



Team Guava

Preliminary

Design Review

Presentation

F17



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Presentation Overview

- Introduction
- Motivation
- Block Diagram
- Progress
- Future Work
- Gantt Chart
- Problems
- Questions



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Team Guava **Introductions**



Riley Cammack

Junior- 396

2nd semester

CENG



Kenneth Lauritzen

Junior - 396

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CENG



Sawinna Huang

Junior - 396

2nd semester

EE -Systems



SCEL Motivation

Guava is the fifth iteration in the weatherbox design. The main goal for Guava's weatherbox is to incorporate newer components into the existing SCEL weatherbox layout. The motivation of team Guava is to improve upon the recent generations by using a new processor.



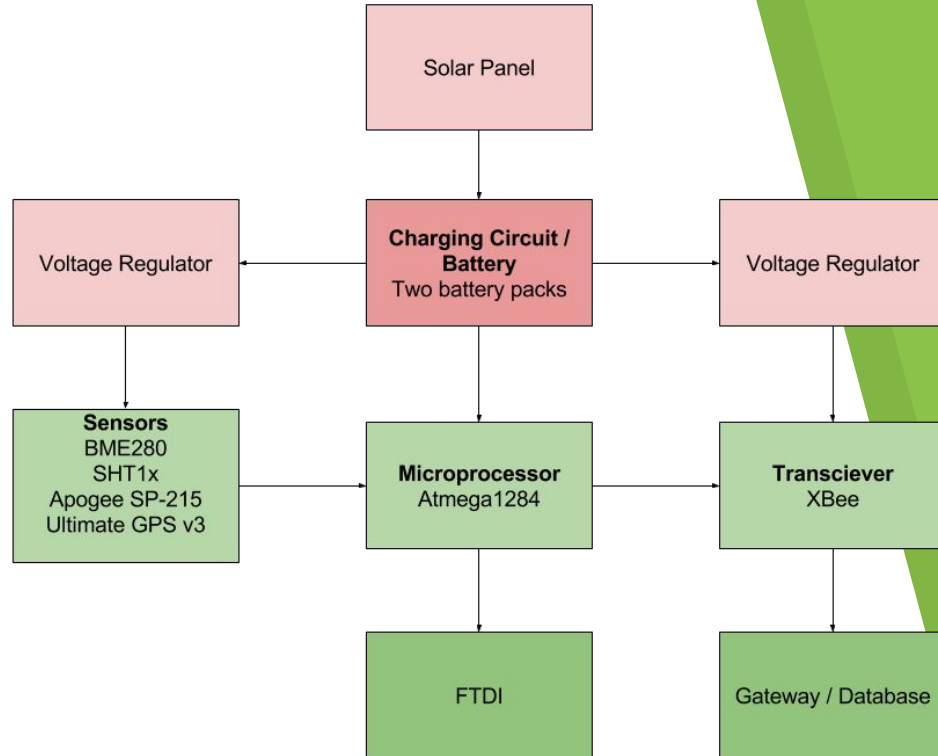
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Block Diagram

- Voltage Regulators may not be needed
- May not be using SHT11
- May change clock to lower MHz to decrease power consumption





Guava Progress

Soldered BME280 Headers

- soldering

Schematic

Decided on the **ATmega1284 (not p)**

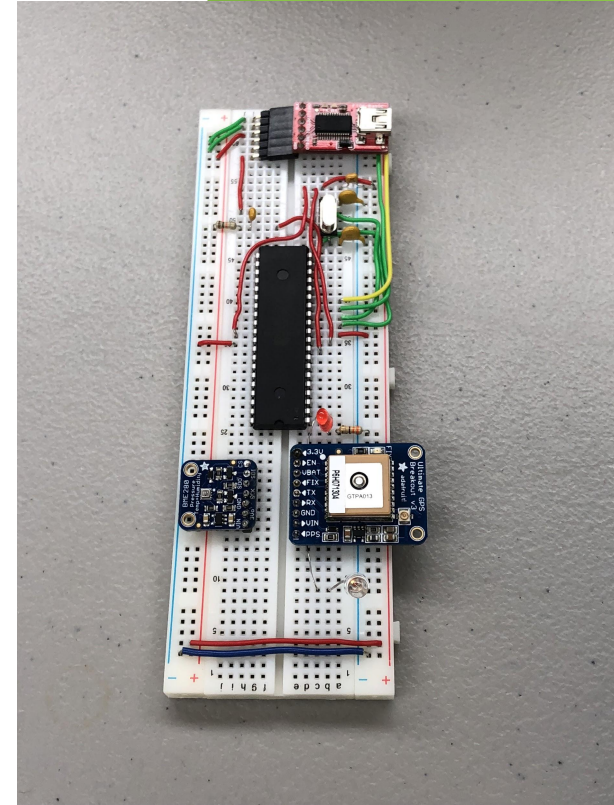
Finished setting up 1284 on breadboard, ready to program.

- Installed bootloader
- Able to upload programs to new processor



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Future Work

Produce a self-sustaining environmental sensor module that will collect meteorological data

- Finish Schematic
 - Properly integrate new processor
- Design and fabricate a printed circuit board
- Draft and build a weatherproof housing
- Test and Deploy the completed weatherbox



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Team Chocolate Cosmos

(Gantt Chart)



Gantt Chart



Problems

- Differing signatures in 1284 and 1284p
- No default hardware setting for 1284 on Arduino IDE
- Change of clock setting to “FULL SWING”
- Locating required libraries

Other

- No initial schematic / started from scratch
- Run two batteries in parallel whilst staying in operating current

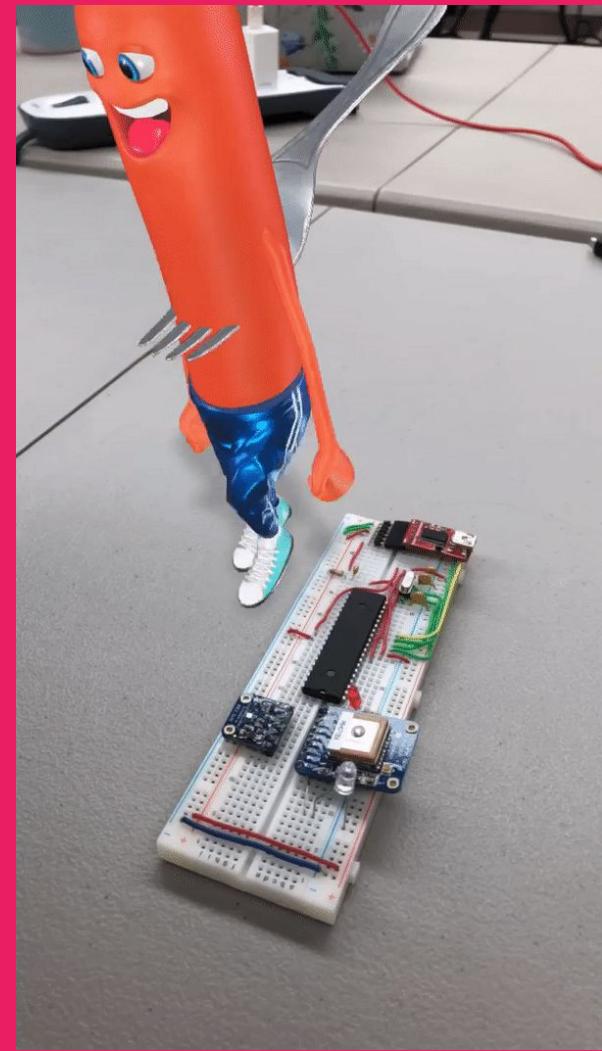


Thank you!
Any Questions?



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