SAMSUNG PAY
CONCEPT & SERVICES

Pioneer of
Mobile Technology

Redefine
the Possibilities

Samsung pay

1 Samsung Pay Overview - Samsung as a mobile payment enabler

SAMSUNG
NFC/MST, TEE/TZ, HCE

**EMV
Compliance**

Tokenization

USER

RETAILERS
& SMBs

CARD NETWORKS
& BANKs
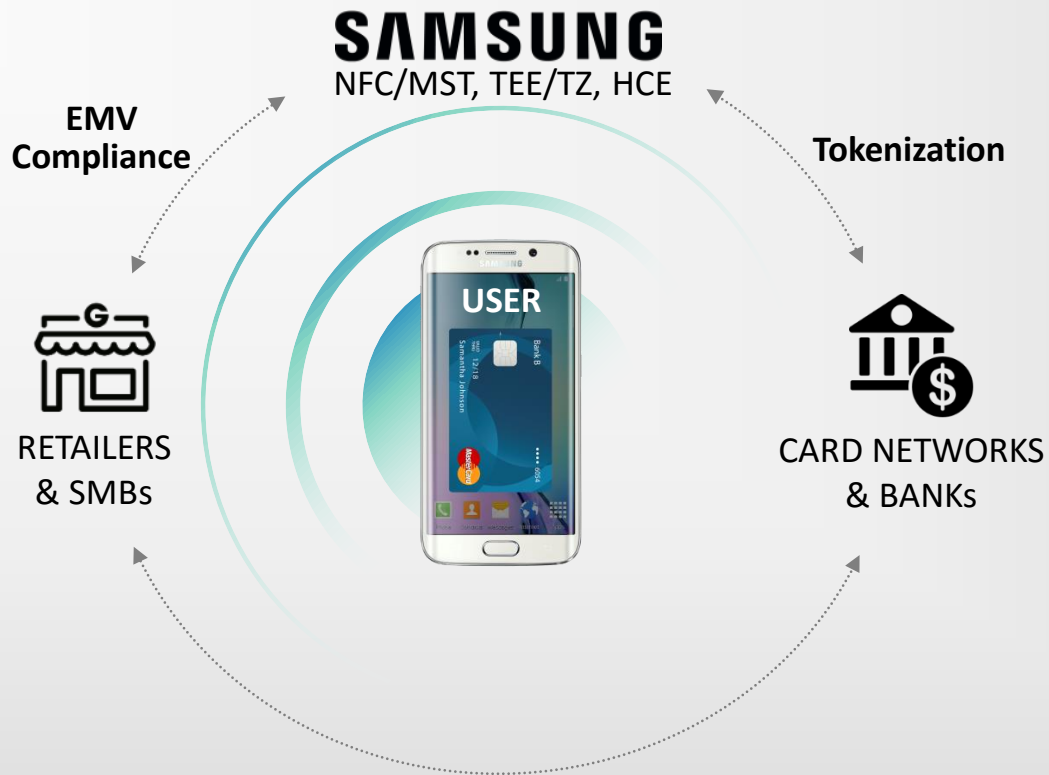
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1 Samsung Pay Overview – Value Position

CONSUMERS
- Wide coverage in regards to POS acceptance (via NFC and MST)
- Out of the box experience (preload)
- Exclusive Offers for Samsung Pay Users

MERCHANTS
- No need to upgrade POS terminals for Samsung Pay acceptance
- Faster customer throughput, reduced cash handling
- Opportunity to develop loyalty/engagement with Samsung Pay

BANKS
- Can cater to broad Samsung user base, cross-sell and promote Issuers
- Maximized security via tokenization, TEE/TZ, fingerprint identification and Samsung Knox
- Minimal additional costs for on-boarding process

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1 Samsung Pay Overview – Service characteristics

Enhanced Security

- Samsung KNOX
- Tokenization
- Trustzone/eSE

Easy to Use

- One hand operation
- Fingerprint
- Consistent user experience for both NFC and MST

Wide coverage

- NFC & MST transaction
- Online & Offline payment
- Membership
- Gift card

MST: Magnetic Secure Transmission

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1 Service Characteristics – Enhanced security

Samsung KNOX

- Real-time kernel protection to monitor and protect the kernel from malicious attacks.

- Periodic kernel measurement to monitor changes to the kernel code and static data for any changes

- Client certificate management to provide ability to build a Trustzone based authentication and secure storage for private keys

- Trusted user interface to protect user input and sensitive display data

- Remote attestation to validate from a server that the device is running an approved binary and the Kernel has not been tampered, before provisioning any Token or Keys to device

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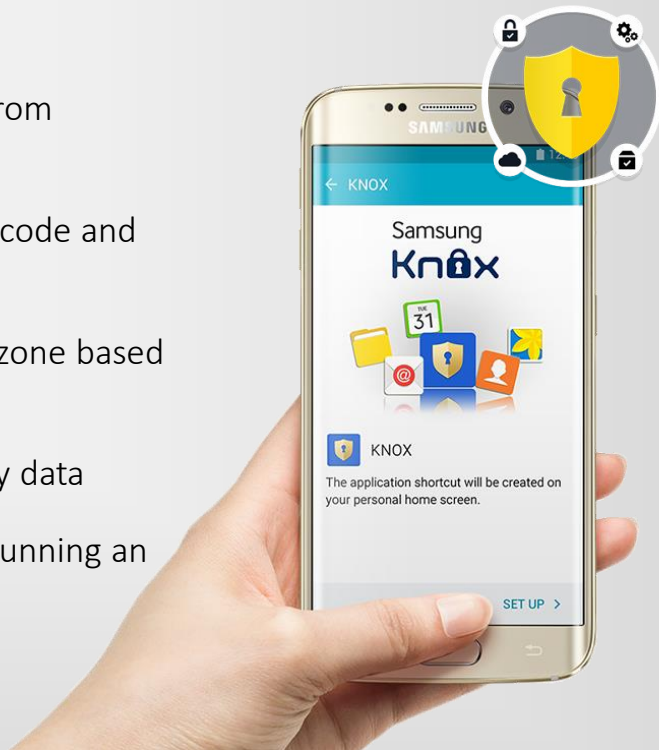
2 Service Characteristics – Enhanced security

- **Fingerprint is the alternate to PIN for payment simply**

- **User security by fingerprint verification**

- **Enrollment**

  - Binding a fingerprint to a device

- **Identification**

  - Matching scanned fingerprint with the enrolled ones

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1 Service Characteristics – Enhanced security

Tokenization

- The process of replacing sensitive data with unique identification symbols that retain all the essential information about the data without compromising its security.

Trustzone

- Establishing trust in ARM-based platforms
- The distinction between secure worlds and normal world is completely orthogonal to the normal ring protection between user-level and kernel-level code and hidden from the operating system running in the normal world

eSE (Embedded Secure Element)

- The component in a mobile phone providing the security and confidentiality to various business models (payment, commerce, security and etc)

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1 Service Characteristics – Easy to use
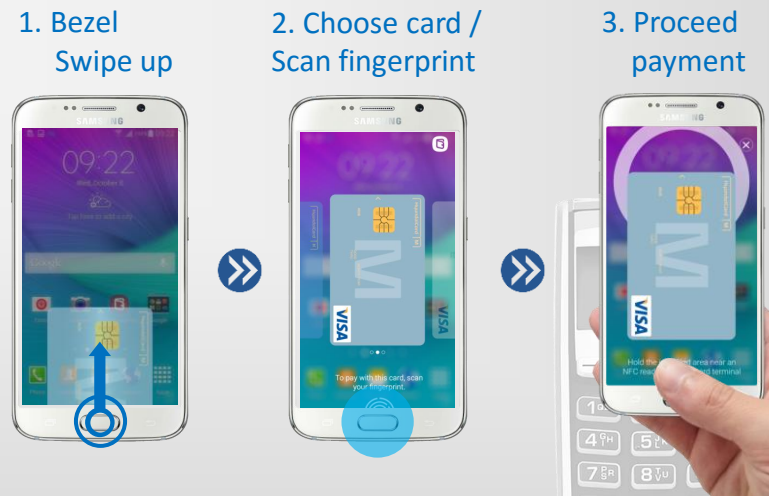
ONE HAND OPERATION

Easy to switch cards & easy to pay with one touch of fingerprint

- Switching Registered Cards
- Consistent User Experience for paying by NFC or MST
- One touch Payment via. Fingerprint authentication

NFC

MST

Barcode - Korea
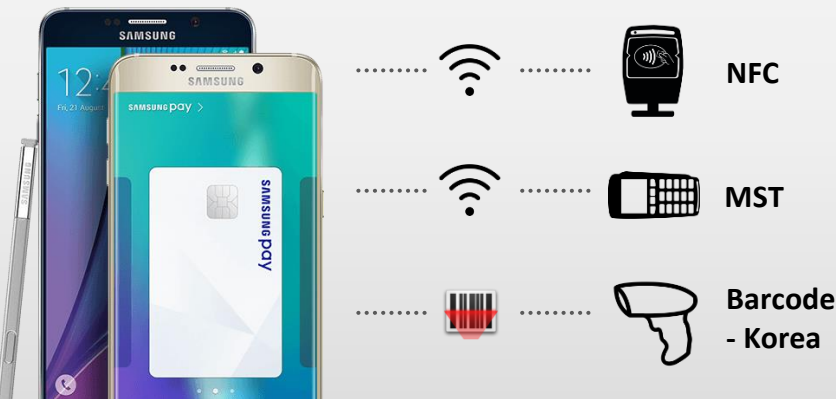
Quick and Easy Payment UX

- Simple app launch and zero learning curve

1. Bezel Swipe up

2. Choose card / Scan fingerprint

3. Proceed payment

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1 Service Characteristics – Easy to pay

❚ Convenient, impactful payment experiences

Quick, Efficient Payments

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1 Service Characteristics – Wide coverage

Support MST transaction

- MST (Magnetic Secure Transmission) formats the card data into simulated magnetic stripe tracks and transmits them via magnetic pulses

- MST communication is entirely inside of Trustzone

- Contactless payments via the existing retail infrastructure

- NFC coverage is just 3% (US)

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1 Design & UX Concept – Key Concept

Intuitive design for home screen

- Simple layout with emphasis on payment card
- Minimized number of steps for quick and easy payment

Simplified payment experience

- Persistent shortcut (Swipe up gesture)
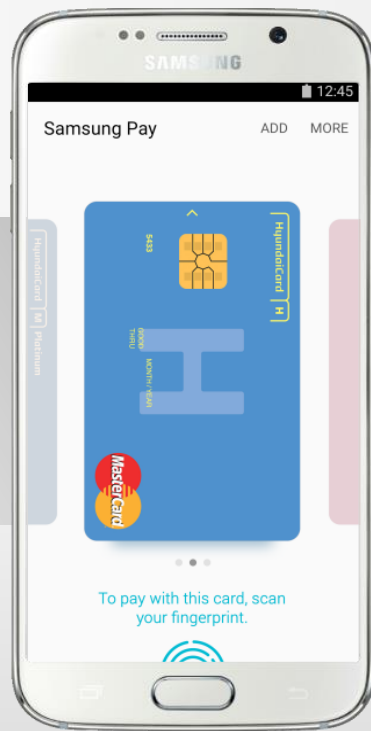- NFC and MST task flows aligned for a consistent payment experience

Easy registration process

- Simplified registration process with OCR solution

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1 Design & UX Concept – Intuitive design for home screen

Simple layout with emphasis on payment card

Full-size card per page reflecting the average number of payment cards per person

Minimized number of steps for quick and easy payment

Fingerprint scan module provided up front for fast access to payment mode

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1 Design & UX Concept – Simplified payment experience

▎Persistent shortcut (Swipe up gesture) on LCD-off, Lock screen and Home screen

Swipe up

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1 Design & UX Concept – Simplified payment experience

❚ NFC and MST task flows aligned for a consistent payment experience
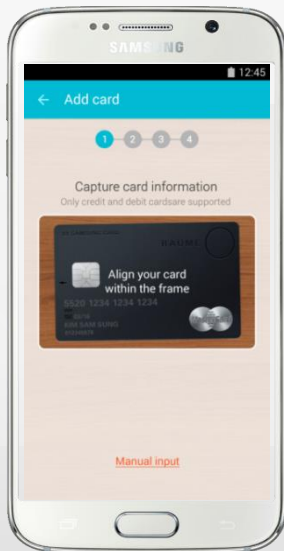
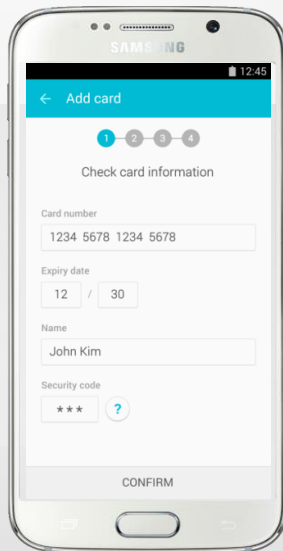**1** Swipe up   **2** Finger print   **3** POS tagging

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1 Design & UX Concept – Easy registration process

| Simplified registration process with OCR solution
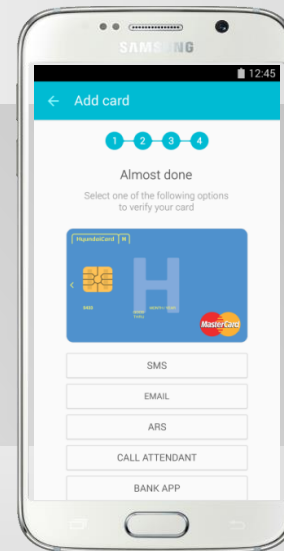

1 OCR   **2** Card info. confirm   **3** T&C Accept   **4** ID&V

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2 Security – Phone Lost

Find My Mobile (FMM) portal have two additional links to control Samsung Pay: Lock and Unlock My Samsung Pay

Lock and Unlock My Samsung Pay closely match the user experience of 'Lock My Device' option

There is a PIN setting option. User can set a PIN that can be used to unlock on the device

User can login to the FMM portal and remotely unlock the Pay app

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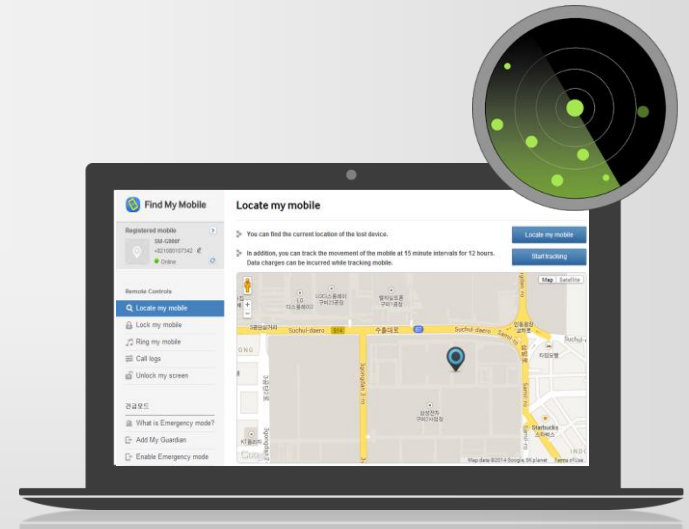
Service Category

Payment Service

Offline Payment
Support In-store payment by MST and NFC

Online Payment
Support Online payment in application or web

Prepaid / Gift card
Support additional payment method

Membership card
Issue and save membership card

Wide Acceptance

Security

Convenience

Flexibility

Simplicity

Value Added Service

Coupon & Offers
Great deals, easy discovery, simple redemption

Tickets
Save tickets and reservation vouchers for mobile use

Transit Card
Carry and pay with transportation card

P2P Money Transfer
Send/Receive money without account number

Location based services
Location-based offers and advertisements

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Thank You

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