Capstone Meeting Notes 11/26/14

* Next Meeting 6:30 Tuesday 12/2 in lab 25-01
  + Will talk further about requirements
  + Possibly assign early tasks for December
* Project overview review
  + Currently record up to 50 kHz
  + 2 Channel
  + Cheap
  + Choose sample rate
  + Choose file names
  + Battery powered
  + Will be using board from current recorder
  + Want separate microcontroller unit
    - May combine boards
    - Must make sure it will fit in payload area
  + Goal is to have 4 days of continuous recording (may not be done consecutively)
  + Interface to configure microcontroller
    - Would then be autonomous
    - Low power
      * Configure sleep mode?
  + Current disadvantages
    - Can not program scheduled recording times
      * Losing data time
    - Only accepts up to 32 GB of data

Meeting Minutes 12/2/14

* Informal Requirements
  + Slide show will be provided
  + Button interface with microcontroller
  + Soldering connected is important asap
  + Microcontroller
    - Low power
    - 1 SD card can hold about 1 day. MUX 4 SD cards
      * power to support 4 days of continuous
        + including sleep mode power
        + Deployment of up to 30 days

4 days continuous over this time frame

random/flexible scheduling

* + - Hardware testing/debugging
  + Laptop for interfacing with board
    - Synchronized time
  + Mounting brackets
    - CAD drawings and 3D printing
  + Package less than 1/2 kg
* Tips for getting started
  + Microcontroller
    - Sleep and wake-on-interrupt
      * Latch GPIO outputs while asleep
        + Possible latch GPIOs for MUX
    - Interface for RTC
    - Nonvolatile memory
    - PC interface
  + Look into RTC on tascam, volatile or nonvolatile
  + First step is connector to tascam to provide interface with tascam
  + Button interface. One transistor per button