

**RFID & Privacy
in the Information Age**



Welcome

Today's Agenda



- Welcome and Introductory Remarks
- Opening Address by Professor J. Clark Kelso
- RFID Technology and Applications
- Questions and Answers
- Luncheon with Keynote Speaker –
Senator Joe Simitian (D - Palo Alto)
- Real ID and Evolving Federal Initiatives:
What is the Impact on California?
- California User's Panel
- California Legislation / Policy
- Closing Remarks
- Reception

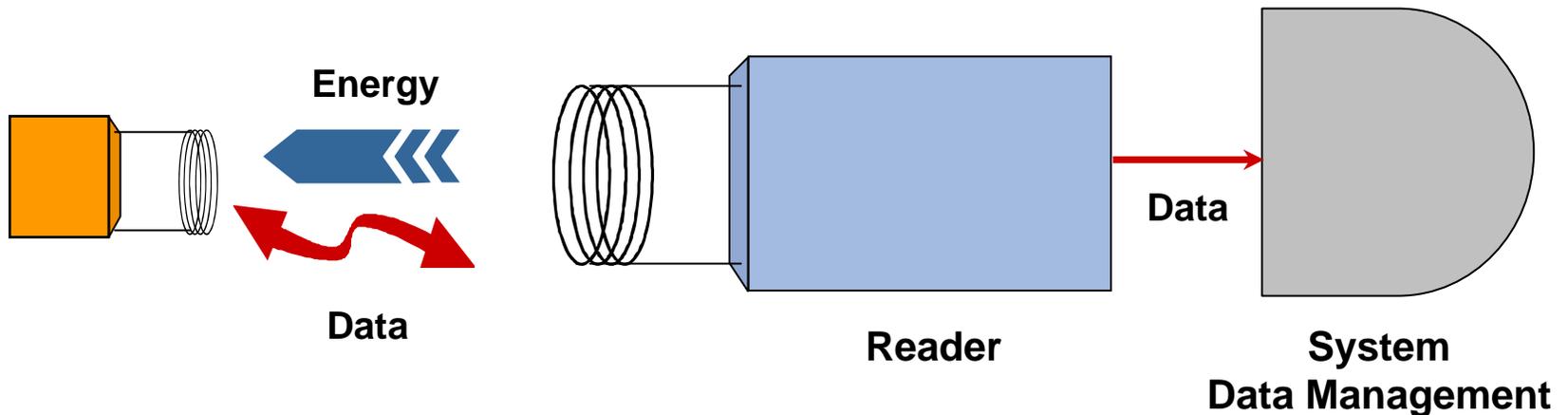
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RFID Technology & Applications

Radio Frequency Identification Device

A transponder is a passive or active electronic device which transmits information when activated by an electromagnetic field.



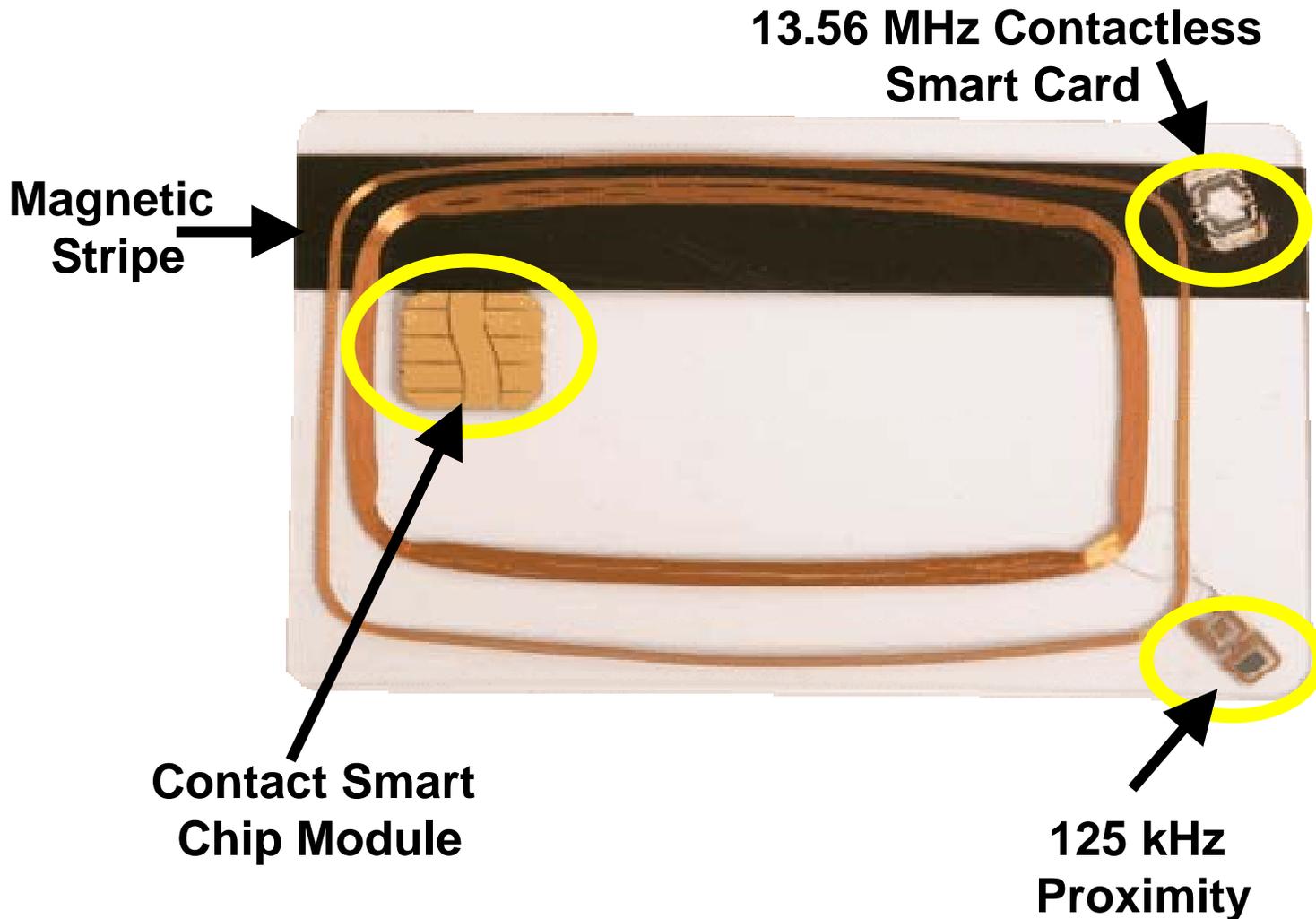
RFID 101



Radio Frequency Identification DeVICES

- RFID has multiple operating frequencies.
- Low frequency is ~125 kHz.
 - A read only technology that uses a unique, random serial number.
 - Primary use for this frequency is physical access control.
- High frequency is ~13.56 MHz.
 - A read / write technology that uses a unique, random serial number.
 - Users may write data to the card.
 - Primary uses of this frequency today are mass transit and cashless vending.
- Ultra-high frequency is ~2.5 GHz.
 - The primary uses of this frequency are toll road tags and asset and pallet tracking.

Multi-Technology Cards

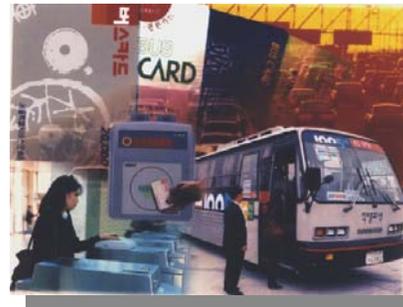
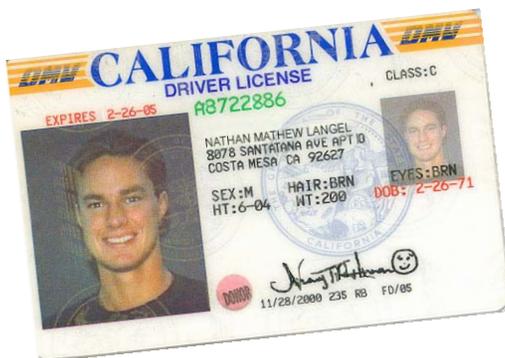
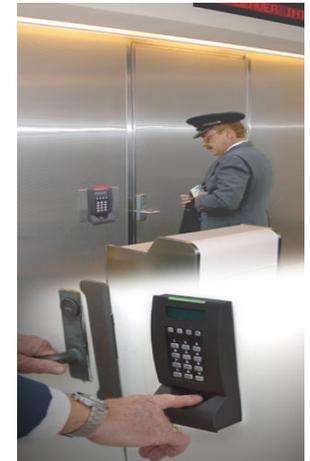
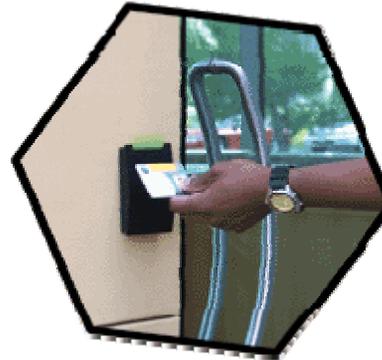


RFID

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Security... Safety... Speed
Convenience... Quality...
Assurance...
Cost Reduction...
Peace of Mind



RFID Users

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Large users of RFID in California include:



Market Segments

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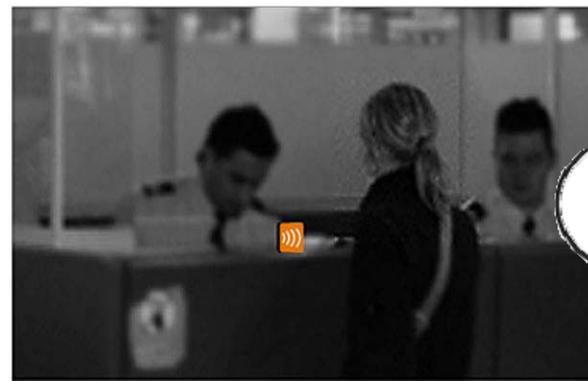
Industry & Logistics



Access & Security



Food & Animal



e-Documents

Industrial Applications

RFID can
be used to
manage gas
cylinders and
beer kegs!



ID Your Wheels!

RFID offers protection and traceability.



Record Keeping

Use RFID to automate the collection of detailed maintenance and inspection records.





Pallet and Asset Tagging

- Tag pallets for effective inventory control and management.
- Locate assets quickly and easily.



Vending Machines

Cashless payment
at vending machines
is convenient and
secure!



Cashless Dining

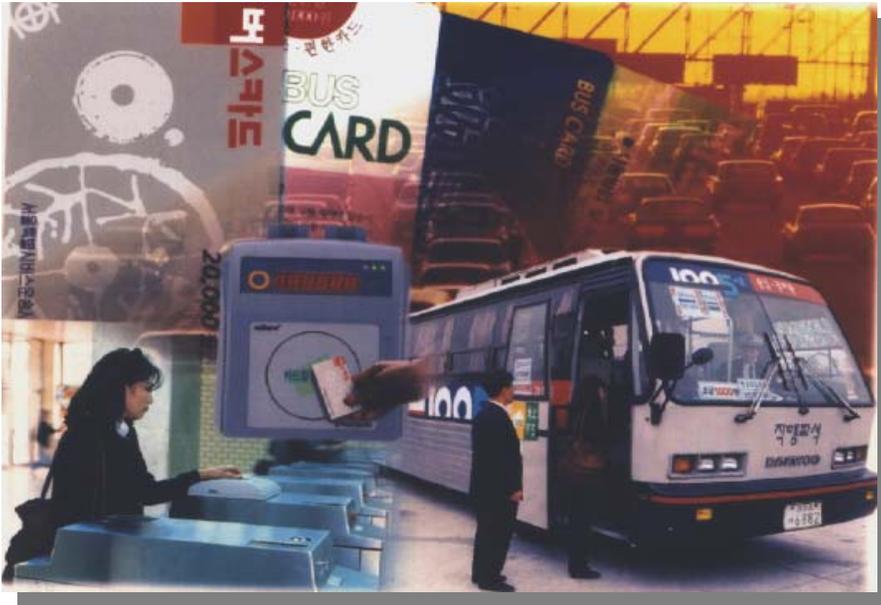
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HID



Public Transportation

Mass transit providers use RFID for convenience and security.





Automated Toll Collection

EZ TAG means...

No need to carry change

No need to stop...just keep on driving

It's easy...it's convenient!

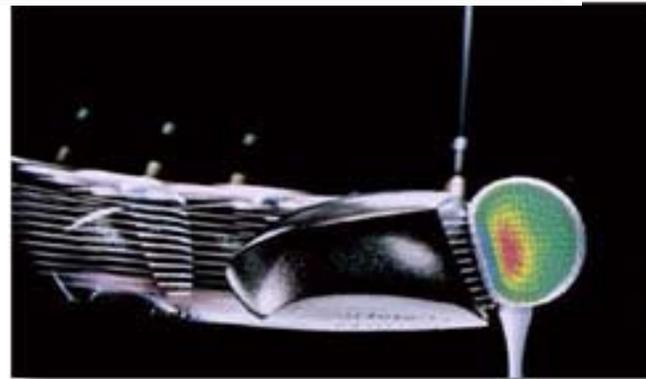


Improve Your Golf Game

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HID

RFID for the
golf enthusiast!

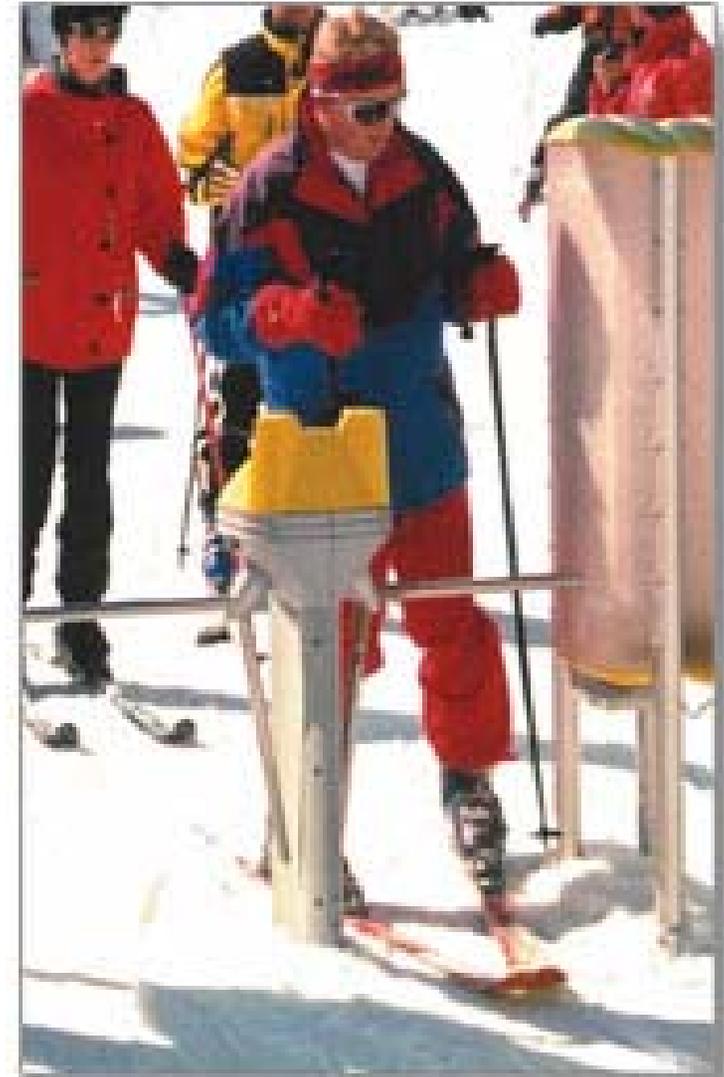


ID on the Ski Slopes

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Ski lifts and ticket systems

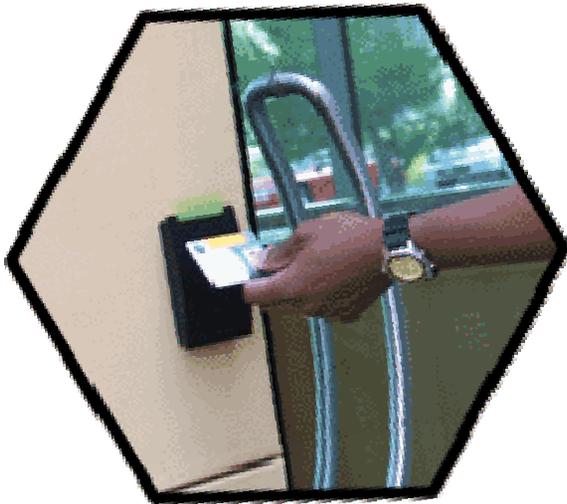


Access Control

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Secure building access - access is gained through the use of proximity or contactless smart card technology.



Logical Access

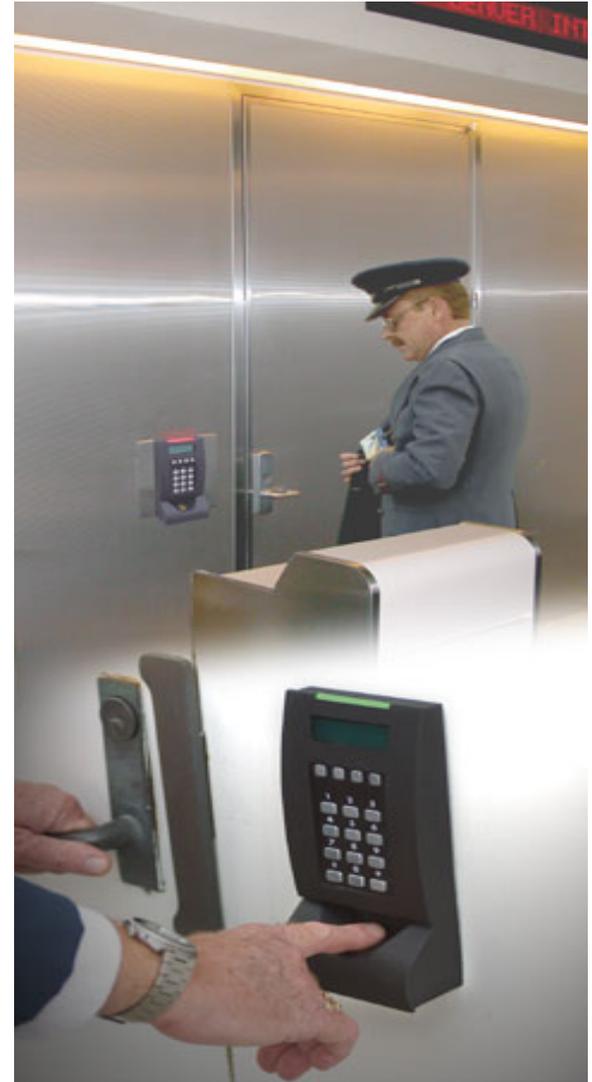
Gain secure access to the PC or the network!



Biometrics

Contactless smart cards allow for the on-card storage of biometric templates.

Increases privacy as templates are not stored in a central database.



HSPD-12



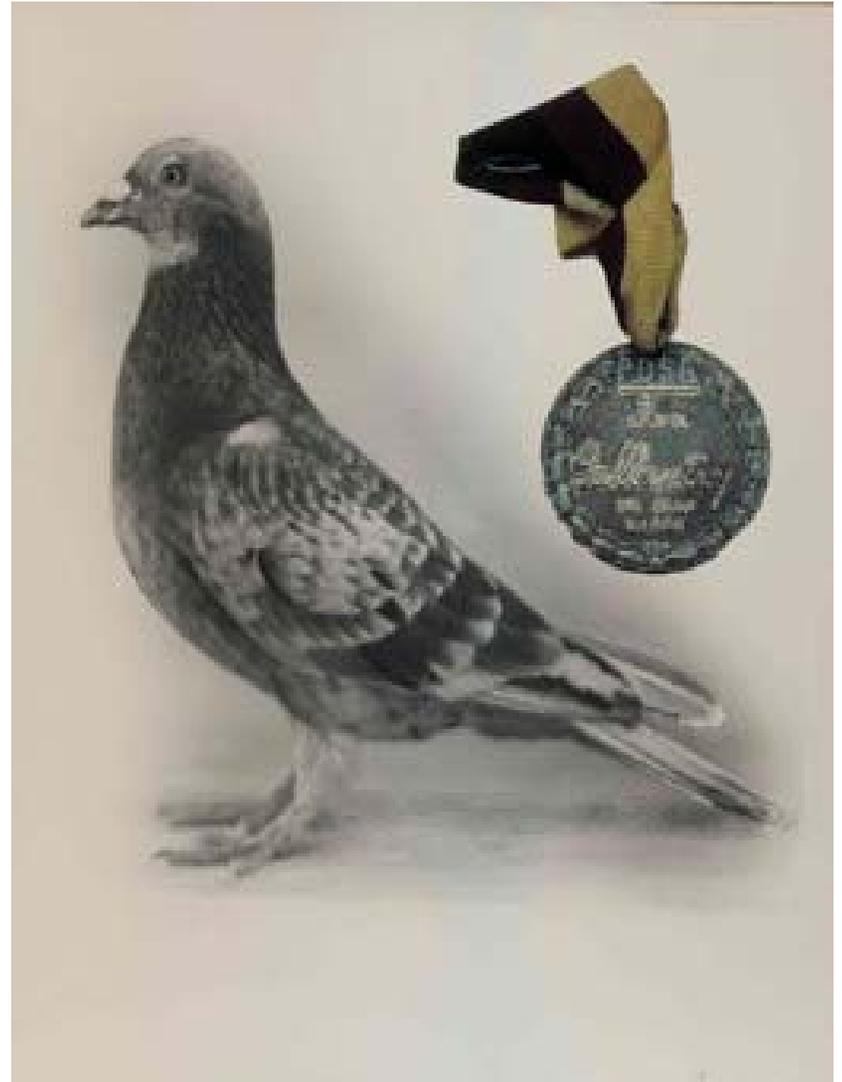
Homeland Security
Presidential Directive 12
(HSPD-12) requires the use
of a common identification
credential for both physical
and logical access to
federally controlled facilities
and information systems.



Going to the Races

Win, place or
show..

The technology
knows...



The Bumble Bee

The bees are “fitted” with RFID tags that are no larger than a half a grain of rice.

The bees recognize and become attracted to the smell of TNT, a by-product of land mines.



Automated Feed Systems

RFID tells automated feed systems how much food to dispense to each individual animal.



Life As a Dog or Cat

RFID helps to quickly reunite lost pets with their owners.



Water Park

RFID and electronic maps help you to quickly locate your child at an amusement park.



Medical Uses



- Ensure positive patient identification.
- Streamline operations.
- Control medication doses.
- Comply with HIPPA regulations.



Infant Abduction Prevention

Protect newborns
from switching
and abduction.





RFID Provides...

Privacy

Security

Convenience

Peace of mind

Economic Development