

# PassFree

Public Key Cryptographic Radio  
Access Control System

By Cheyenne Software, Inc.

# Agenda

- State of the Art
- Invention
- Features
- Markets
- Summary

# State of the Art

- Mechanical lock and key
- Electromagnetic credit cards
- Radio car remote keys
- Stationary fingerprint scanners
- Plaintext social security numbers
- Passwords and security questions

# Invention

- Prevents lock-picking
- Prevents copying of keys and cards
- Prevents fingerprint lifting
- Obsoletes reliance on plaintext tokens
- Simple and complex lock & key relationships are possible
- Increases privacy & security of users

# Features

- Sensitive information never leaves the key unencrypted
- Locks and keys communicate by radio
- Locks can power nearby low-energy keys, high-energy keys supply their own power source
- A key can be the size of an iPod Nano or written as software for iPhone/Blackberry

# Metaphysical Features

- **Meaningful** – makes life better
- **Deep** – does one thing really well
- **Intelligent** – versatile and forward-compatible
- **Elegant** – simple and intuitive

# Markets

- Physical security – home, corporate, vehicles, any locked container
- Personnel security – building and room access, action authorization
- Financial authorization – credit card point of sale, bank ATM, online transactions
- Computer access cards and cell phones
- Identity verification – public offices, notaries, first meetings, passports

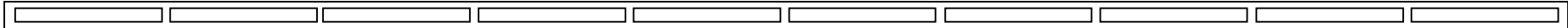
# Market Size

- 13 million contact-less credit cards and key fob devices already exist
- 225 million cell phones in USA
- 61% of consumers ages 19–34 would use contact-less cards, according to VISA research
- 17 million new cars sold every year
- Over 1,000,000 home security systems installed
- 60 million passports will be issued/renewed in the next 10 years (~20% of Americans have passports)



# Summary

- Invention enables people to use PKI wherever they are; not just at work desk
- Market for applications is large
- Prototype development in progress



# PassFree

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