SmartSettia

SmartSettia provides remote monitoring and control of poinsettia covering systems using mobile devices.

Our Team

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COMPUTER SCIENCE

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COMPUTER SCIENCE

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COMPUTER ENGINEERING

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- Advisor: Bruce Bolden

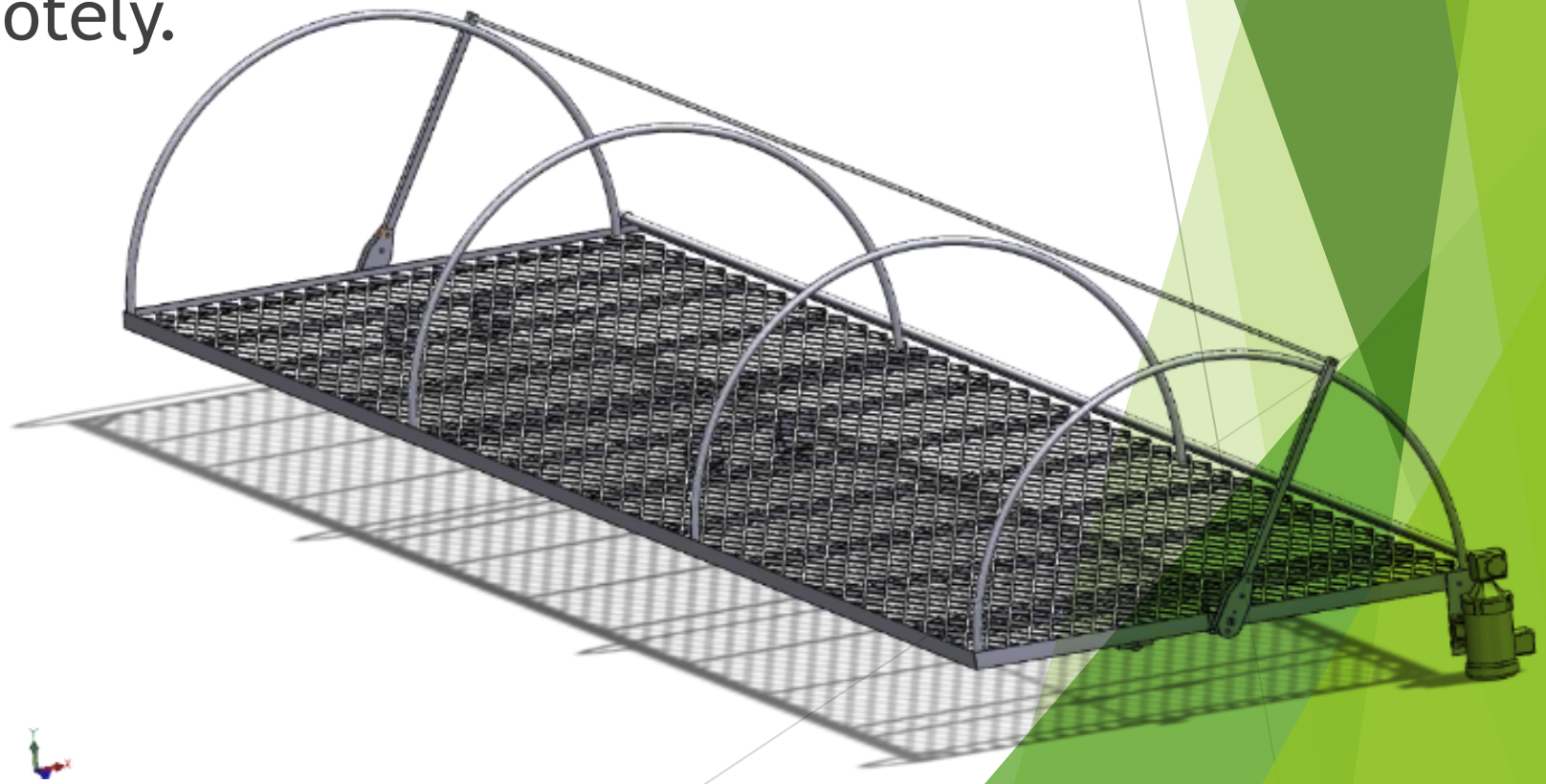
The Photoperiod Problem

- Controlling photoperiod (and night temperature) is essential in precise programming of poinsettia market date and final height.
- The Sixth Street Greenhouse has streetlamps as well as internal lighting that invades the room where the poinsettias are stored.
- To mitigate the effect of this stray light, the students of the Plant & Soils Science Club have to manually cover and uncover the poinsettias every day.

(image © P. Allen Hammer, Purdue University)

Limitations of the Old System

- No feedback for if system is open or closed.
- Unable to change covering schedule.
- No notifications of failure.
- Cannot control remotely.

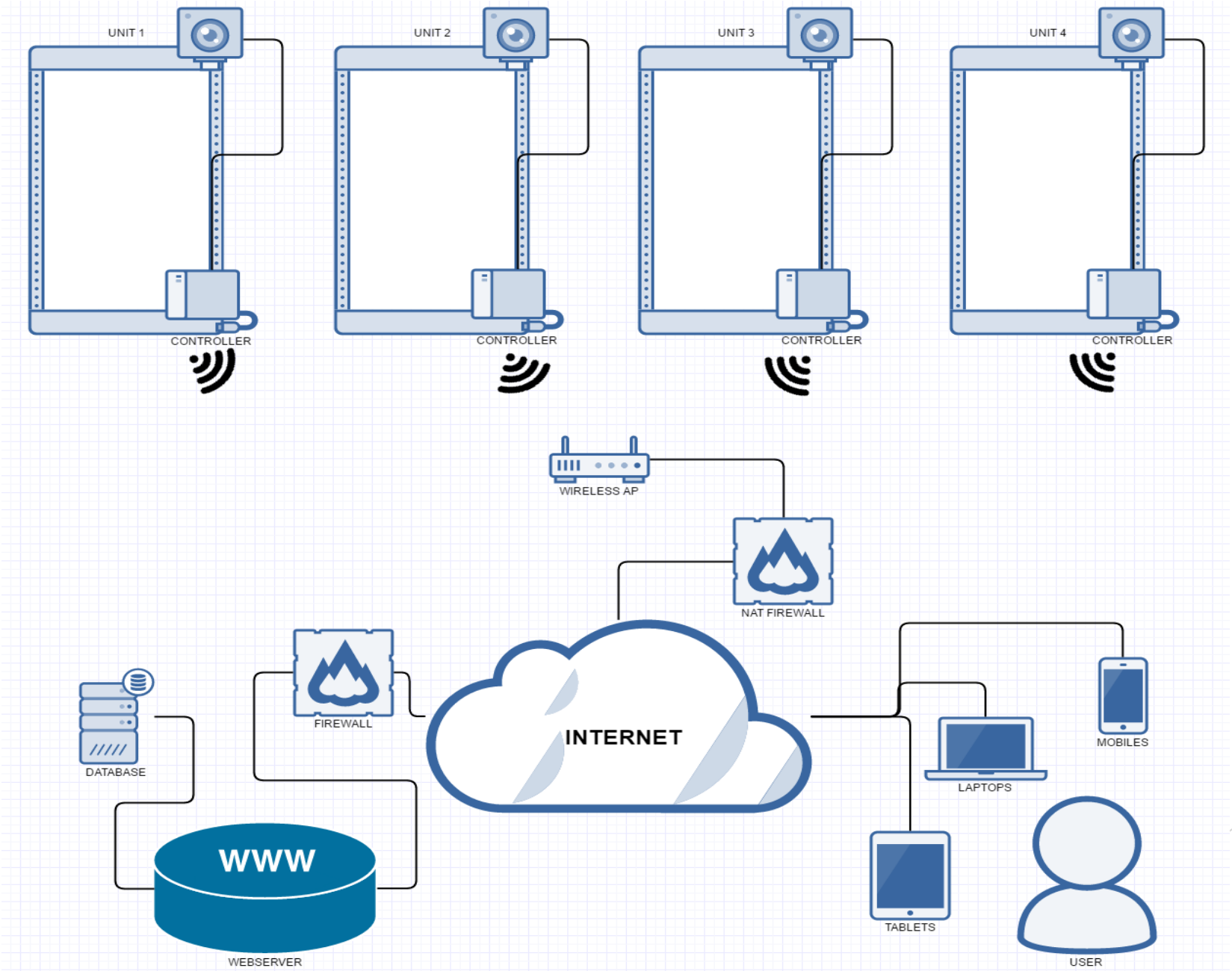


Design Goals

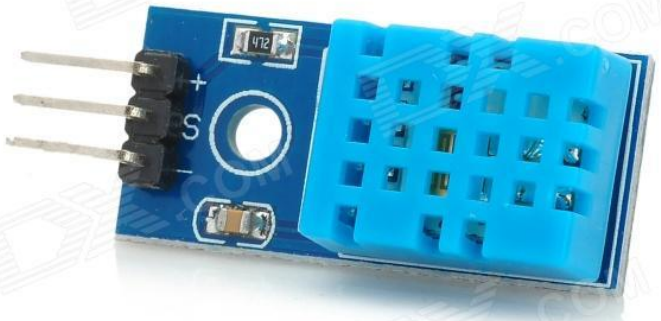
In addition to automatically covering plants, the system must:

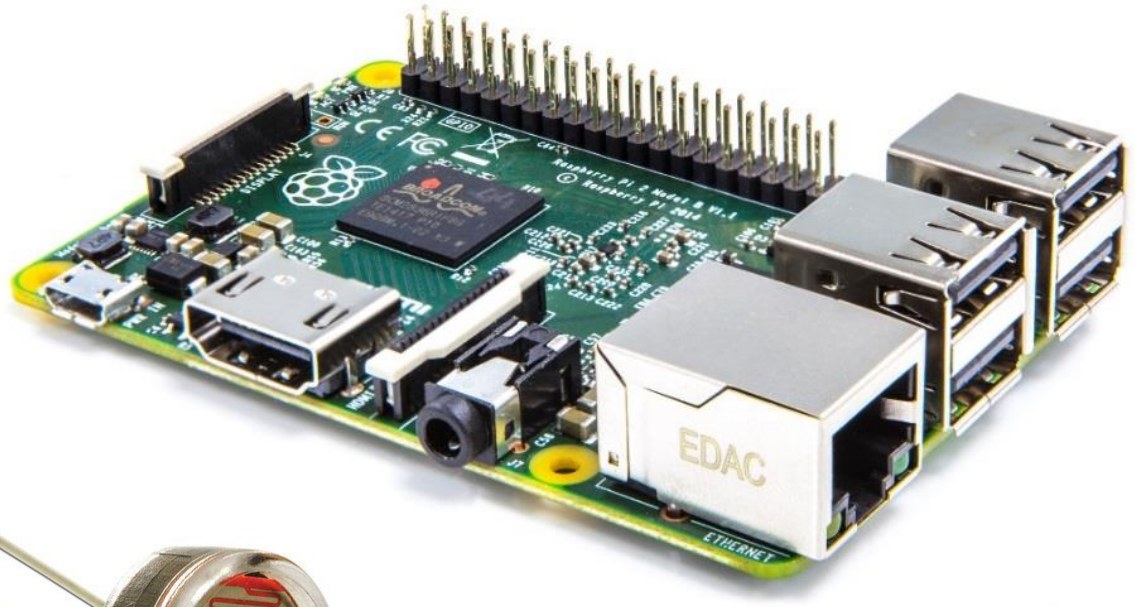
- Be simple to use on both mobile and desktop devices.
- Have a way to visually confirm if open or closed.
- Text notifications in the event of failure.
- Allow for a custom schedule.
- Log all actions and sensors.
- Operate in a hot and humid environment.

System Design

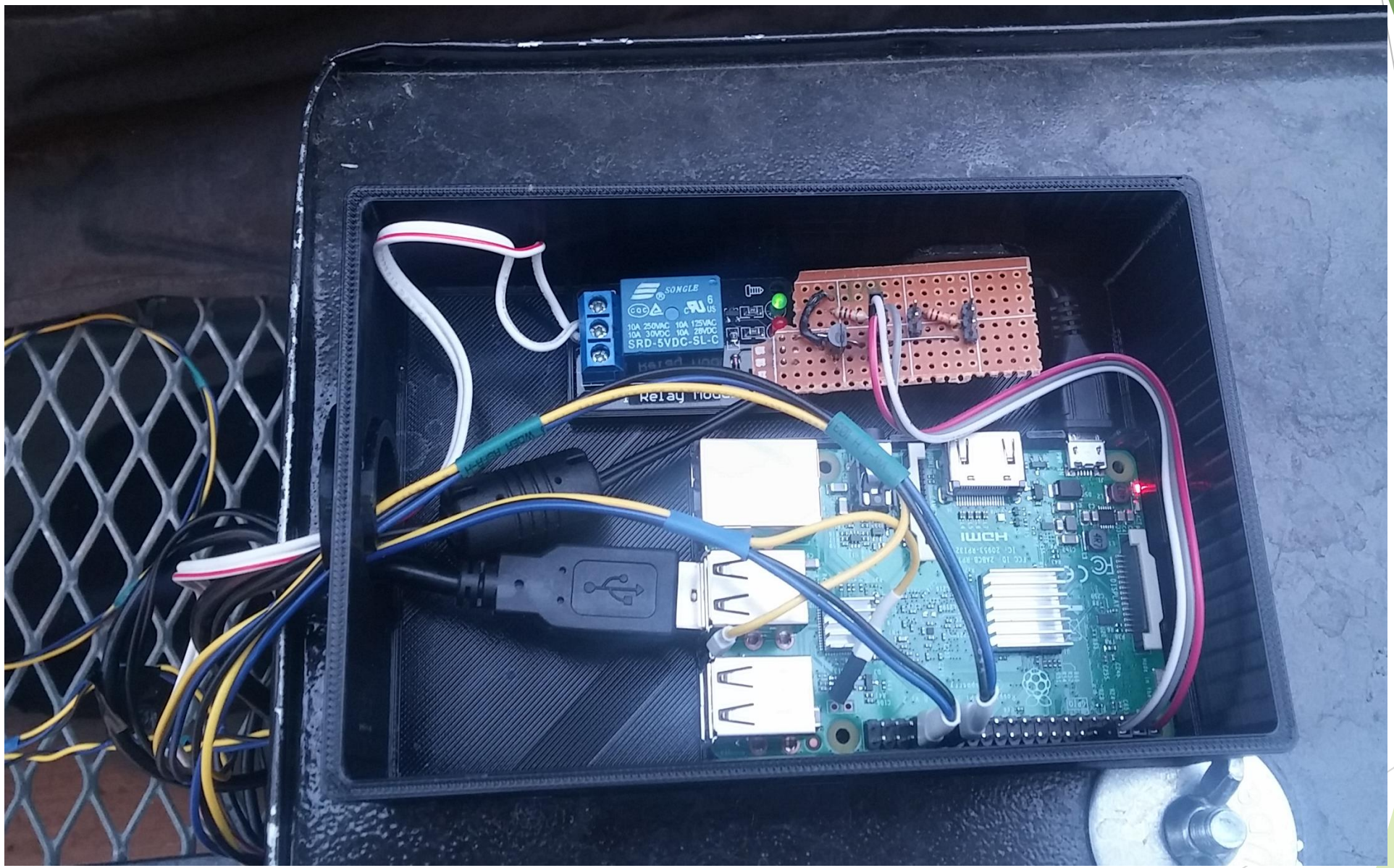


Hardware Implementation





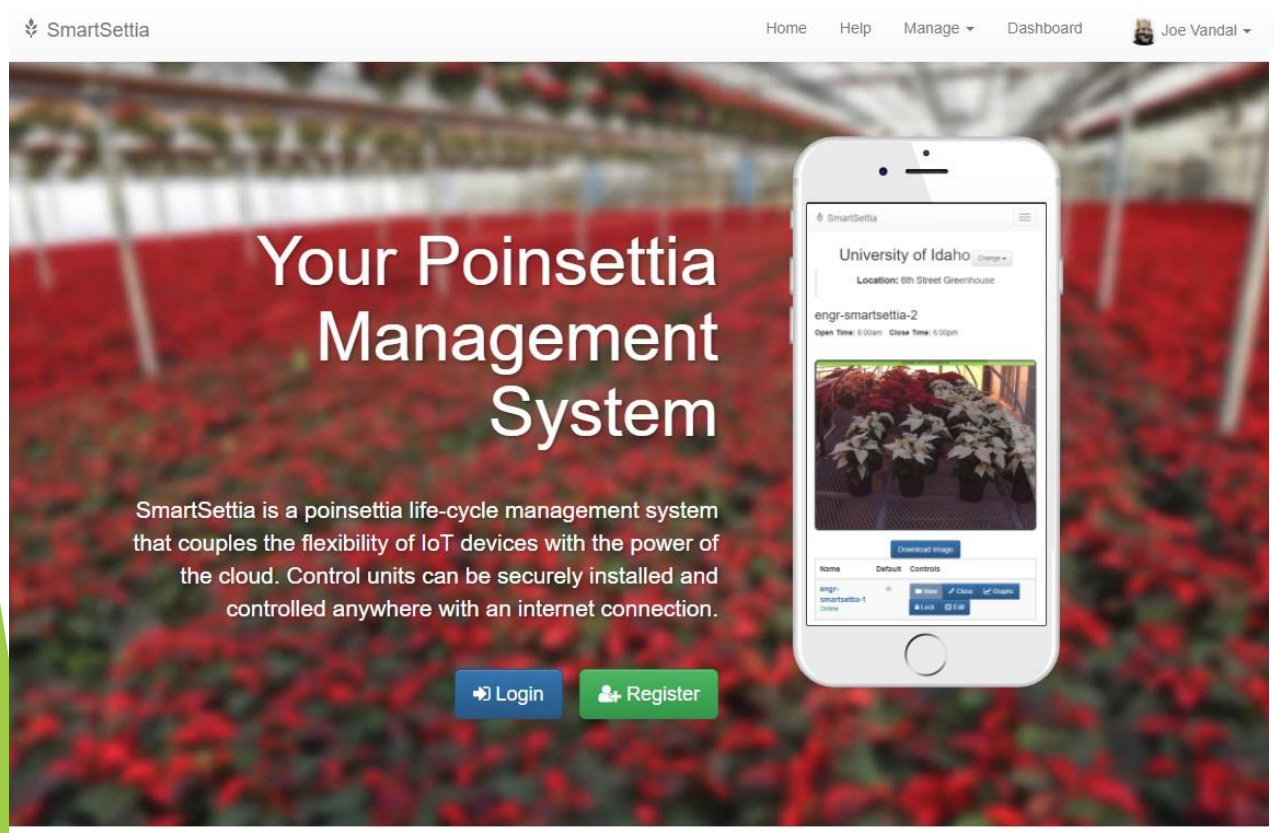
Raspberry Pi 3 Model B

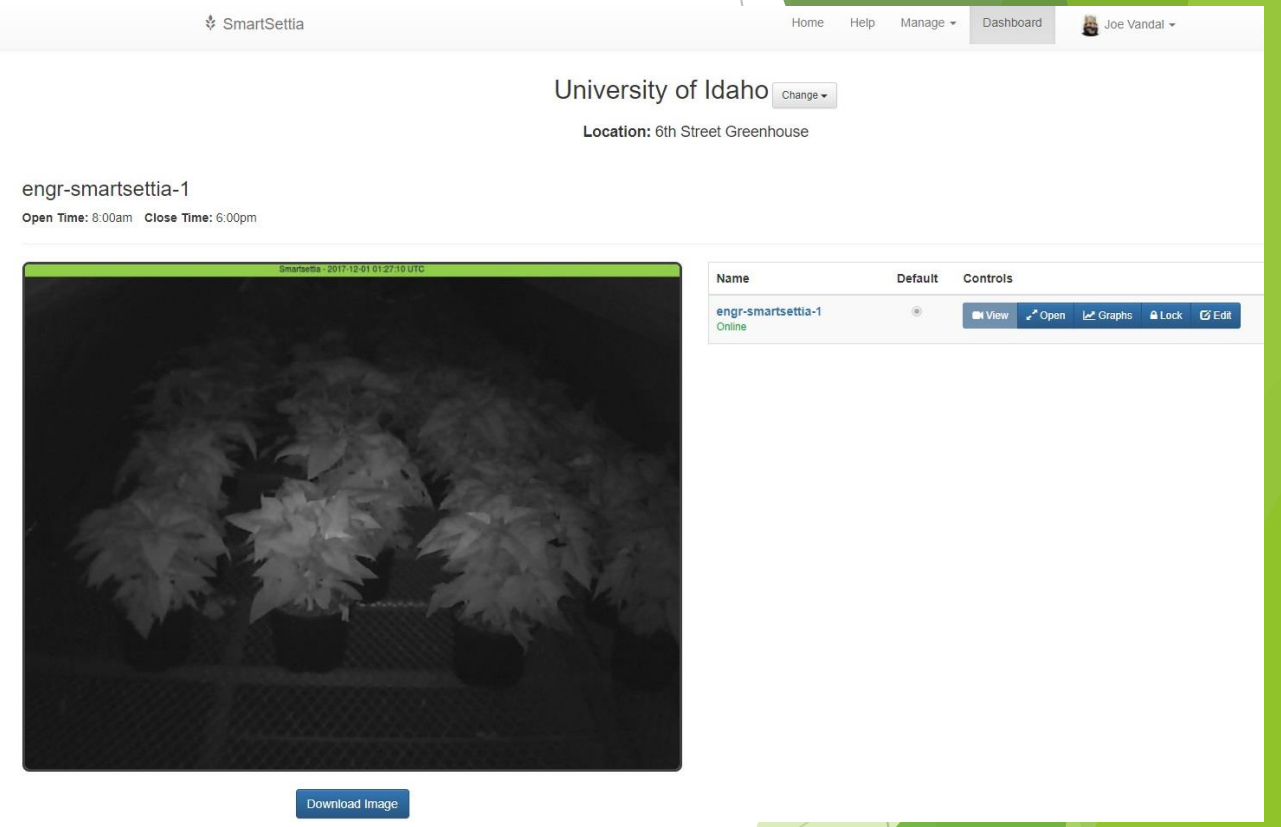

SONGLE
10A 250VAC 10A 125VAC
10A 30VDC 10A 28VDC
SRD-5VDC-SL-C


UNIVERSITY OF IDAHO

Technology Stack

Website





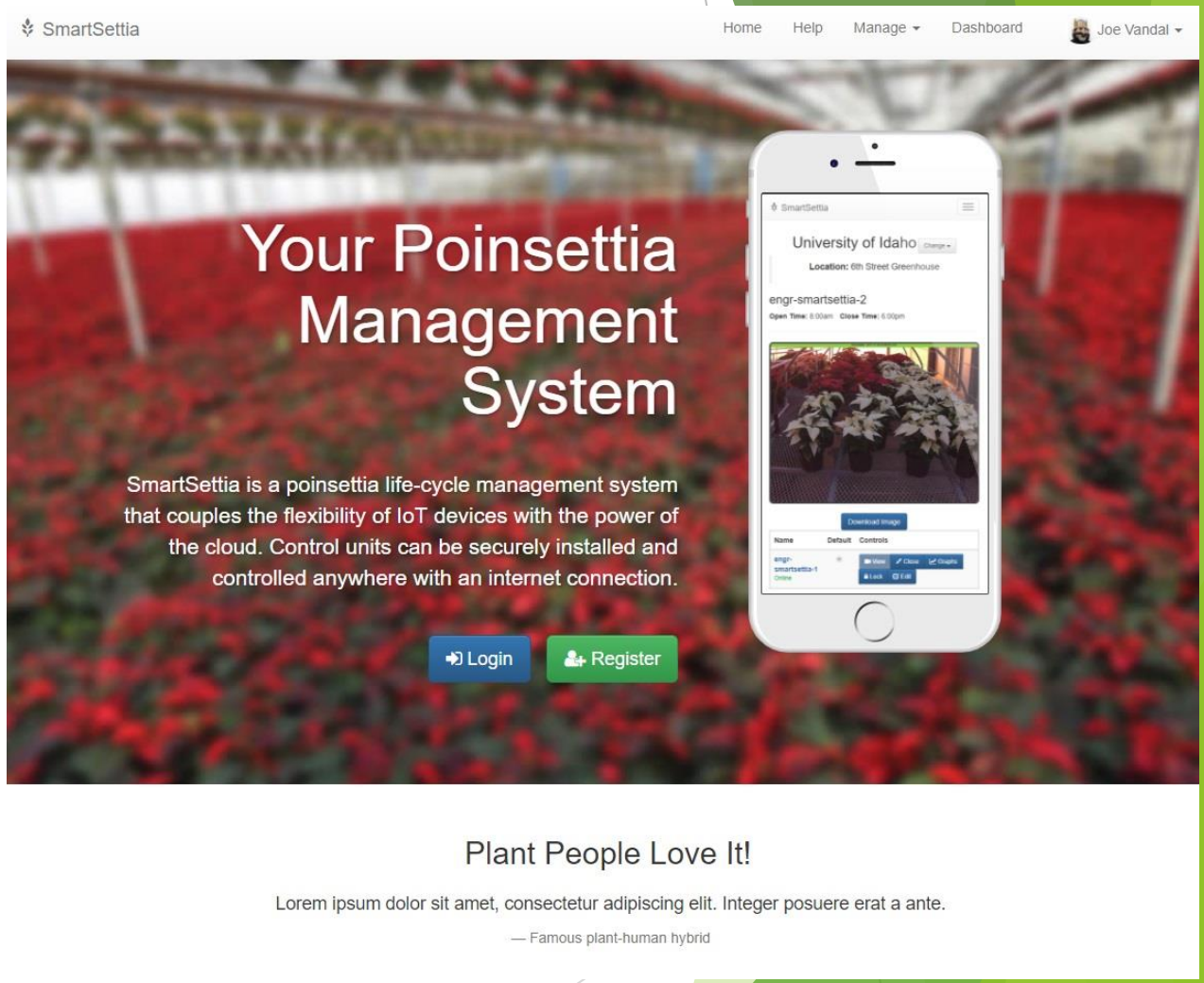
Plant People Love It!

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Integer posuere erat a ante.

— Famous plant-human hybrid

Benefits of the New System

- The ability to monitor and control remotely save trips to the greenhouse.
- Increases caretaker productivity by allowing them to keep track of things from a mobile device anytime and anywhere.
- Saves money and reduces risk by detecting and reporting problems early on.



Questions and Feedback

- Thank you for attending our technical presentation!
- We welcome any questions or feedback you can provide.
- You can also e-mail the SmartSettia team at:
  - engr-smartsettia@uidaho.edu