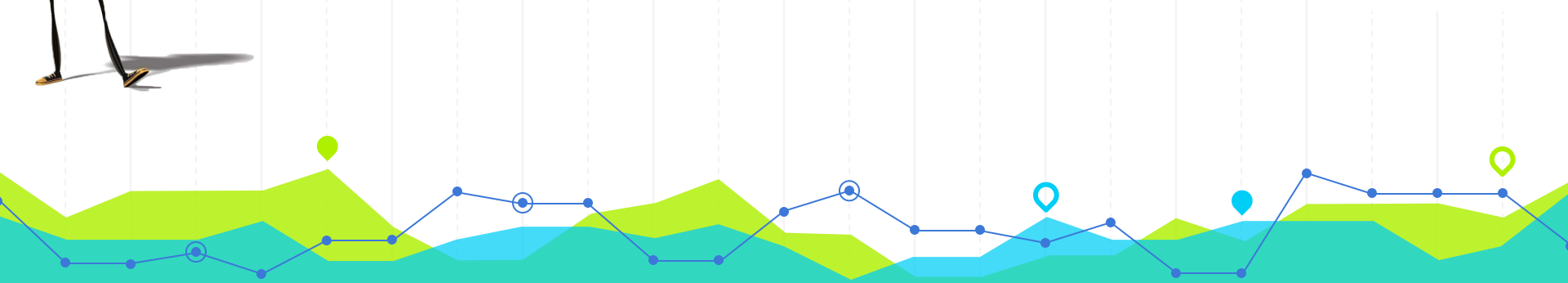




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Team Bumblebee Spring 2018 Preliminary Design Review

Sharmaine Javier, Mizpah Mansanao, Xiao Chen



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Presentation Overview

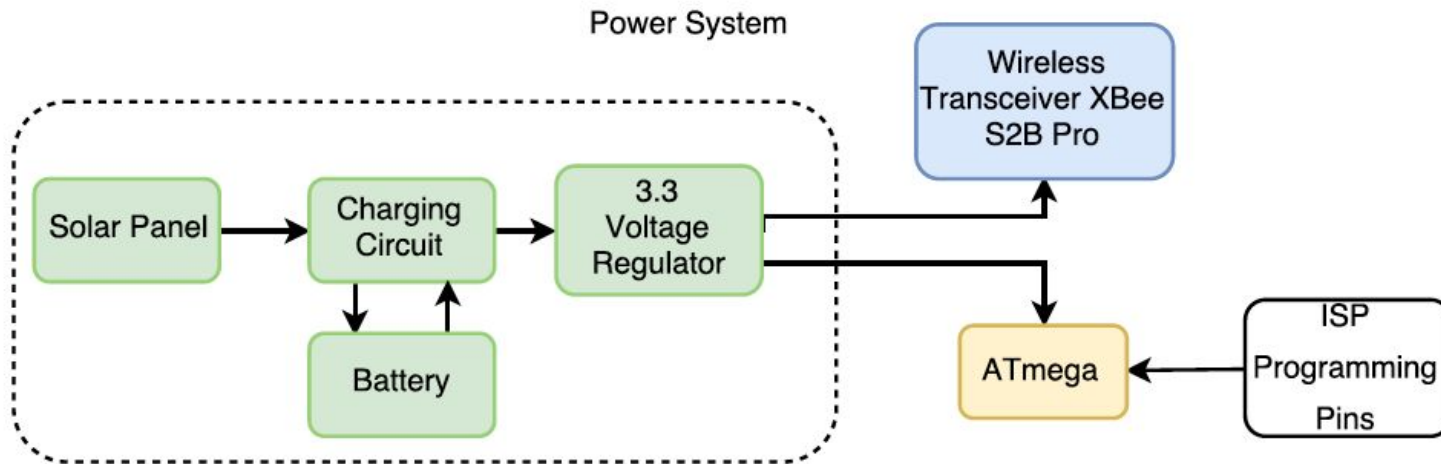
- Block Diagrams
 - Power
 - Signal/Communication
- Team Progress
- Schematic
- PCB
- Problems
- Gantt Chart
- What Needs To Be Finished



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Block Diagram (Power)

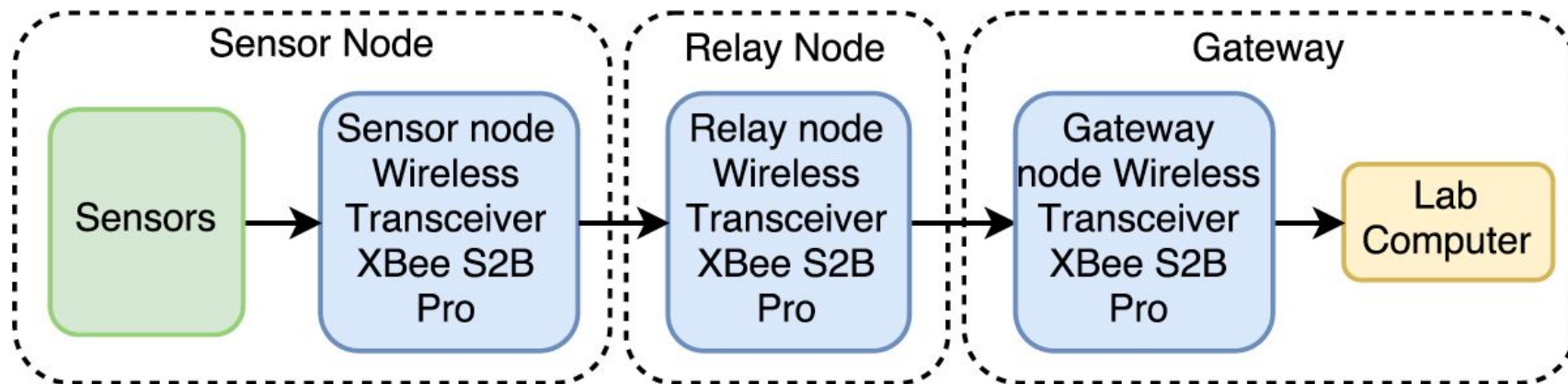




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Block Diagram (Signal/Communication)





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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



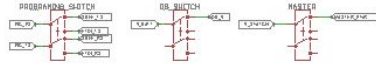


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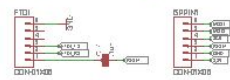
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Schematic

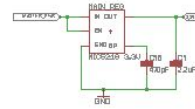
Switches



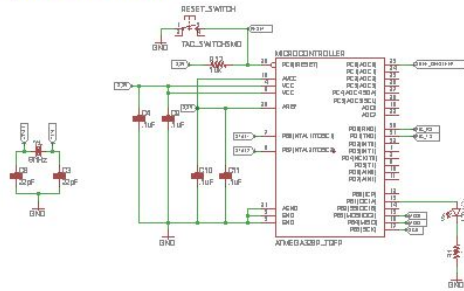
Programming Circuit



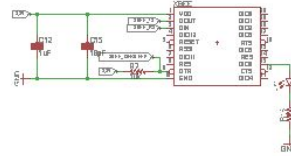
Voltage Reg



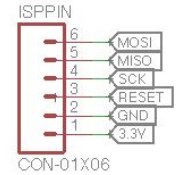
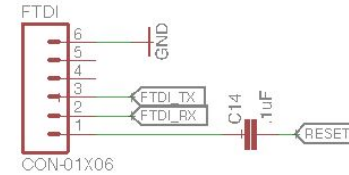
Microcontroller



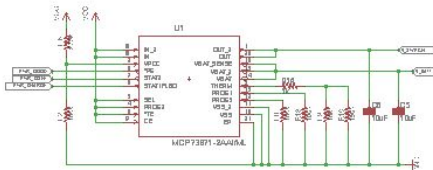
Xbee



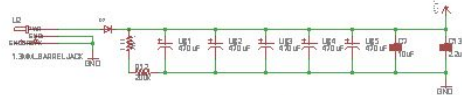
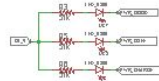
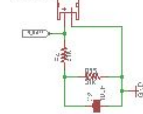
Programming Circuit



Solar Charging Circuit



BATTERY-HEADER



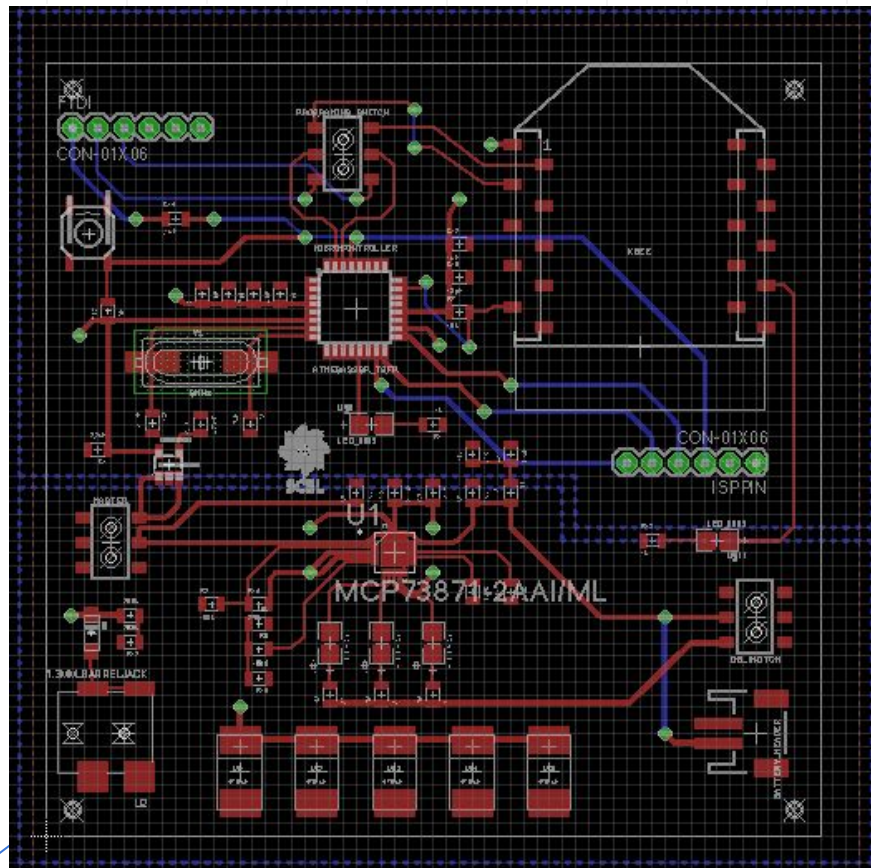


PCB Design



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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*

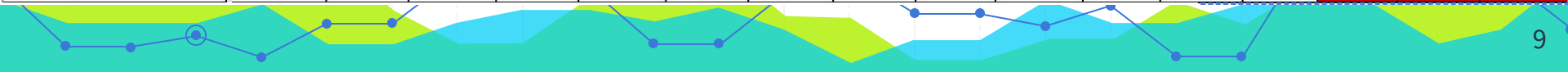
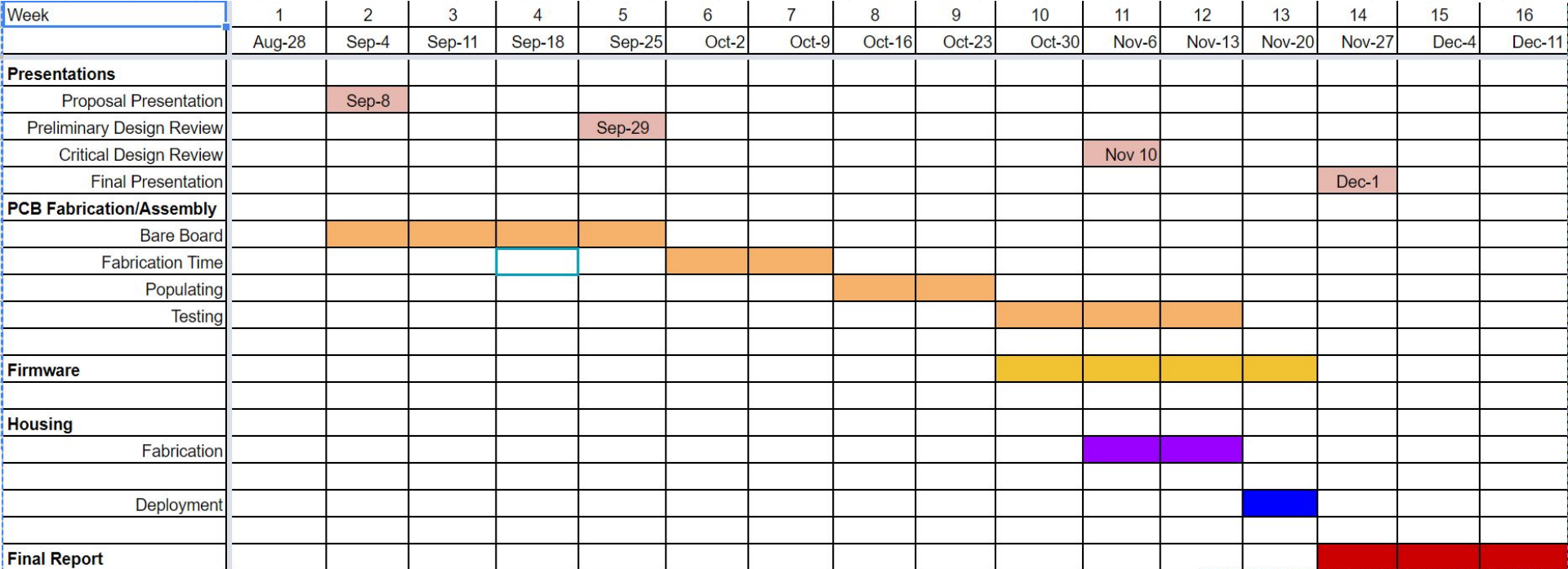


Gantt Chart



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What Needs to Be Finished

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



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QUESTIONS?

