lifeLogger

never forget again

The Crew

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What if your journal wrote itself?

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The World Today

Personal Analytics

Photo Uploading

Location

Our Solution

Never forget a place

Log everywhere you go

Never forget a face

Upload photos as you take them

Never miss a friend

Get notifications when your friends are nearby

Forget it's there

An ultraportable device invisible to the user.

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Competitive Analysis

	GPS data	Bluetooth connectivity	Web interface	Photo Uploading	Active data analysis	Friend Network
FitBit		✓	✓			✓
Motorola Motoactv	✓	✓	✓			
Qstarz BT-Q1300S Nano	✓	✓				
lifeLogger	✓	✓	✓	✓	✓	✓

Why can't this just be an app?
    GPS: 2.5 m vs 8 m
    Battery concerns
    Leaving your phone behind
    60% of Americans don't have smartphones

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Functional Requirements

Collect GPS data onboard the lifeLogger

Communicate between two lifeLoggers over Bluetooth to share contact and profile information

Transmit data from the lifeLogger to a smartphone over Bluetooth

Transmit data from the smartphone to the web server

Analyze data on the web server to be able to detect when two friends are nearby

Notify the user on their smartphone about nearby friends

Construct a user friendly website to allow the user to view their collected data

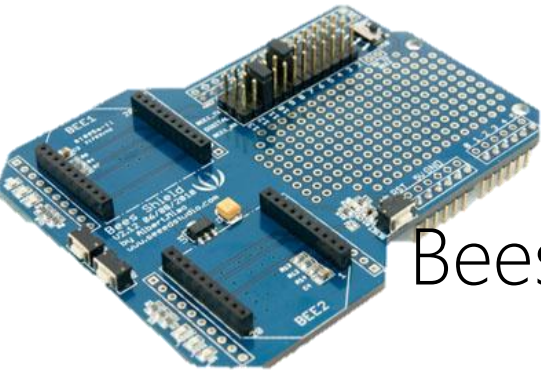*life*Logger

Nonfunctional Requirements

Portability

The device should be small enough that the user can carry it around conveniently. This will be a little difficult using only off the shelf parts, but would certainly be feasible if we were fabricating our own hardware.

Ease of Use

Ideally, lifeLogger will be nearly invisible to the user. After the initial sync with the Bluetooth device of their choice, lifeLogger should collect and transmit data automatically, never requiring input from the user.
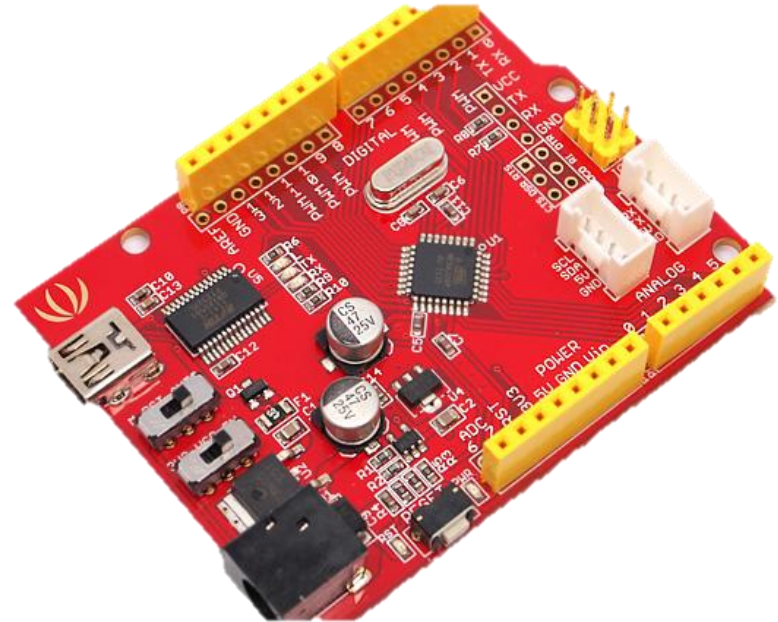
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Hardware

Bees Shield
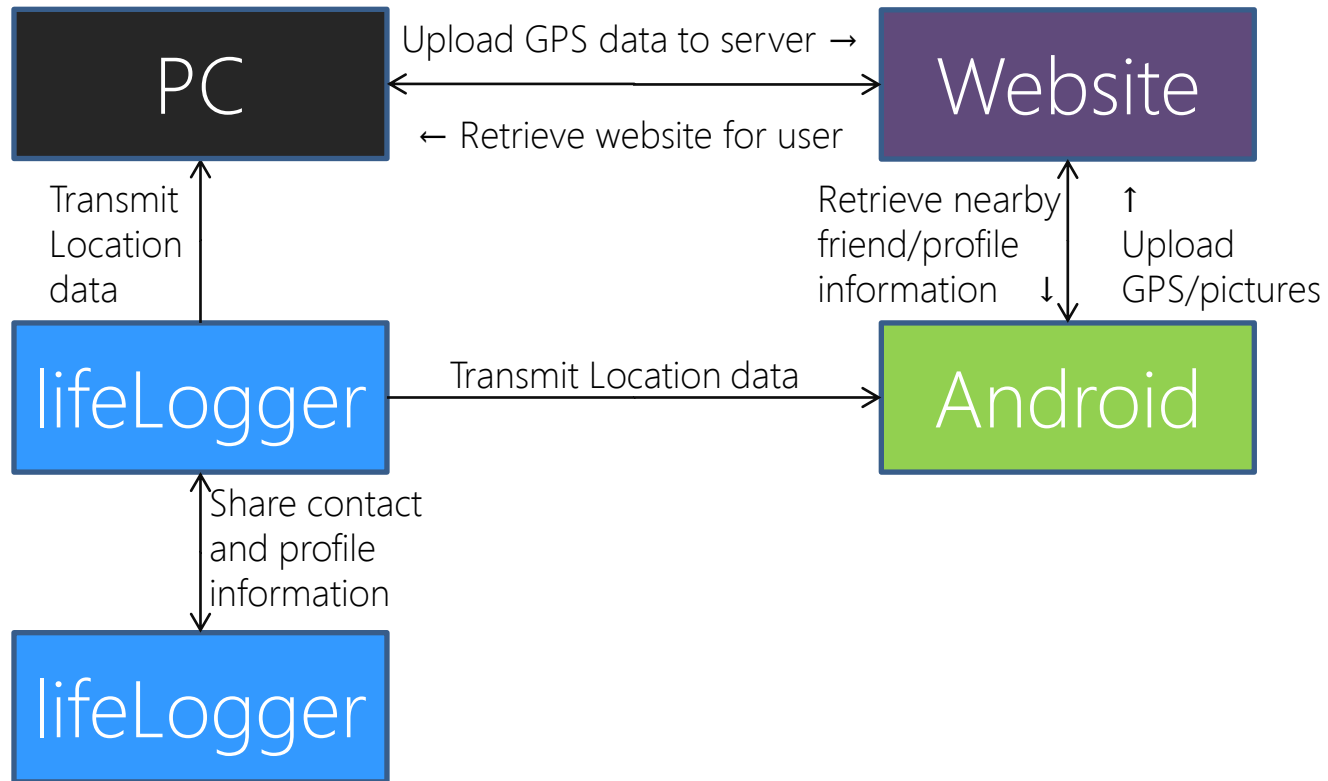
GPS Bee

Bluetooth Bee
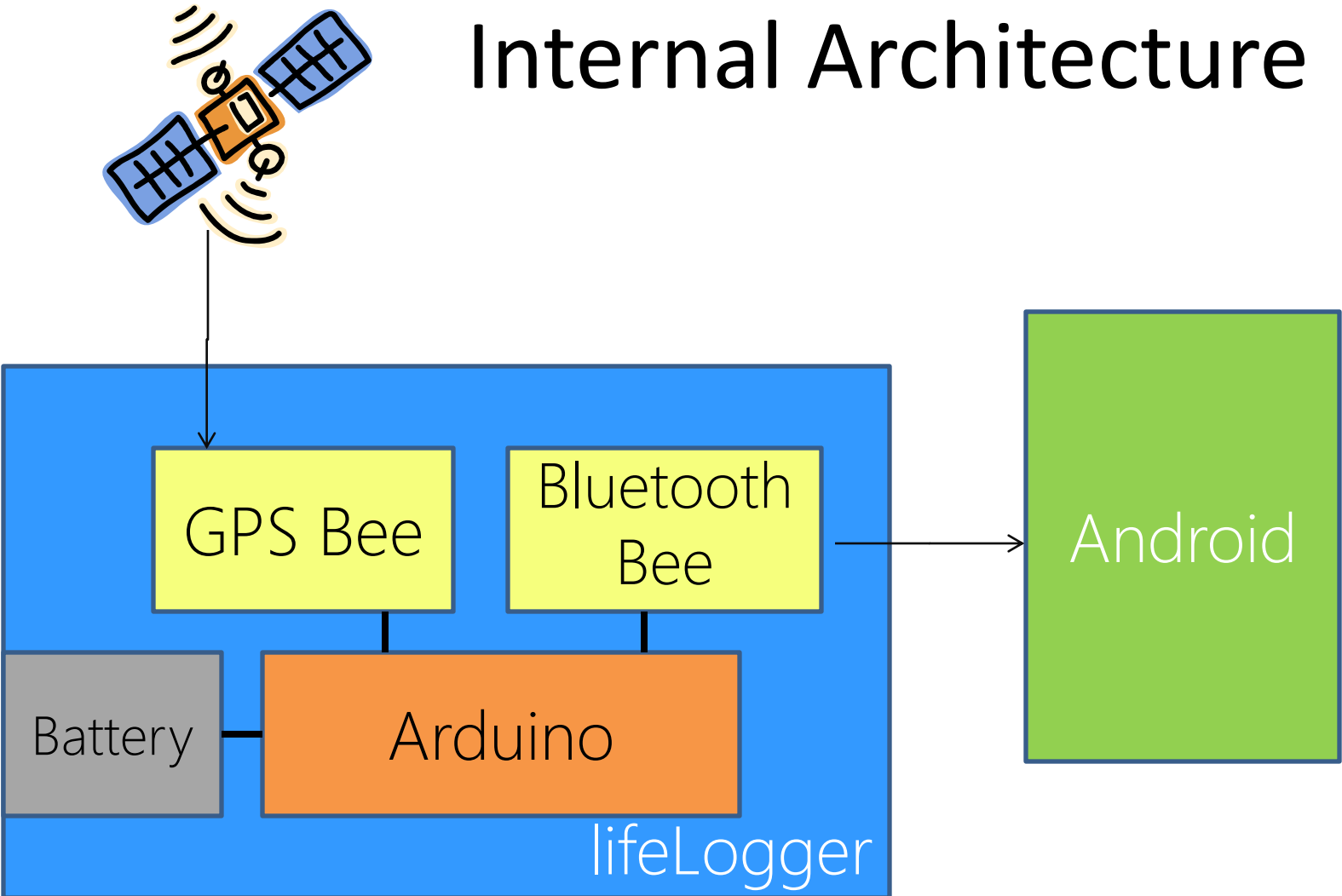
2Ah Battery

Seeeduino v3.0

(Duemilanuve Schematic)

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Architecture

PC

Website

Upload GPS data to server →

← Retrieve website for user

Transmit Location data

Retrieve nearby friend/profile information ↓

↑ Upload GPS/pictures

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Transmit Location data →

Android

Share contact and profile information

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Internal Architecture

GPS Bee

Bluetooth Bee

Android

Battery

Arduino

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Risks & Mitigation Strategies

False Positives for Conversations
      Refine through testing
      Use both BT and GPS to gather location information

GPS Accuracy Indoors
      Add logic to the server-side location monitoring to detect GPS data loss or degradation. Because the data corruption should only occur while the user is in a building, we know where they are until the signal returns

Multiple, Bluetooth Connections
      It may be unfeasible for the lifeLogger to maintain connections to other lifeLoggers and a smartphone simultaneously. We may have to not require the lifeLoggers to communicate with each other, leaving more work for the web server.

Battery Performance
      Adjust polling frequency to optimize for both data richness and battery life

Server Scalability
      We would need bigger, better servers
      To operate, a subscription model might be necessary

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Questions?

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