Soil Smart

UCSB ECE 189 Capstone 2016

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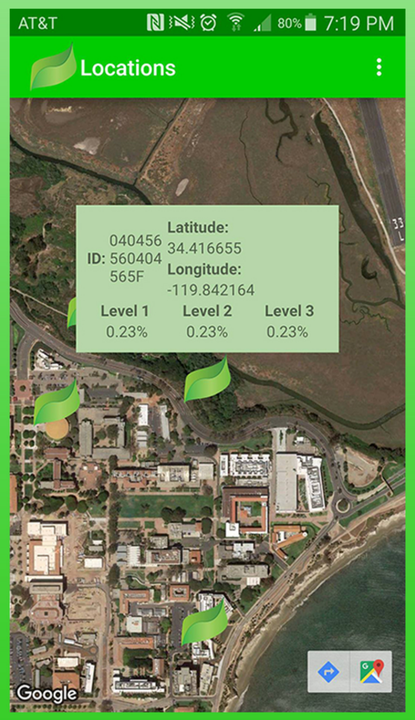
UCSB

Traditional irrigation techniques use cyclical watering cycle routines with little to no soil moisture feedback which wastes water, damages the soil, and hurts the farmers' yields.

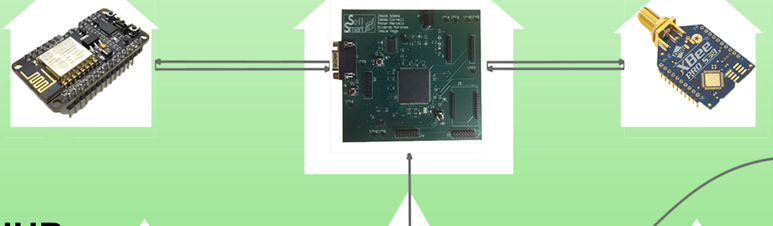


- The home board communicates with the web server through the internet to provide the user with the latest information about their system and makes it available 24/7 by our mobile app or website.
- The control board acts as the coordinator for the sensor network and relays all node information to the home board.
- Each node module will have three soil moisture sensors at three user specified depths to record soil moisture data.
- Our node modules use GPS to map their coordinates and form a grid that will periodically relay the drawn data to a control board.

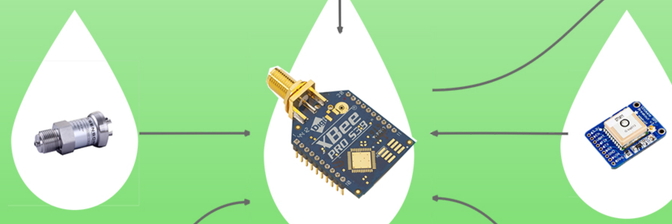
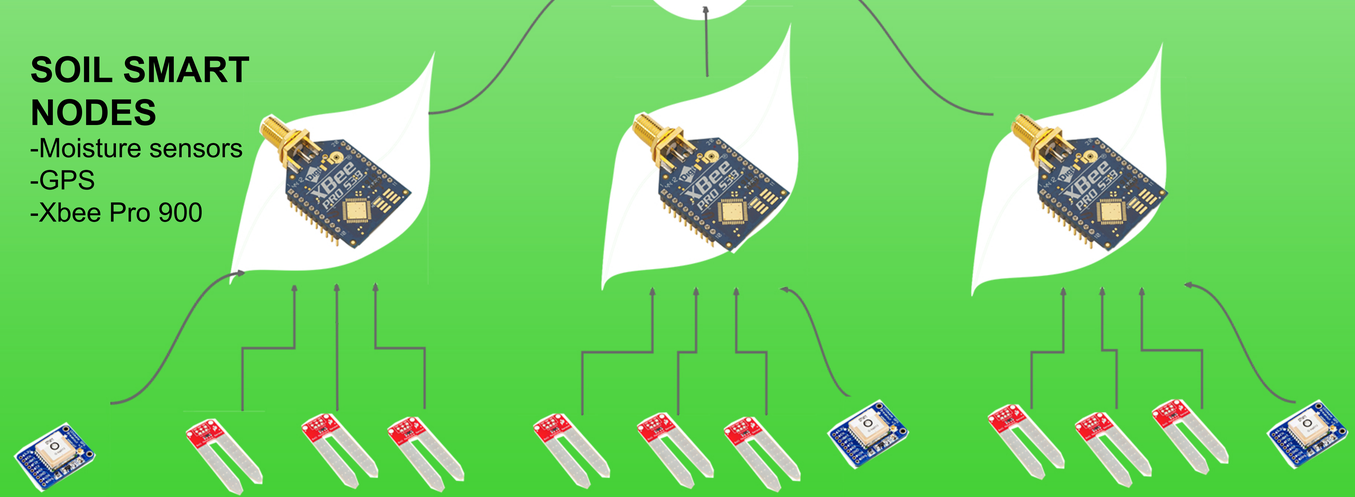
Soil Smart is a wireless sensor network that monitors and records soil conditions and detects leakage in pipes. This information is used to control irrigation systems and is made available to the user via a mobile app and web interface.

USER INTERFACE
- Website
- Mobile App.

HOME BOARD
- WiFi
- Xbee Pro 900



CONTROL HUB
- Solenoid control
- Pressure sensor
- GPS
- Xbee Pro 900



SOIL SMART NODES
-Moisture sensors
-GPS
-Xbee Pro 900