

Mobile NFC Secure UICC vs. Secure IC

Bultel – Stafford
CTST May 2008
Orlando, FL



Never stop thinking

Mobile NFC Main applications



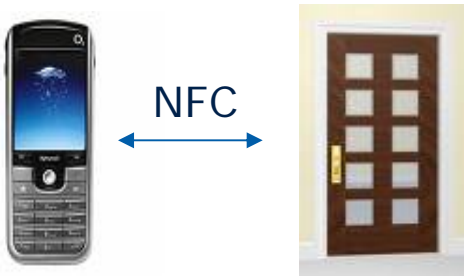
Payment everywhere:
Mobile = POS / Reader
needs security !



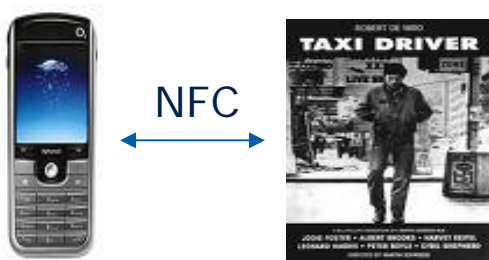
Micro-Payments:
Mobile = Debit/credit card
needs security !



Access to public transport:
Mobile = Ticket



Building access:
Mobile = Key



Info from smart-poster:
Mobile = Info display
(Active Mode)

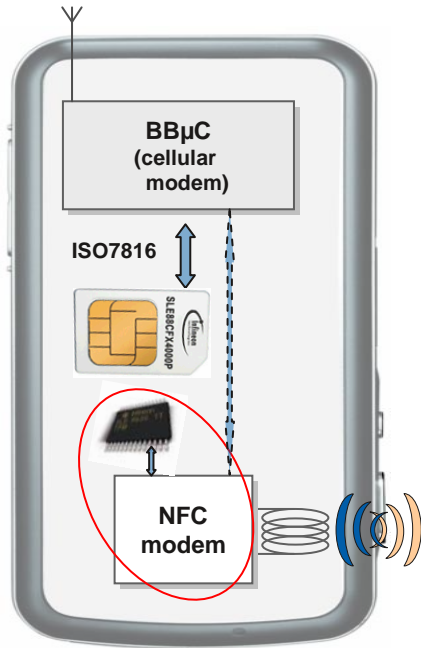


Information Exchange
Mobile = Info storage
(Peer to Peer)

POS...Point of Sales

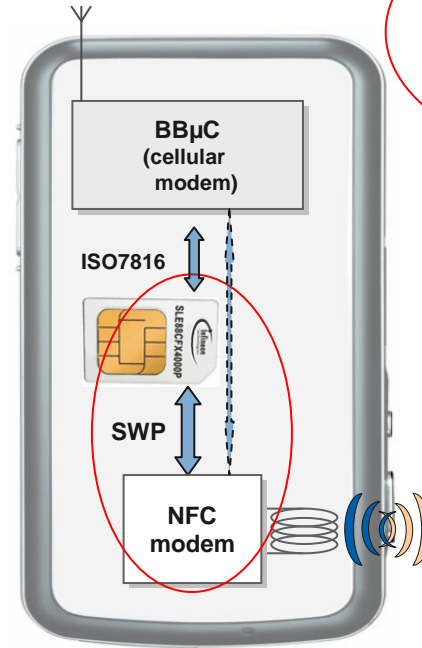
Mobile NFC

2 Market approaches: HSM and MNO



Handset Manufacturer - Centric Approach

- Secure Element = a device in the handset so called “**SE-NFC**”
- Security: in the SE (device-oriented)
- most trials until SWP ETSI release



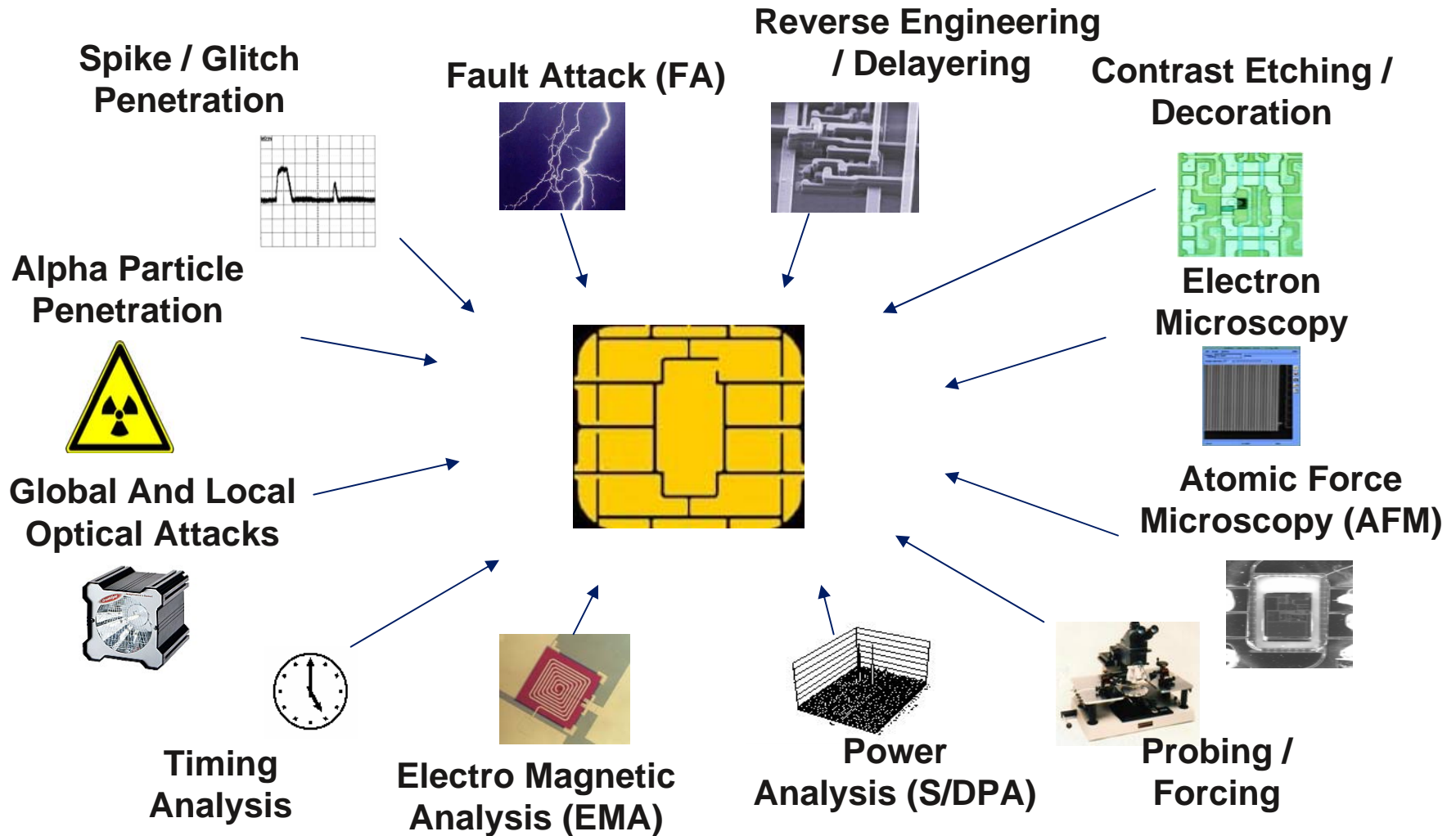
NFC device
=
Secure Element
+
NFC modem

Mobile Network Operator – Centric Approach

- Secure Element = SIM so called “**SIM-NFC**”
- Download of credentials via the network (from MNO or 3rd party)
- Security: in the SIM (user-oriented, removable)
- The SIM can also support DRM, Mobile TV access rights

Mobile NFC

What is chip security?



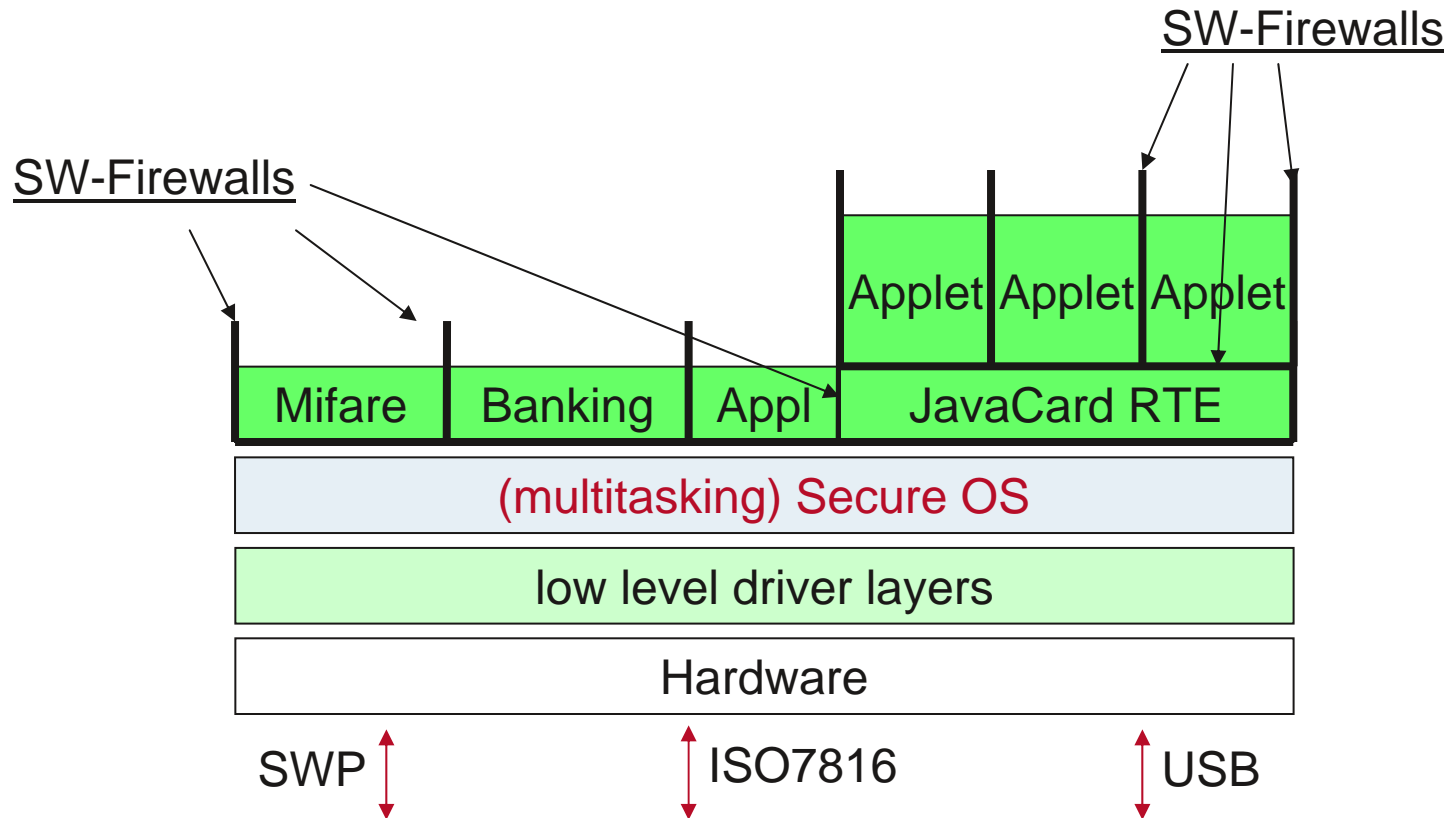
Mobile NFC Secure IC vs. Secure SIM



	Secure IC	Secure SIM
Secure Software	Specific Development	High end secure OS
Channel	HSM	MNO
Remove/Exchange hacked chip	Impossible	Easy
MobTV, Banking application isolation	Theoretically ok because different chips used (but additional costs)	Download of Java Applet compromise chip security => See next slide
Industry Standards	Typically Proprietary host interface implementation	Standards based interface implementation
Security Upgrade	Handset Manufacturer responsibility	OTA (operator services)

Mobile NFC The present SIM/UICC

Issue: Security of system compromised by download of new applications

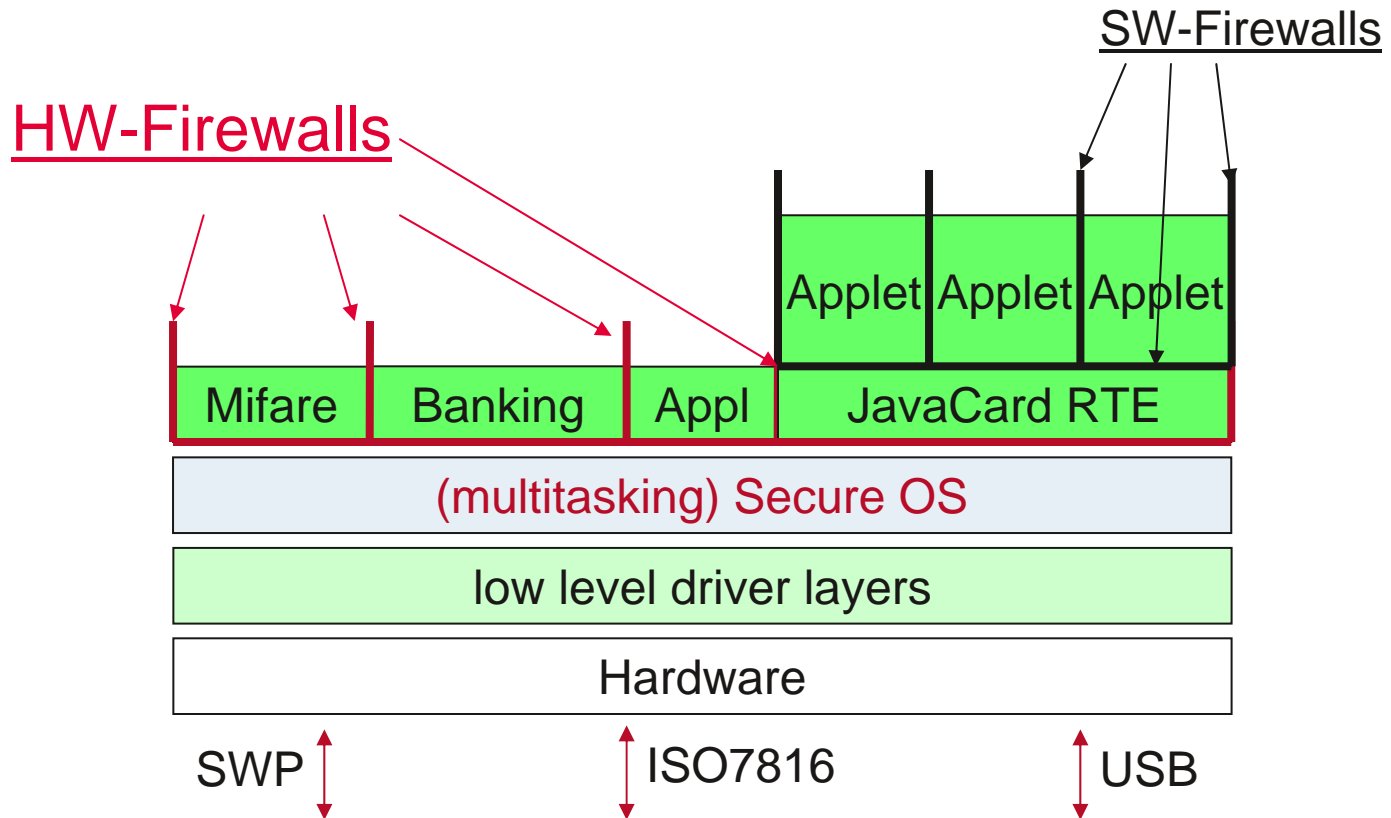


Mobile NFC

Secure the system with HW firewalls

Solution: Use Hardware Firewall which isolate each application

- Possibility to perform Composite Certification Java/Banking
- Possibility to secure in hardware and software banking application from applets download or OTA upgrades





We commit.
We innovate.
We partner.
We create value.



Never stop thinking