RFID Crash Course
Data Transmission
Project Overview

Create a multipurpose RFID tool
- Read cards
- Spoof cards

Stretch Goal
- Program blank cards
- Increase portability
High Level Block Diagram
1: Generate 125 kHz signal
2: Read bits from RFID signal
2: Decode FSM

Diagram showing the flow from IDLE to TRIGGERED, then to CONST1, PERSONAL, and finally to CONST2. Arrows indicate transitions and labels show signal detect, 30 zeros, 22 bits, 33 bits, and 139 bits.
3: Generate spoofed signal
3: Spoofing FSM
Timeline

Sat 11/9  Analog frontend prototype
          Read raw bits from card
Sat 11/16 Add ability to store ID numbers
          Basic BPSK signal generation
Sat 11/23 Open a card-access controlled door
Sat 11/30 Stretch Goal: Generate signals to write blank ID cards
Sat 12/7  Stretch Goal: Increase portability and final touches