

Problem Statement

Water testing kits are used worldwide for educational purposes and tracking of water parameters. Current kits are analog and require users to manually input parameter data into databases.

Requirements

- Measure same parameters as the existing EarthEcho kit
- Have the device connect to the phone with a USB cable
- Create an application to control the device and upload the data

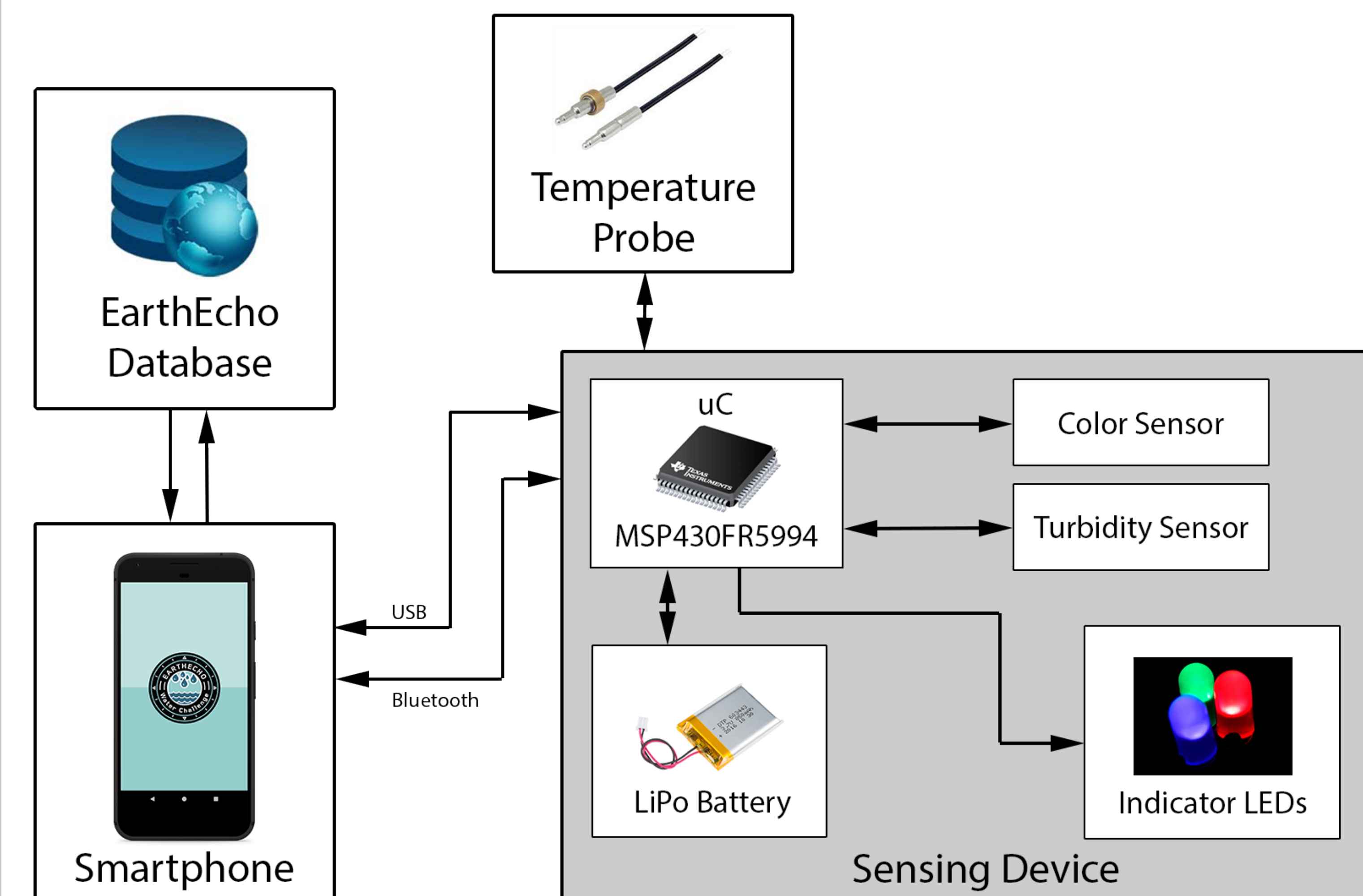
Technical Accomplishments

- Pushing and Pulling to the database
- Integration of Google Maps into phone-side application
- Designing a 4 layer PCBA
- Designing mechanical packaging
- Designing hue to pH algorithm
- Implementation of rechargeable battery and Bluetooth
- Switching to a probe for temperature

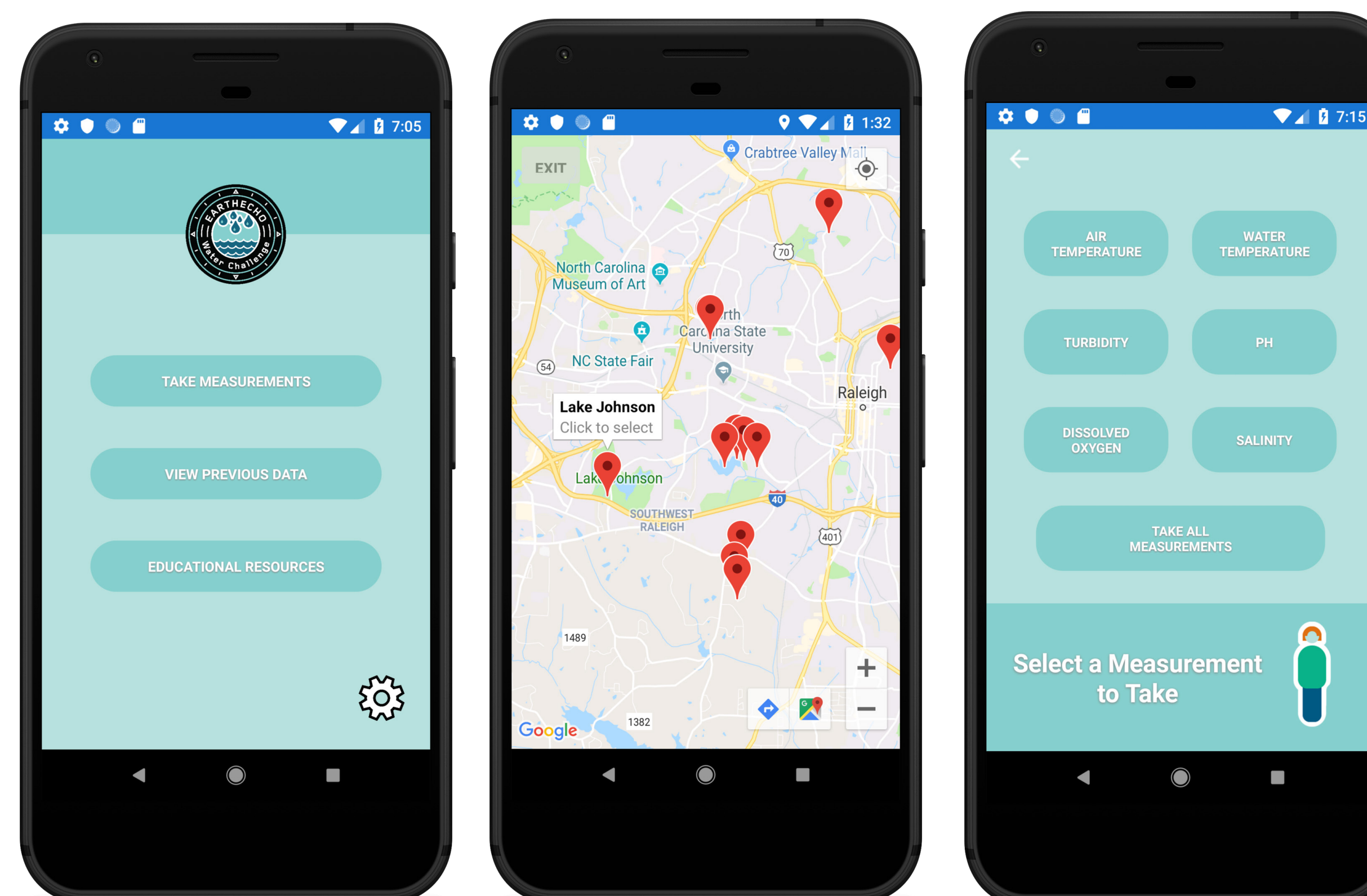
EarthEcho Kit



System Architecture



Smartphone Application



Packaging Design

