Smart Cards and their Applications

- Mobile Communications
- Finance & Loyalty
- Physical access
- Healthcare
- Mass Transit
- Pay TV
- Parking
- Payphone
- Network Access & Information Security
From Mainframes to Smart Cards

70’s: 10,000’s

80’s: 1,000,000’s

90’s: 100,000,000’s

00’s: 10,000,000,000’s

70’s: 10,000’s

80’s: 1,000,000’s

90’s: 100,000,000’s

00’s: 10,000,000,000’s

Secure $10

Personal $1K

Network $100K

Computing $10M

70’s: 10,000’s

80’s: 1,000,000’s

90’s: 100,000,000’s

00’s: 10,000,000,000’s
What’s the opportunity in the US

- 180 million mobile phone subscribers
- 100 million internet subscribers
- 70 million wireless internet subscribers
- 920 million Financial Issued cards
- 100 million Pay TV subscribers
- 18 million Fortune 200 employees
- 2.7 million hardworking Federal Government employees
- 290 million tax paying American citizens
Market Drivers
Smart cards are seen as…

- EMV mandates
- Internet commerce
- Merchants requiring customer value proposition - loyalty,…
- Issuer costs increasing for customer acquisition
- Vision of multiapplication environment
- Conversion from TDMA to GSM standards accelerating
- PC manufacturers and software editors now integrate card support
- Increased focused on security post 9-11 (physical and logical)
- Identity fraud problem is seriously growing
- ICAO- Intelligent Passport
Factors Inhibiting Full Scale Adoption

- Switching costs to accept smart cards
- Legacy infrastructure
- Competing standards for mobile technology
- Lower telecom costs decrease the benefit of off-line authorization
- Fraud costs are “small” for issuer
- Business arrangements among multiple application suppliers not defined
- Disparate os support for smart cards

*Plug-n-play interoperability between all the components is required for the industry to reach it fullest potential*
What is interoperability?

- Any card in any device for any application

and why is it important

- Remove possible barriers to adoption
- Share computing platform within verticals
- Broaden acceptance and increase use and functionally
- Expand market opportunities
- Bring smart cards to mainstream
- End users enjoy the convenience and security
- The world is better!
Interoperability Universe

Complimentary Technology
- Biometric Systems
- PKI

Service Providers
- Consulting
- Integration

Enterprise Servers with different operating systems
- Hardware
- Software