

Team Bumblebee

PRELIMINARY DESIGN REVIEW PRESENTATION

Spring 2019

Advisor: Dr. Anthony K





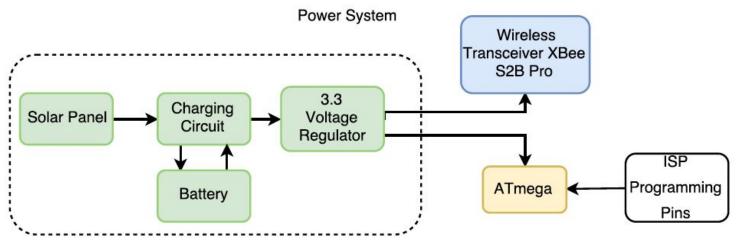


- Block Diagrams
 - Power
 - Signal/Communication
- Team Progress
- Problems
- Current PCB Design
- New PCB Layout
- Gantt Chart



Block Diagram - Power

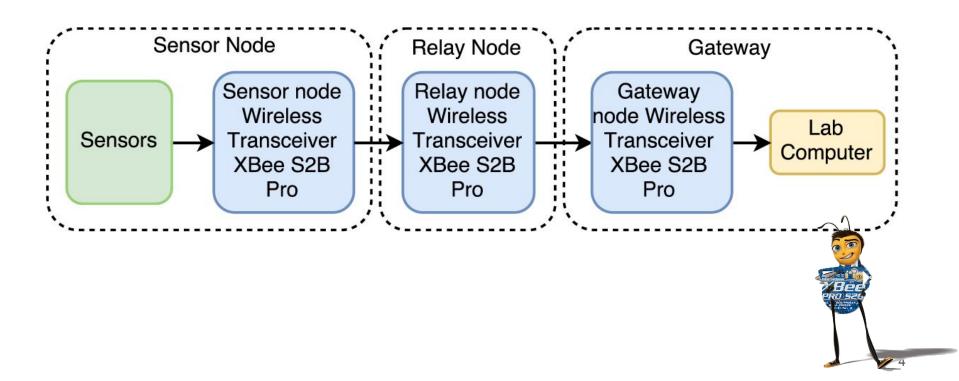






Block Diagram - Signal/Communication







Team Progress



- Finished populating two of our PCBs
- Bootloaded microprocessor
- Started fabricating new PCB layout
- Contacted Bumblebee mentors



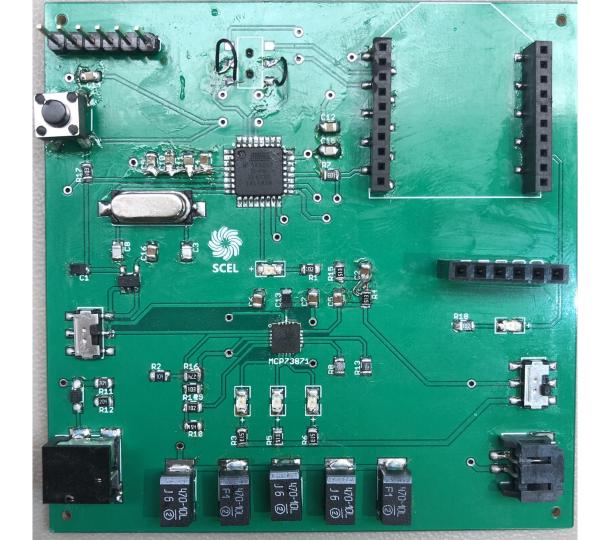




- Unable to receive or send packets (LED not blinking)
 - Firmware problem
 - Solar charger
 - Switch leaking (voltage)?



Current PCB Design







New PCB Layout



- Solar Charging Circuit → Breakout Board
- Remove switch
- Add debug LEDs
 - Transmitting
 - Receiving
- Wiring Orientation
- Add more vias



Gantt Chart

Week	6	7	8	9	10	11	12	13	14	15	16
	Feb-18	Feb-25	Mar-4	Mar-11	Mar-18	Mar-25	Apr-1	Apr-8	Apr-15	Apr-22	Apr-29
Presentations											
Proposal Presentation		o.									
Preliminary Design Review											
Critical Design Review		9			r.i.	Mar-30					
Final Presentation	·	13							-	Apr-27	*
PCB Fabrication/Assembly											
Fabrication Time											
Populating											
Debugging											
Testing									e .		
Firmware								25			\wedge
Housing											
Fabrication										Internet	
Deployment										PRI	Bee 1 SZL
Final Report											

