Presentation Topics

# Slide 1 (Project Intro)

* What is a TNC
  + Device that takes in packets from a dummy terminal and converts to an audio signal for radio transmission
  + Used by HAM radio community for data easy data transmission implementation
* Why are we designing a TNC
  + Our project is a starting point for further development within the C.A.P.E. research group
  + Project should be well documented. Code should be written with modular intentions
* Design requirements (probably not)

# Slide 2 (Meat and Potatoes: Served Light)

* AX25
  + Packet structure
  + Bi-modal frequencies (1200Hz/2200Hz)
  + Baud Rate
  + Flags
* KISS
  + Packet structure
  + Flags
* AFSK
  + Waveform shape
  + Waveform meaning

# Slide 3 (Current Progress)

* Receiving Code
  + Waits in receiving until signaled to transmit
  + Count frequencies coming from radio
  + This uses microcontroller external interrupt for high precision
* Transmission Code
  + Using onboard DAC, AFSK waveform is output
  + Baud rate is controlled by a timer interrupt for high precision
* Receiving Circuit
  + BJT voltage amplifier circuit tuned to trigger hardware interrupt on controller
  + Output is filter with Low-Pass Filter
  + LED indicates Receiving status
* Transmission Circuit
  + MOSFET controls PTT line from radio
  + LED indicate transmission status

# Slide 4 (Remaining Effort)

* Finish receiving logic
  + CRC calculation
  + Add more packet fault detection
* Finish transmission logic
  + AFSK waveform currently has voltage blips from software
  + Add hardware for scaling down a 3.3Vptp AFSK signal