Bus Tracker

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Problem Description

- Public transportation is not always on time so it is useful to be able to know the exact location of a bus.
Proposed Solution

- Make buses smart without buying a new fleet
- Outfit each bus with a tracker box that communicates over cellular
  - Transmits GPS location, speed
- Communications application for passengers to view how far away a bus is
Demonstrated Features

- Location tracking
- Speed recording
- Bus Driver Interface
  - Input Bus Number, Driver ID
- Passenger Web Application
  - Live bus locations and transit times
    - OR
- Station Hub
  - Live Bus Location Display
    - Passenger interface to choose specific bus
  - Transit times
Available Technology

- Cellular chip
- GPS module
- Microcontroller
- Sensors (Accelerometer)
Engineering Content

- Build main board with cellular chip, micro, sensors, etc.
- Communication with LTE chip and network (Sprint, whoever)
- Communication between LTE chip and micro (USB?)
- Power board (off bus 12V line)
  - Possible battery backup
- Building app