SCEL
Smart Campus Energy Laboratory

Team Bumblebee
Spring 2018 Preliminary Design Review

Kayla Amano, Alex Moore, Rebecca Rupley, Alex Wong

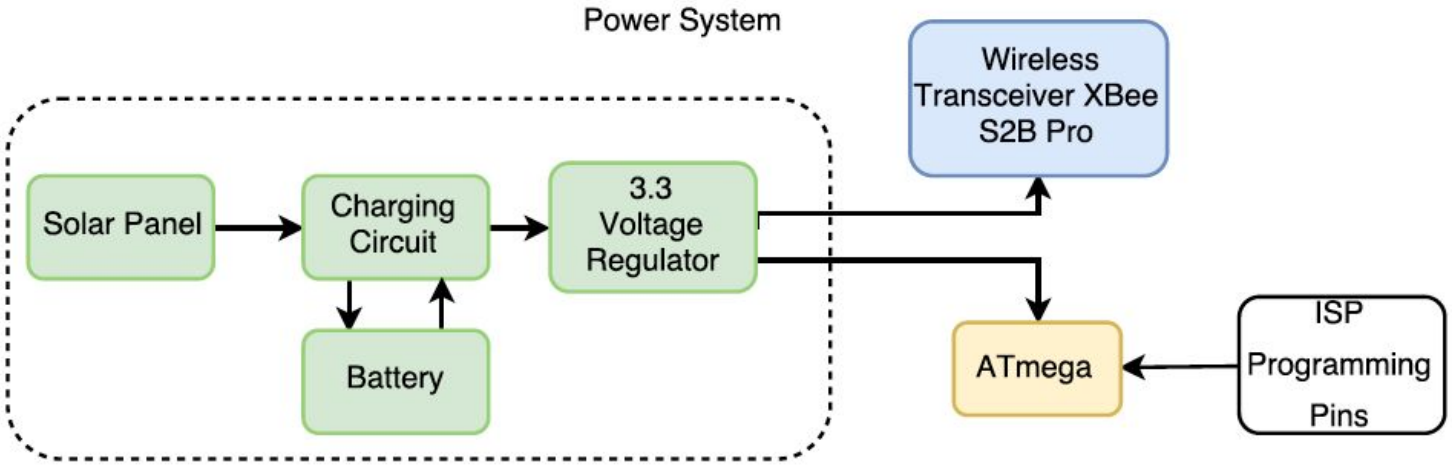
SCEL
Smart Campus Energy Laboratory

Presentation Overview

- Block Diagrams
  - Power
  - Signal/Communication
- Team Progress
- Schematic
- PCB
- Problems
- Gantt Chart
- What Needs To Be Finished

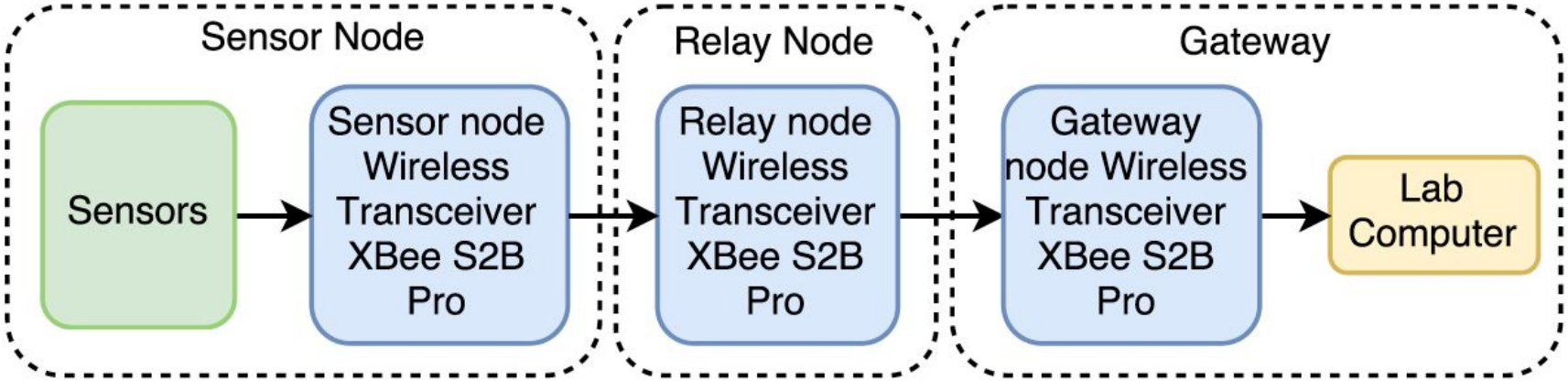
SCEL
Smart Campus Energy Laboratory

Block Diagram (Power)



SCEL
Smart Campus Energy Laboratory

Block Diagram (Signal/Communication)

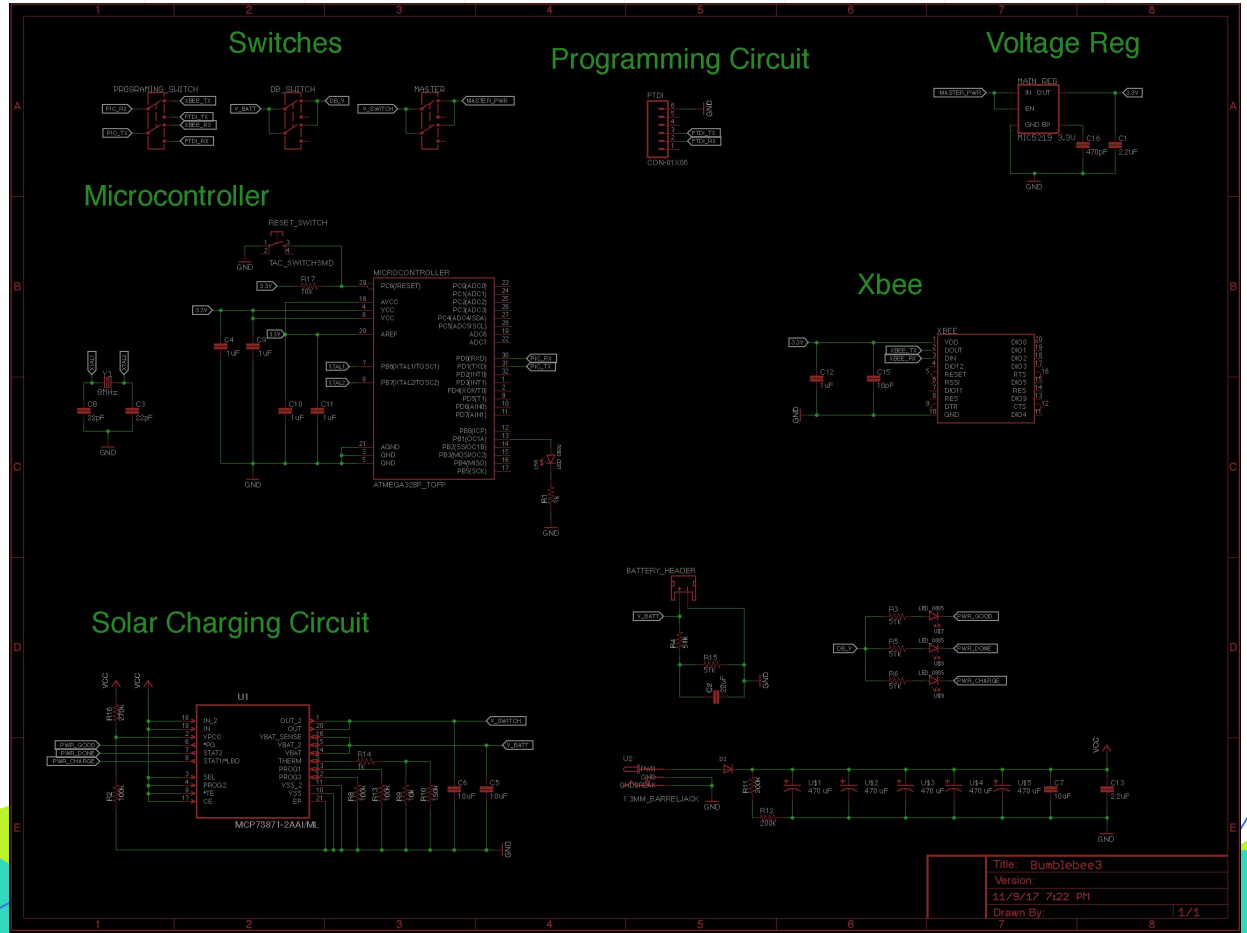


SCEL
Smart Campus Energy Laboratory

Team Progress

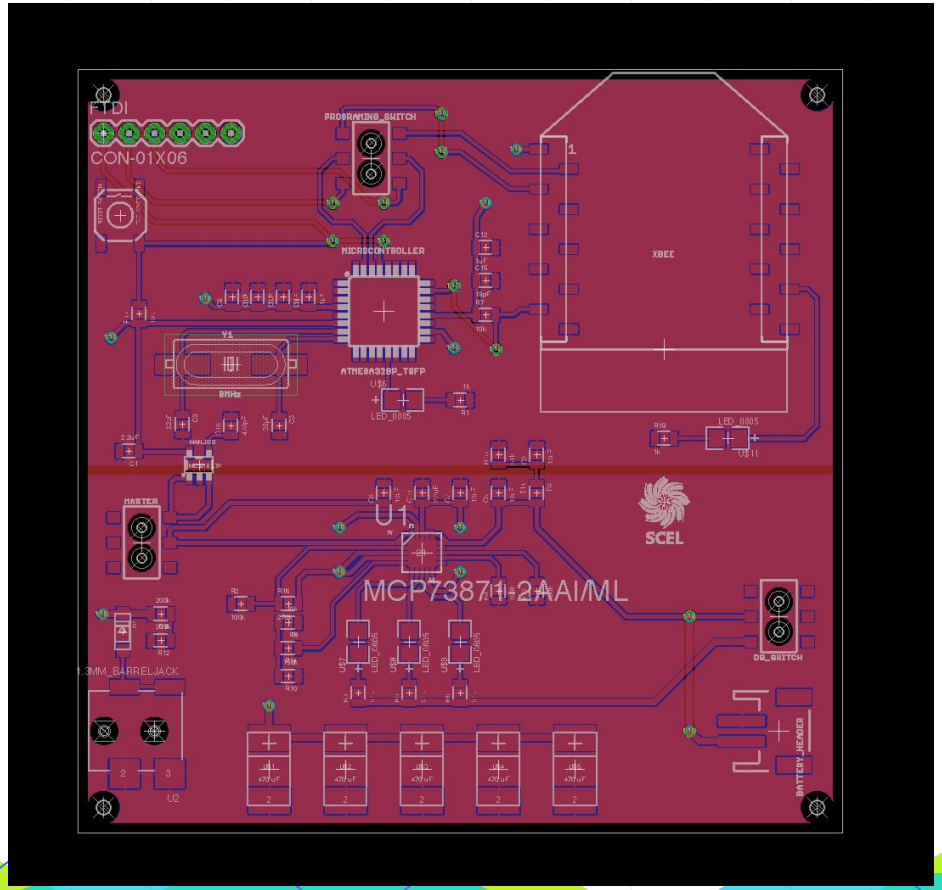
- Populated PCBs
  - One done, one almost done
- Met with housing team
- Started looking at firmware

Schematic



SCEL
Smart Campus Energy Laboratory

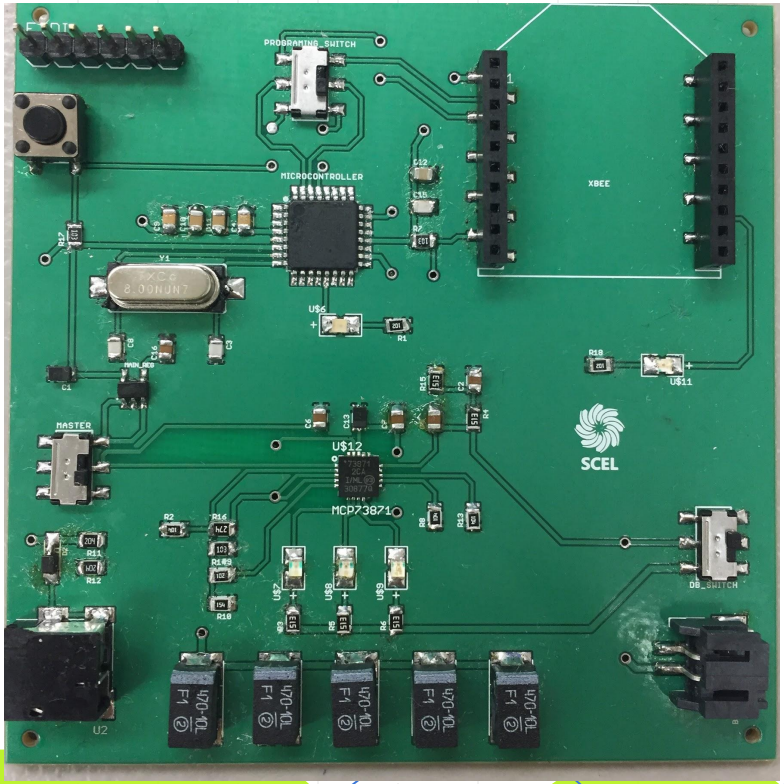
PCB Design

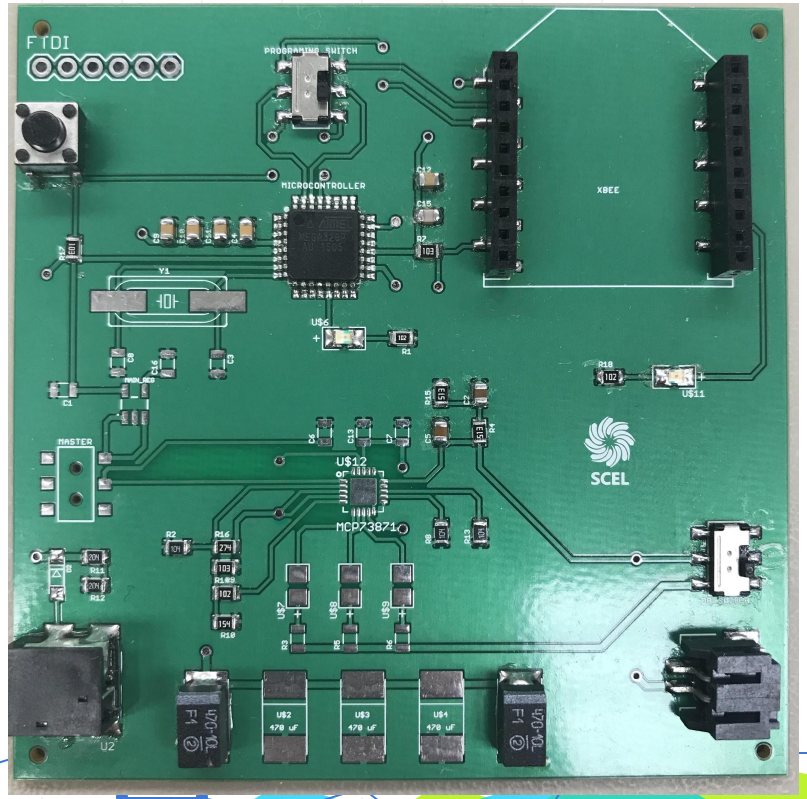


SCEL
Smart Campus Energy Laboratory

PCBs

SCEL
Smart Campus Energy Laboratory





SCEL
Smart Campus Energy Laboratory

Problems

- Used wrong parts list for first PCB attempt
- First time soldering surface mount components
  - Microcontroller

Gantt Chart

SCEL
Smart Campus Energy Laboratory

Week	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	Jan-22	Jan-29	Feb-5	Feb-12	Feb-19	Feb-26	Mar-5	Mar-12	Mar-19	Mar-26	Apr-2	Apr-9	Apr-16	Apr-23	Apr-30	May-7
Spring Break																
Presentations																
Proposal Presentation		Feb-3														
Preliminary Design Review					Feb-24											
Critical Design Review									Mar 24							
Final Presentation														Apr-28		
VIP poster session																
EE496 Poster Session																
PCB Fabrication/Assembly																
Fabrication Time																
Populating																
Testing																
Firmware																
Housing																
Design																
Fabrication																
Deployment																
Final Report																

SCEL
Smart Campus Energy Laboratory

What Needs to Be Finished

- Populate last few components
- Testing of PCB
- Housing
- Modify firmware for one Bumblebee to accommodate more than one Weatherbox
- Test Bumblebee with Cranberry

SCEL
Smart Campus Energy Laboratory

QUESTIONS?