

New Trends For Your Family  
Entertainment Center  
RFID Technology Overview

IAAPA Show 2006

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# What is RFID?

- RFID = Radio Frequency Identification
- An electronic circuit or chip becomes an interactive item tag when attached to an antenna
- When combined with software and a reader this chip can be related to a specific identity and location
- This information can be stored and updated during the life of the RFID chip

# How Does It Work?

- Strategically placed readers send a signal to the RFID Tag and it responds by uploading its identity and stored data
- The major components are:
  - RFID Tag
  - RFID Reader
  - Application Software
  - Network Software-Middleware

# Different Systems Implementations

- RFID-example-"E-Z Pass"
- RFID Near Field-example-Mobil "Speed Pass"
- WI-FI-example-Starbucks Internet Cafe
- Combinations
  - RFID/Barcode
  - RFID/WI-FI

# What Are The Benefits Of RFID

- No line of sight or contact required information transfer
- Able to store and retrieve data to improve decision making process
- Security and authentication of products and services
- Improved accounting and financial control

# RFID Versus Barcodes

- Advantages

- No line of sight required
- Object does not require orientation
- Greater data storage capabilities
- Can be constantly updated or changed

- Disadvantages

- Cost of chips or tags
- Cost of system infrastructure
- Electronic interference issues

# Where Is It Used Today?

- Supply chain tracking-Wal-Mart & DoD
- Positive Identification- Hospitals/Prisons
- Highway Tolls
- Payment Systems
- Secure Entry Systems
- Asset tracking

# Possible FEC Applications

- Secure Admission
  - Can not counterfeit
  - Deters fraud and theft
- Easy Payment
  - Convenient
  - Good paper trail
- Cashless Purchase System

# Possible FEC Applications

- Tracking people and habits
  - Demographics for marketing
  - Crowd control
  - Employee accountability
- Play Game
  - Replace tokens
  - Lower labor costs
  - Convenient and easy to play

# Possible FEC Applications

- Rides-queue management and admission
  - Labor saving
  - Improved ride usage and people management
- Food and Concessions
  - Cashless convenience and faster service
  - Total Accountability
- Accounting Systems
  - 100% tracking of transactions

# Information Resources

Information on these subjects were collected from various sources including these websites for future reference:

[www.highjump.com](http://www.highjump.com)

[www.contactlessnews.com](http://www.contactlessnews.com)

[www.cardtechnology.com](http://www.cardtechnology.com)

[www.nfc-forum.org](http://www.nfc-forum.org)

[www.fdp.com](http://www.fdp.com)

[www.rfid-101.com](http://www.rfid-101.com)

[www.rfidjournal.com](http://www.rfidjournal.com)