HOW SECURE IS MOBILE MONEY?

NOVEMBER 2010. NICK NORMAN

Consult Hyperion Overview
Mobile Payment Security Review
A Final Thought

Introduction to Consult Hyperion

Consult Hyperion has helped some of the world’s leading organizations to make the right technical and commercial choices within and around mobile, contactless and NFC-enabled payments and transit ticketing.

Consult Hyperion References (Mobile Money)

M-PESA

Consult Hyperion’s Role
- Commercial and Technical Infrastructure
- Solution Design and Implementation
- Market and Product Development
- Program Management
- Project Management
- Telecommunications
- Network Security

Consult Hyperion References (Mobile Contactless)

O2 Wallet Trial

Mobile Payment Security Review

The Threat

**Reputational Risk**
- Consumers perceive alternatives to be more secure
- Fraudulent transactions impact consumer take up

**Financial Risk**
- Fraudulent transactions consume investment funding
- Local Financial Regulator raises concerns about Security of Funds

Business fails

Electronic Payments introduce new types of Fraud

**Man in the Middle Attack**
- Fraudster harvests account information
- Uses them to divert funds into accounts they control

Mobile Money solutions based on SMS or USSD messages
- Data transmitted in clear text in parts of the network

Mobile Payment Security Review

Which Services are at Risk

Those that offer the Fraudster the highest ROI
- Salary/Social Payments
- Person to Person Payments
- Business to Business Payments
- Accessing Savings Accounts
- Mobile Banking
- Bill Payment

Business fails

Mobile Money solutions based on SMS or USSD messages
- Data transmitted in clear text in parts of the network

Considered Good Practise

- Encrypt Communications between handset and server
- Gold Standard in SIM Toolkit
- Limit Transaction Values
  - Maximum value per transactions
  - Maximum number of transactions in a period
- Host Service from Secure Sites
  - Dedicated team of security vetted staff

Mobile Payment Security Review

Remember the Consumer

The right technical solution can impact consumer adoption
- SIM v USSD
- PIN v One Time Password

One solution does not necessarily fit all
- The Bottom of the Pyramid v Employed
- Portfolio of Services
- Frequency of Use
- Value of Funds in the System

A Final Thought

Policemen in Afghanistan received a 30% pay rise

83% of users say not having M-PESA would have a “large negative impact” on their lives. (CGAP)

- More frequent payments
- Prices don’t rise when the bus arrives
- Less trips home
- The rise of the City Wife

Whatever we do must ultimately change people’s lives
For Further Information

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