

Final Project Preproposal
Team "This is important, guys"
13 October 2015

Basic Concept

For this project, we wanted to create something bike-inspired. Specifically, we envision a bike attachment with sensors that takes in readings (i.e. distance travelled), and from there, interfaces with a web component to unlock user-specified "blocked" sites like Netflix, Facebook, etc. based on metrics like distance biked.

Functionality

The initial idea is a four-part system: a mechanical fixture to allow for a modular system, mechanical/electrical measurement system, an electrical/software component to interface between the readings and the web (computer interface), and a software component to trigger actions based off data from the sensors.

Anticipated Challenges

"Mechanical part -- what, how" - With a team of non-Mech:Es, we anticipate the mechanical aspects to be a challenge.

We also anticipate the integration of all the subsystems to be a challenge as we have several different parts that we don't know exactly how to interface yet.

Deliverables

October 23:

Sketch/CAD of what we're envisioning (dimensions, materials, costs)

Deliverable 1:

Have a shaft encoder working with raspberry pi

Script to change hostfile to block websites. (Can we show a certain visual instead of the website?)

Have a something that attaches to a wheel

Deliverable 2:

Either server or tweeting (some way of getting our data onto the web for later use).

Have something that attaches to many wheels

Be taking distance measurements from small wheel

Deliverable 3:

Have something that attaches to many wheels easily (and is waterproof, resistant to life)

Be able to Tweet measurements? (if this is something we still care about)

Chrome extension?