

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 exaction 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