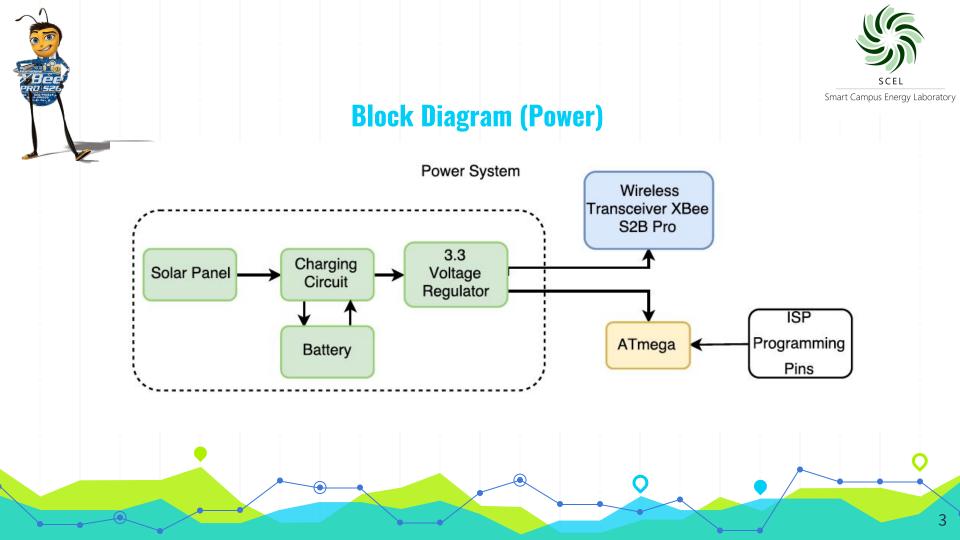


**Team Bumblebee Spring 2018 Preliminary Design Review** Sharmaine Javier, Mizpah Mansanao, Xiao Chen



#### **Presentation Overview**

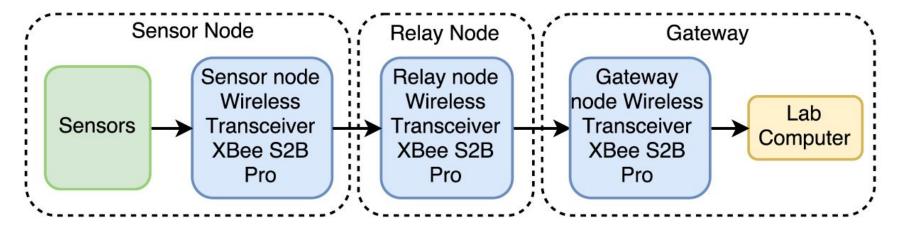
- Block Diagrams
  - Power
  - Signal/Communication
- Team Progress
- Schematic
- PCB
- Problems
- Gantt Chart
- What Needs To Be Finished







## **Block Diagram (Signal/Communication)**









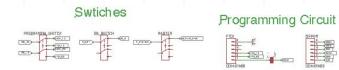
# **Team Progress**

- Gathered more information from past year's team
- Modified the PCB layout and inputted ISP Programming pins and a capacitor between the reset and FTDI
- Configured the three XBee S2B as relay, receiver, coordinator and sender

### **Schematic**

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CONTRACTOR STATEMENT IN

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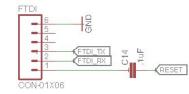
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FILESICE IN HESTICES PROJECT

#### Voltage Reg NADA RE N DUT DI + HICES219 3-34 C18



**Programming Circuit** 







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2407 4

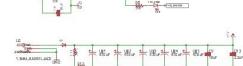


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277

BND

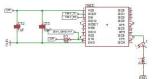
Microcontroller





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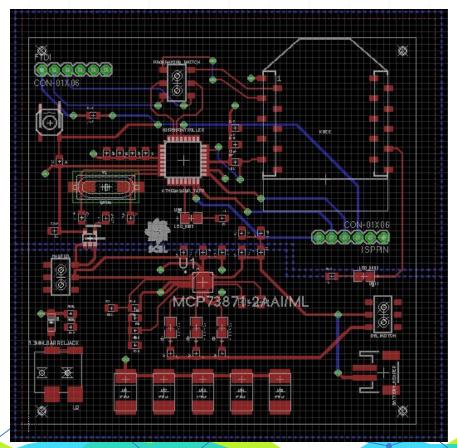


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Xbee



## **PCB Design**





Smart Campus Energy Laboratory





**Problems** 

- XBee S2B discontinued
  - First S2B, Second S2C
- XBee connection
- Unable to upload code for XBee
  - avrdude: stk500\_getsync() attempt 8 of 10: not in sync: resp=0x18







Week	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	Aug-28	Sep-4	Sep-11	Sep-18	Sep-25	Oct-2	Oct-9	Oct-16	Oct-23	Oct-30	Nov-6	Nov-13	Nov-20	Nov-27	Dec-4	Dec-11
Presentations																
Proposal Presentation		Sep-8								- 	~				21	
Preliminary Design Review		-			Sep-29											
Critical Design Review											Nov 10				21	
Final Presentation										- 	~			Dec-1	23	
PCB Fabrication/Assembly										- 	~				21	
Bare Board																
Fabrication Time																
Populating																
Testing																1
Firmware																
Housing																
Fabrication																
Deployment											0				0.1	
													· · · · · · · · · · · · · · · · · · ·			
Final Report																





# What Needs to Be Finished

- Order new PCB
- Populate PCB
- Gather last few components
  - Capacitors, SMD, etc...
- Range testing with bare bumblebee board





# **QUESTIONS?**