

PHILIPS

Contactless Identification Technologies – Types and Applications

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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





shopping

entertainment

banking

information

messaging

logistics



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 track **GOODS**



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?

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