

RF-Enabled Access Control

An Overview

History of RFID in Access Control

- Early Access Control Systems
 - Architecture
- Early Access Control Cards
 - Magnetic Stripe
 - Barcode
 - Barium Ferrite
 - Optical Infrared
 - Wiegand Wire
- Issues with Early Access Card
 - Easy to copy
 - Wear and tear
- Early Commercial Proximity Card Readers
 - “Contactless” Card Readers
 - Schlage Electronics
 - Anti-Shoplifting tags

RFID in Access Control

- Digital Cards
 - Wiegand Protocol becomes the standard
 - Indala
 - HID Proximity
 - COTAG
 - Battery powered
- Issues with Cloning Cards
 - Cloning
 - The “Gecko”
- Smart Cards
 - iClass (ISO 15693)
 - Mifare, DESfire (ISO 14443)
 - FIPS 201 Standard (ISO 14443)
 - TWIC

RFID in Access Control

- Benefits of Smartcards in Access Control
 - Better security
 - Information on the card
 - Biometric Data storage
 - JPEG Image
 - Debit/Credit
 - Smarts on the Card/Reader
 - Less reliance on panels more intelligence on the card
- Issues with RFID
 - Cost
 - Clones
 - Hacking
 - Duplicates
 - Compatibility with existing systems
 - Privacy and legislation