Lesson Title:
Introduction to RFID Applications

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RFID application categories

- Item management
- Anti-counterfeiting
- Physical access control
- Travel documents
- Finance & banking
- Sensors
- Human identification
- Animal tracking
Item management

• Railroad
• Supply chain
• Inventory control
• Equipment control

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Physical access control

• Automobile on toll roads
• Automobile
• Building access
• Garage access

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Travel documents

• E-Passports
  – Oct. 2005
  – HF
  – ISO 14443

• DHS Peoples Access Security Services (PASS) card
  – Low-cost alternative to passports to meet the requirements of the Western Hemisphere Travel Initiative (WHTI)
  – U.S. citizens, as well as for Mexicans and Canadians
  – UHF

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Finance & banking

- American Express
- Mastercard
- Visa

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Cross Country Race

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VeriChip

- Human implantable RFID tag operating at about 134 KHz because at these frequencies the RF can penetrate mud, blood, and water
- About the size of uncooked grain of rice
- Oct. 2004 – FDA ruled serial number in VeriChip could be linked to healthcare information
- Healthcare applications
  - Implanted medical device identification
  - Emergency access to patient-supplied health information
  - Portable medical records access including insurance information
  - In-hospital patient identification
  - Medical facility connectivity via patient
  - Disease/treatment management of at-risk populations (such as vaccination history)

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Animal tracking

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Pet Identification

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Product counterfeiting countermeasure

- Pharmaceutical
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