Senior Design Meeting Agenda — Microgrid Team

10:00AM Thursday, April 8th, 2021
205 Stinson Remick
Meeting Leader: Dan
Secretary: *Maia*

1. ## PCB Being Printed
2. ## UART Communications
   - Inconsistent clock
     - Tested w/multiple boards, computers, PICkits, codes
     - Working on changing clock divide
       - Changing PLLODIV or REFODIV doesn't fix the error
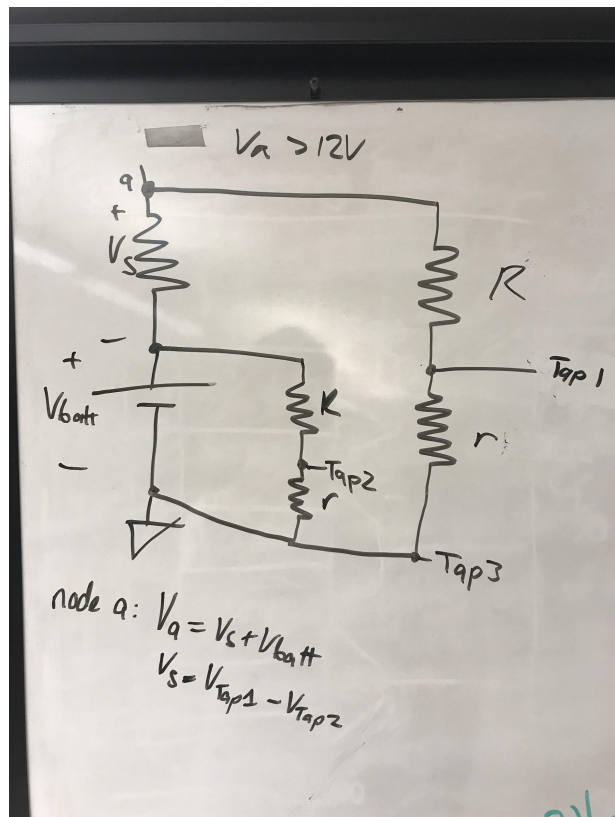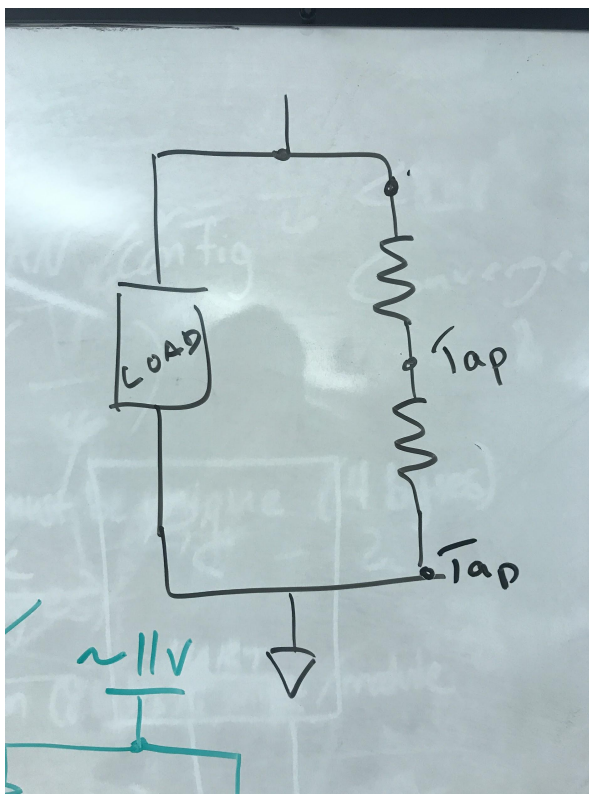3. ## Analog Voltage for Power Monitoring

Figure: Load Power Monitoring (left), and Battery/Storage Monitoring (right)

- Using 3 analog inputs for battery and generation monitoring
- Using 2 analog inputs for load monitoring
- Configured PIC32's analog-digital converter
  - Max input impedance of 2.5 kOhm

- - Tested with 150 Ohm load, divider of 247 kOhm/2.47 kOhm
  - Converting ADC output to fractional value

Fractional (FORM<2:0> = 010)

0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	d11	d10	d9	d8	d7	d6	d5	d4	d3	d2	d1	d0	0	0	0	0

4. UART to Display System
- Board Side: how to organize data package & sent using a char*
- Display Side: continuously reading in & interpreting packages, sending data to display GUI

5. System Build
- Time scheduled for Friday, April 7th to begin system build & work on UART communication