demonetization*

The background of the slide is a collage. At the top, there's a dark blue silhouette of a world map. Below it, a person's face is partially visible, looking directly at the camera. The main part of the background is a close-up, slightly blurred image of Indian currency notes, including a prominent yellow 500 rupee note and a green 1000 rupee note. A semi-transparent dark grey rectangle is positioned on the right side of the slide, containing text.

## *Demonetization*

On November 8, 2016, the Government of India announced the demonetisation of all ₹500 and ₹1,000 banknote

Overnight, 90% of the nation's currency was killed.



## WALLET PAYMENT ECOSYSTEM IN INDIA

### Wallet Provider

### PoS

### Payment Processor

Customer

Merchant

**Operators**

**Retail**

**Retail**

**Utilities**

**Card Issuer Bank**

**Banks**

**Remittances**

**Remittances**

**Travel Entertainment**

**Processor & Gateways**

**Tech Giants**

**Apps**

**Service Providers**

**Ecommerce & Apps**

**Card Association**

**Loyalty Card**

Counterpoint





## Benefits of Mobile Payment

- No only more convenient for consumers
- Additional benefit for merchants and card operators
- And for everyone in the mobile payment ecosystem



## *Consumers' Concerns on Mobile Payment*



## Security

- Multi-factor authentication
- Technologies such as E2EE (End-to-End Encryption) and Tokenization are deployed
- EMVCo has published a document providing a standard for the formatting, encoding, and decoding of data embedded in QR codes when used for payment purposes
- Generally more secured than traditional payment card transactions



















## *Diversity of Providers*

- Causing confusions for consumers
- Slowing down technology evolutions
- Could pose security risk
- Jeopardize the development of the mobile payment market in HK

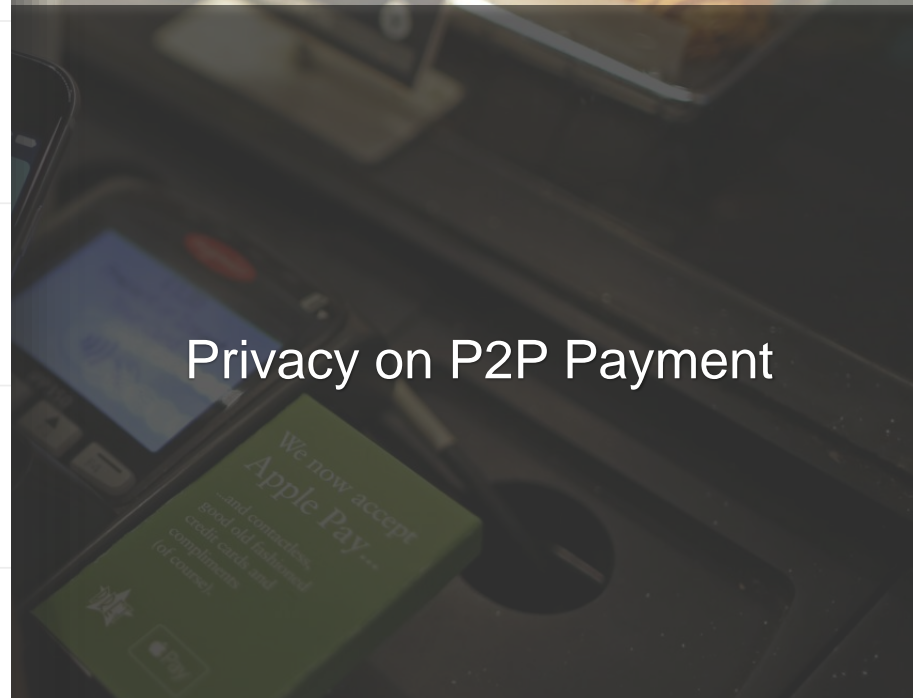
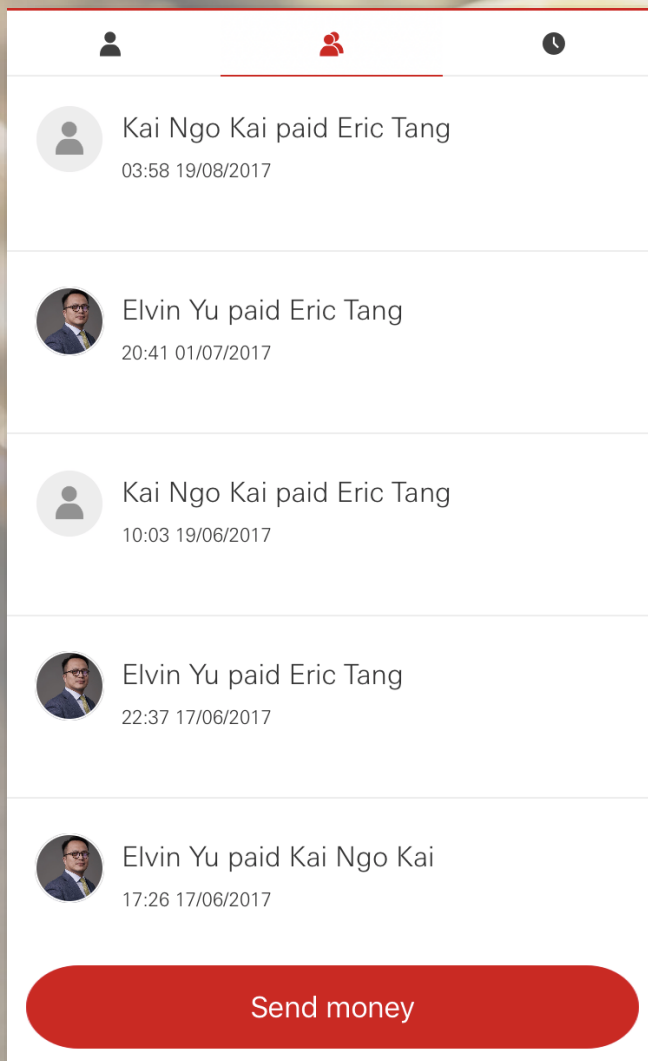




## Privacy Protection

- New payment technologies make it much easier for data mining on consumers' spending behavior
- Consumers raising questions on how their personal data is being protected
- Additional concerns on their spending and transaction history





## Privacy on P2P Payment



## Consumers' Responsibilities

- Setup additional authentication layer
- Only use the wallet and mobile payment methods you needed
- Take good care of your devices
- Have a clear understanding on what needs to be done in case of a lost device
- Stay updated, stay educated





**Guideline:** PCI Mobile Payment Acceptance Security Guidelines

**Version:** 2.0

**Date:** September 2017

**Author:** Emerging Technologies, PCI Security Standards Council

**PCI Mobile Payment Acceptance  
Security Guidelines for Merchants as  
End-Users**

Fresh off the press from PCISSC

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