Contactless Identification Technologies – Types and Applications

Manuel Albers
Director of Business Development
Identification Products, Americas
Philips Semiconductors



Semiconductors - Identification

- Division of Royal Philips Electronics
- Top 10 semiconductor supplier
- Turnover of >\$5 billion (2003)
- More than 100 sales offices in 50 countries
- 18 manufacturing & assembly sites, producing 62 million Integrated Circuits (ICs) daily
- No.1 in contactless Identification Technologies with about one billion contactless ICs sold



Identification Technologies:

- Connecting PEOPLE to Information, Entertainment and Services.
- Identify and track GOODS.

The two Types of Identification Technology

Contactless Smart Cards

To securely identify PEOPLE

To grant PEOPLE access to services

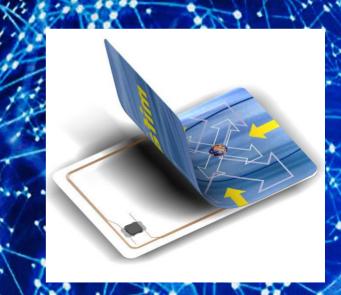
RFID

To identify and trackGOODS



Contactless Smart Card Technology – Granting People Access to Services

- Typically a card form factor that carries sensitive, personally identifiable data or values
- Combination of security and convenience
- Short operating distance (typically 3-4")
- Moderate to strong security features
 - Mutual authentication of card and reader
 - Advanced encryption schemes
 - Password protection
 - Advanced chip design, incl. security counter tempering
- Average cost of a single card from \$1.00 to >\$20.00



Contactless Smart Card Technology – Granting PEOPLE Access to Services

Leading applications include:

- Public Transportation
 - More than 300 cities world-wide,>500M cards issued
- Payment
 - VISA, MasterCard, AmEx
 - Loyalty Programs
- Access Control
 - Physical Access
 - Car Access/ Immobilization
 - Event Ticketing
- ID Cards and Passports



RFID Technology – Identify and track GOODS

Typically a Tag or a Label form factor

 Carries a unique identification number, plus optionally read/write memory

Low to moderate security features

- Memory write protection
- Basic encryption schemes
- Destroy-feature
- Medium to long operating distance (up to 20 feet)
- Typically low cost, ranging from a few cents to a couple of dollars (depending on the application)





RFID Technology— Identify and track GOODS

Leading applications include:

- Supply Chain Management
 - Manufacturing automation
 - Warehouse automation
 - Parcel services
 - Baggage tagging
- Asset Management
 - Library automation
 - Kettle management
 - Laundry automation





Contact Information, Questions?

Please email me at manuel.albers@philips.com



