smart microSD

*The Best Approach for NFC*

May 2013
SD Today

A global ecosystem of 1,000+ companies setting industry-leading memory card standards.

Est. 8,000+ consumer electronics models manufactured by 400+ brands worldwide rely on SD standards.

microSD is the #1 memory card form factor for mobile devices with ~95% of mobile memory card shipments

78% of all mobile phone shipments have a memory card slot
MOBILE PHONE
IS THE MOST CARRIED, CONVENIENT TO ACCESS,
#1 END USER DEVICE

MOBILIZATION OF SERVICES:
A REQUIRED STRATEGIC EVOLUTION
Mobilization of Security Services

CONTACTLESS CARD SERVICES

REQUIREMENTS:
• Contactless capabilities
• Adequate secure element

SECURITY TOKENS

REQUIREMENTS:
• Adequate secure element
• +/- display, etc.
Mobilization of Security Services

Contactless Card Services

- Specifications released and available
- Global platform + JavaCard
- SWP additional pin for NFC phones
- Additional ASSD protocol
- Compatible smart microSD compliant phones
- Standardized solutions available from various vendors

Security Tokens

- Antenna and SE embedded
- Global platform + JavaCard
- Proprietary solutions from various vendors (standard solution with ASSD protocol possible)
- Compatible with most phones with microSD

Meet all requirements
- Contactless capabilities
- Adequate secure element
- Display for enhanced user experience

smart microSD with built in SE and external SWP connection to host NFC
- Specifications released and available
- Global platform + JavaCard
- SWP additional pin for NFC phones
- Additional ASSD protocol
- Compatible smart microSD compliant phones
- Standardized solutions available from various vendors
KEY BENEFITS
FOR SERVICE PROVIDERS
Largest Reach and Worry-Free

- Users’ current phone (with microSD)
- Any mobile operators
- Any mobile plan
- Phones with and without* NFC

* Without NFC: Proprietary solutions
Business Independence

- Easier launch. Lower cost.
  - No need for 3rd party agreement
  - No upfront TSM integration

- Large choice of business models
  - No rental fees
  - User subsidized
  - You decide

- Differentiation
  - Full control the App and the user experience
Fits Existing Business Process

Same distribution process as for existing contactless cards or tokens

smartSD memory cards can be distributed

PERSONALIZED

- Postal/mail
- On-site issuance

And also memory card distribution

- Traditional retail peg packaging and more

Mobile App

JavaCard Applet (TSM or Local)

& TSM COMPATIBLE
AWARENESS
Value propositions for the end user

I want to get those benefits

End user journey

Download Service mobile App

Purchase NFC HW or use existing one

Enjoy the NFC-enabled service
END USER KEY BENEFITS
End User Benefits Summary

- Instant gratification
- Easy to upgrade a mobile device
- Easy to change mobile operators
- Creates larger ecosystem of vendors
- Control apps and applets
- Extra storage for PC, phones, tablets, etc.
CARD ISSUER KEY BENEFITS
Benefits for Card Issuers

Typical card issuers:

- **Business Independence**
- **Larger reach:**
  - Any user
  - Any phone
- **Lower up-front cost**

- **Typical retail model & revenue**
- **Opportunity for new revenue streams from services**

- **Lower up-front cost for NFC**
- **Opportunity for new revenue streams from services**
- **Reach more users and possibly acquire subscribers from competition**

- **New TSM opportunities**
- **Business independence**
- **Large Reach**
- **Direct relationship**

**Service Providers**
**Retailers**
**Mobile Operators**
**TSM operators**
CONSUMER CENTRIC MODEL
Consumer Centric Overview

- End user control of Apps/Services
- Choice of Distribution channels and retailers
- No constraints.

Online Access & Authentication
Privacy & Data Security
Digital Signature & non-repudiation

Plus many more token Apps
And many more NFC services

Banking and Payment
Transit & closed systems
Physical access control
Consumer Centric Model

A model focused on creating value for all parties

Versus controlling the secure element to milk the service providers and reduce churn

More apps & services
More interest/benefits
More users
More NFC HW available
Lower up-front costs

A VIRTUOUS SYSTEM
Hardware Spec: Available
Underlying Hardware: Available
Smart microSD logo: Available
Consumer Centric model: Ongoing
App and Services: Waiting for you to adopt

www.sdcard.org/developers/overview/ASSD/smartsd/