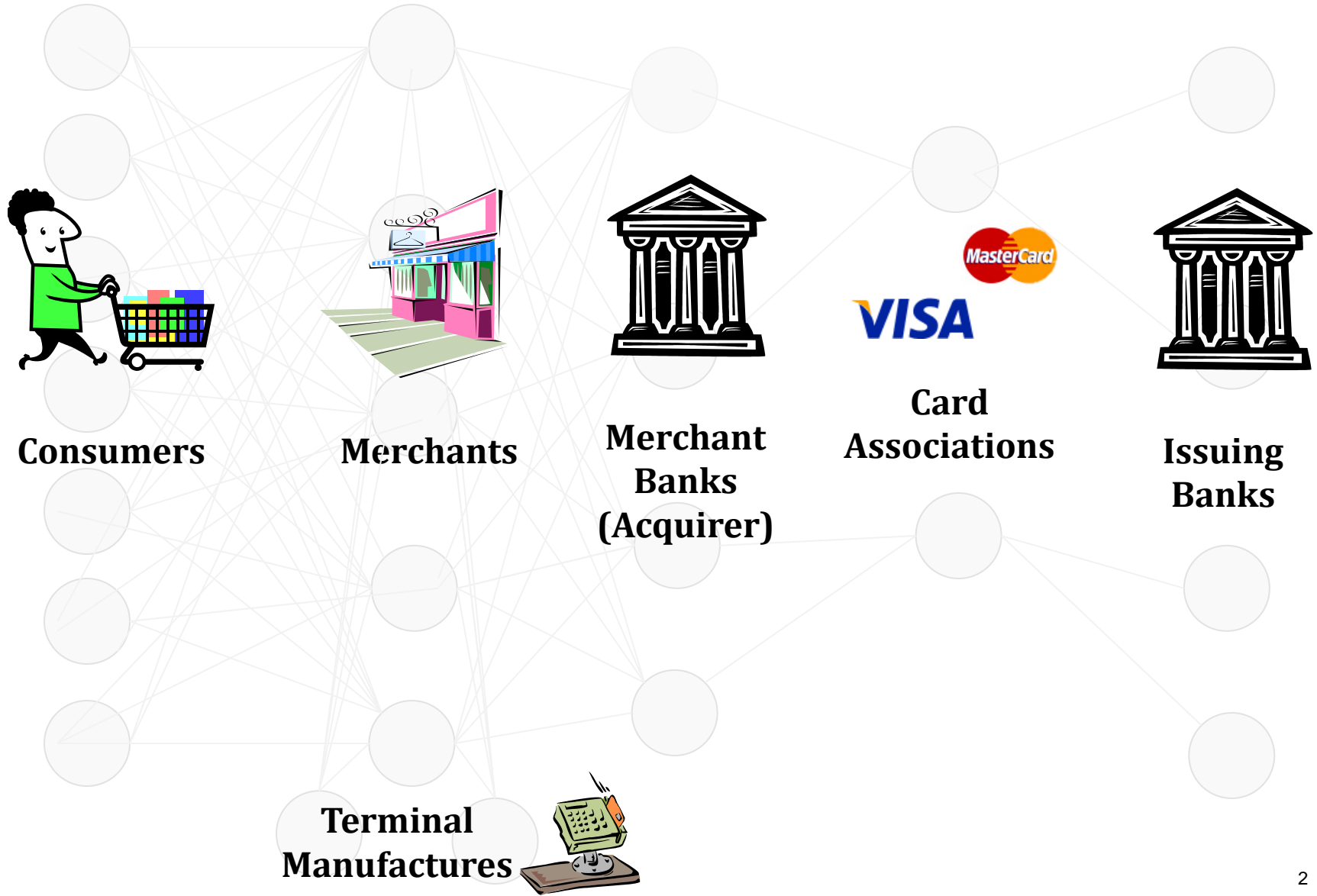


SIX SIDED NETWORK



Struggling to reach momentum



- Between 2003 and 2005 all major cards associations launch their version of contactless card
 - All follow the similar technical standards, but use different brand names



- 93.4% of US consumers have a payment (credit or debt) card
- As of January 2010 only 26% of consumers hold a contactless credit card
- Of consumers who are aware that they have received one, only 33% use it frequently
- Contactless terminal are available only in 80,000 locations across the US
 - But less than 1% of all merchants
 - Dominated by nationwide convenience-sector chain retailers
 - McDonalds, Burger King, Wal-Mart, CVS, Rite Aid, 7-Eleven, BP, AMC Theaters, and more

Players and Incentives



Consumers

Speed and Convenience

- No swiping, signing, pin
- Shortest form of payment
- Less lines

Cash alternative

Security

- Keep card in hand
- Less chances of losing a card
- Can be more secure

Alternate Form Factors

- Keyrings
- Phone stickers

Personal Hygiene



Merchants

Faster Transactions

- Up to 63% faster
- Increase number of transactions

Larger Transactions

- 15 to 30% increase in average spend

Loyalty

- 14% of consumers seek out contactless venues
- Increased customer satisfaction

VISA Card Associations



Banks



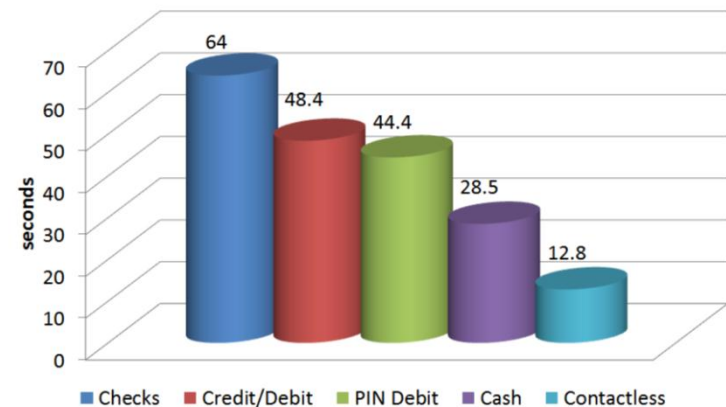
Growth Potential

- A chance to bite the huge cash transactions share
- Transaction (Interchange) Fees
- Finance charges

Card Loyalty

- Avg cardholder has 3.5 cards
- Brings card to top of wallet 77% of the time

Average transaction time by category



TODAY



Fraud and Liability

Magnetic Strip



USA

No encryption
Trivial to Copy

Smart Card



Europe

**Strong Encryption between
card and terminal**
Impossible to copy

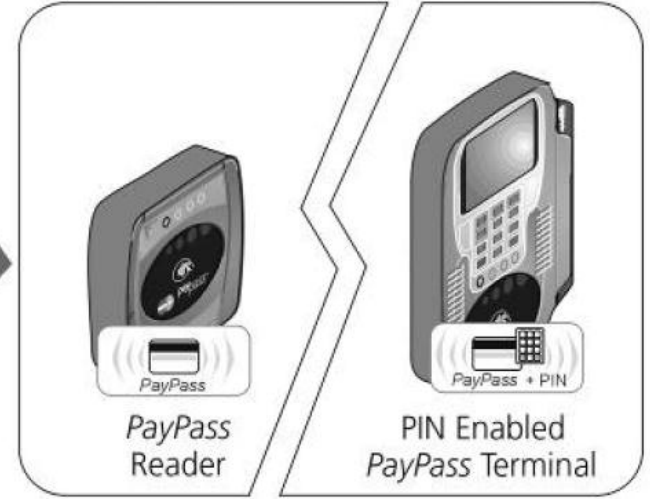
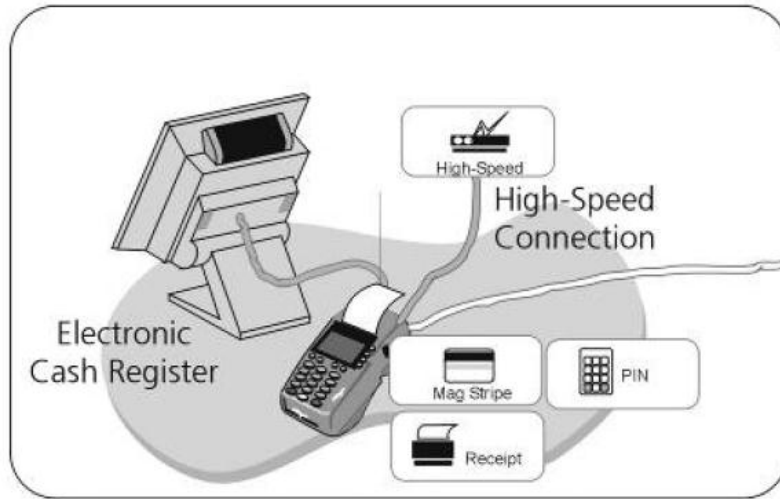
Backend security

Detect fraudulent patterns

Cardholder: **Not Liable for
Fraud**

Liable for Fraud

Terminal Infrastructure



Point of Sale Equipment

- RFID Terminal
- High Speed Connection
- Electronic Cash Register
- Fast Receipt Printer
- Training

Network Backend

- Security compliance (PCI DSS)

For most companies:
Part of POS Equipment Refresh

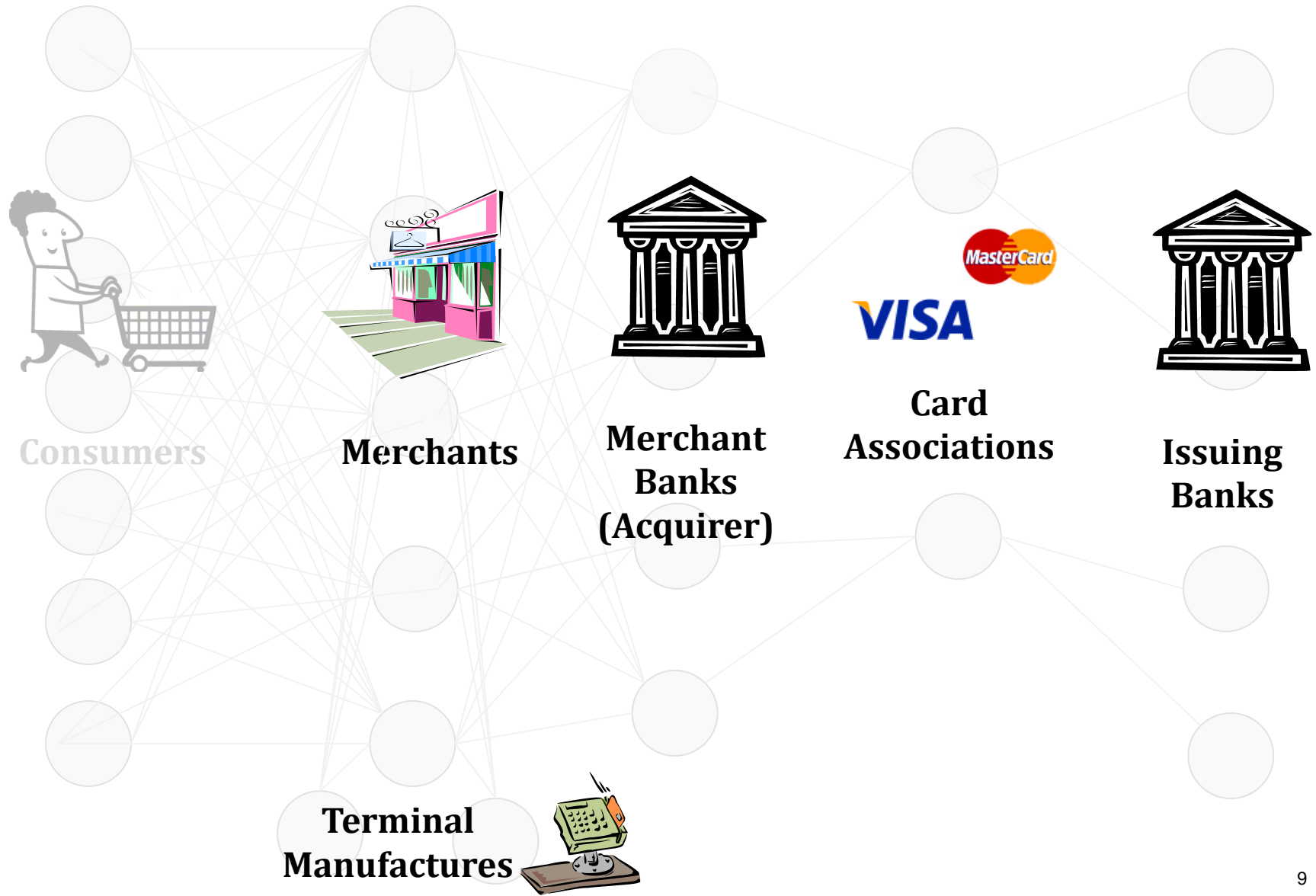
But why not upgrade security at the same time?



Bank Security Standards

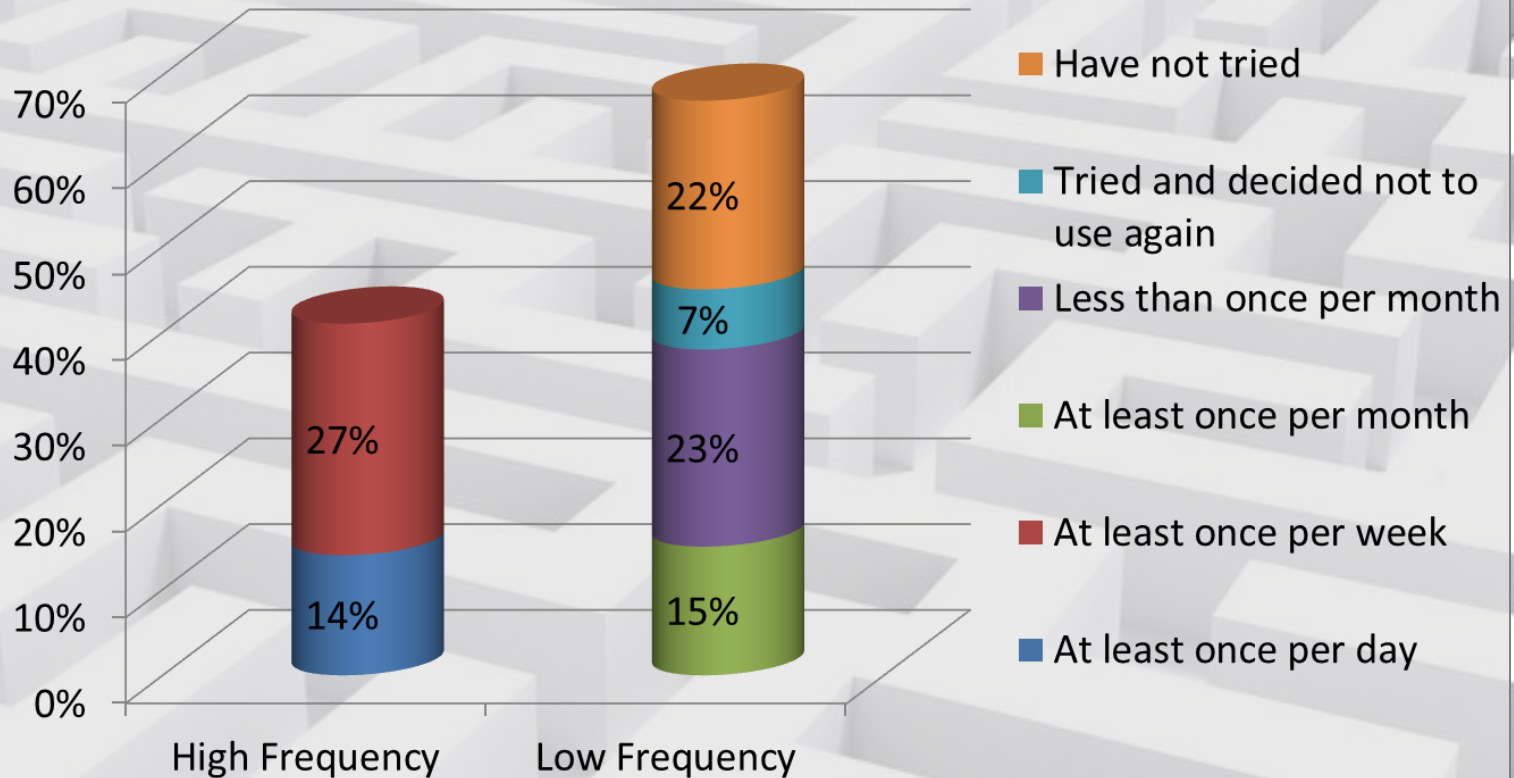
- Visa and Mastercard have implemented both Mag Stripe and EMV based contactless payments
- **But, each bank can set its own security standards!**
 - Even under the Visa and MasterCard name/branding
- This was not differentiated to consumers, who believe that all contactless cards can be created equal
- Contactless can be a lot more secure than it was shown on the Today Show.
- **Big tactical mistake to launch with weak to nonexistent security**
 - **Tarnished the contactless trust**

Network Externalities and Cross Subsidy



Consumer Awareness

67% of online shoppers who are aware they have received a contactless card are either low frequency users or have not even tried to make a contactless payment.



Consumer Awareness

Awareness

In 2009, 41% of online consumers were unaware of contactless payments

Approximately 100m cards have been issued in the US, but only 20m people are using them

Card Use

How does it work?

Won't the machine confuse the cards in my wallet?

Why do I still have to provide a PIN or signature?

Merchant Acceptance

Where can I use my card?

Will it also work like a regular credit card?

If the POS is branded with one card, can I use another?

The Future

RFID

•New Form Factors

- Visa offering RFID stickers for mobile phones
- Visa also offering keyring form factor
- Mobile phones built in with NFC
 - (simply RFID in cell phones)
 - Nokia, Google, Apple? working on



•Not over credit card networks

- Bling Nation



Non-RFID

•Mobile space new payments options

- Offer payment some way via internet/cell network
- XIPWIRE
- FaceCash



We are on the verge of a new milestone in payments evolution

