Remote Energy Monitoring and Control

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What did we want?

"I have some external hard drives I don't want to leave on all the time, but sometimes I need them to be on when I'm out of the house"

"My living room has a lot of lamps, I'd like to be able to turn them on with my phone"

What did we want?

"I want all the things in my house to be powered by node.js"

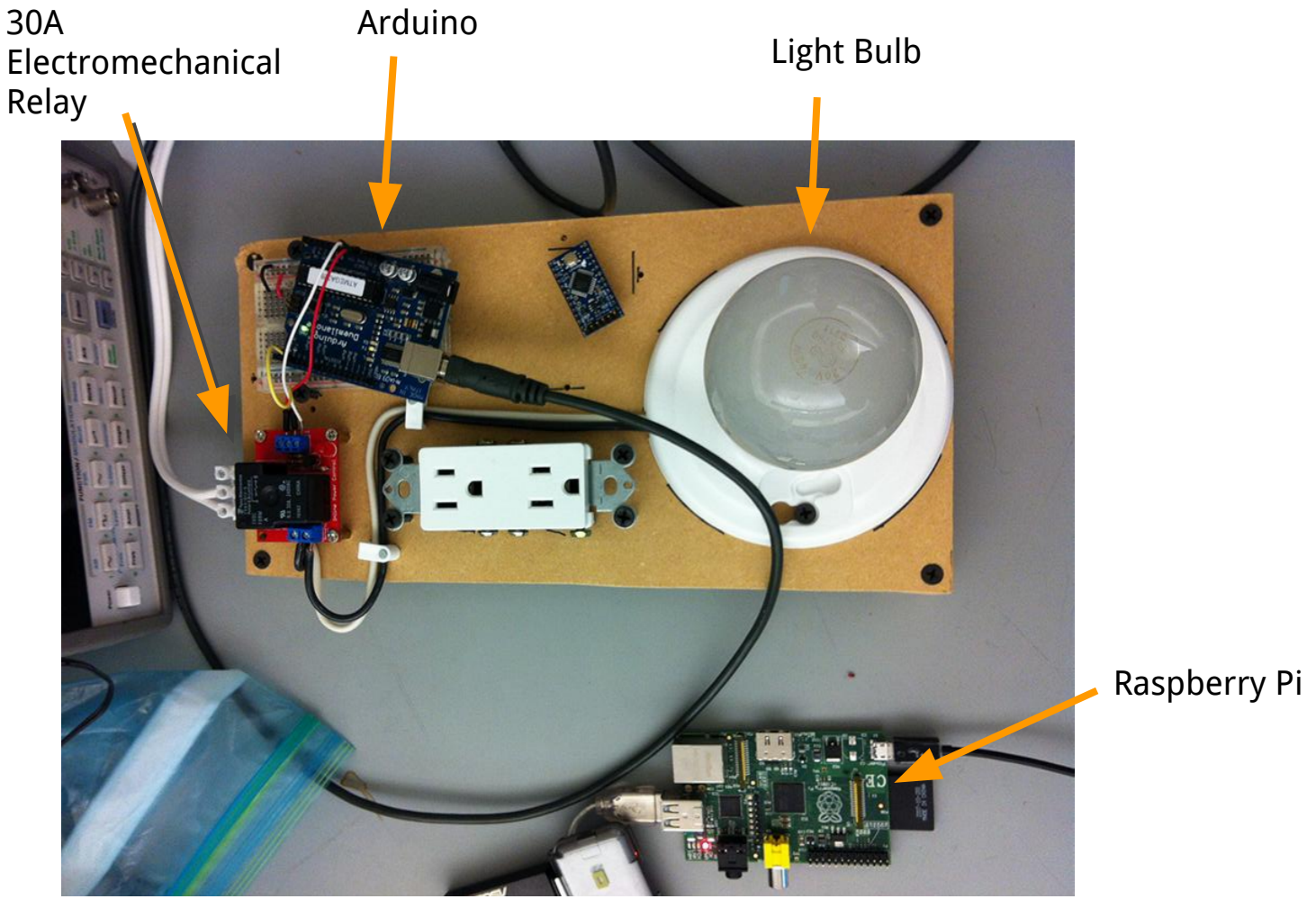
"I want to know where most of my power consumption is coming from so I can reduce my electricity bill"

Requirements

- Multiple individually controlled power sockets
  - Visual indication that the circuit is active (LEDs on device)
- Controllable from multiple platforms
  - Mobile phone app
  - Web app
  - Physical controls on the unit
- Power usage from each socket can be measured
  - Web app will plot power usage in a powerful, interactive display

Prototype 1

Single web controllable circuit

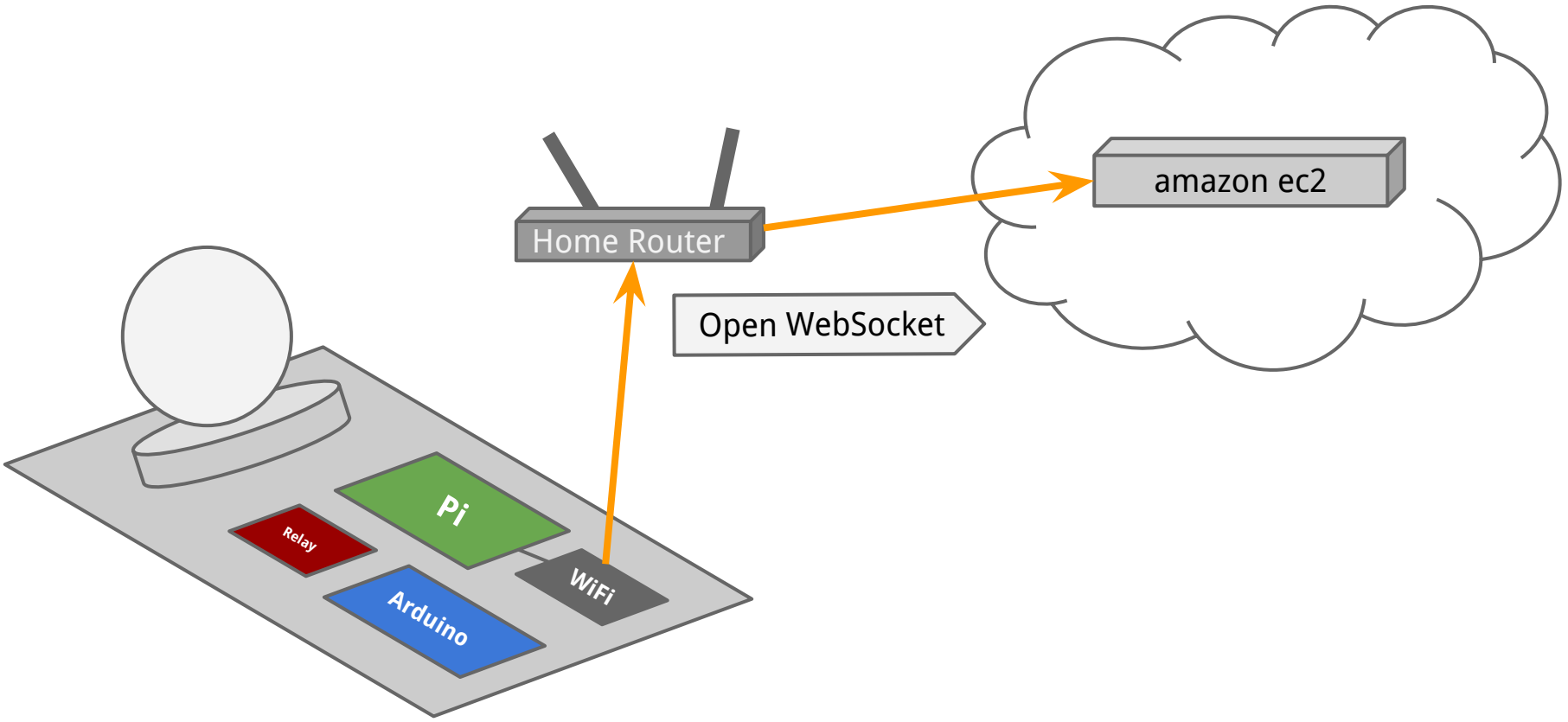


Prototype 1

Try it out:

http://api.gocloudpowered.com

Prototype 1



If you missed it:
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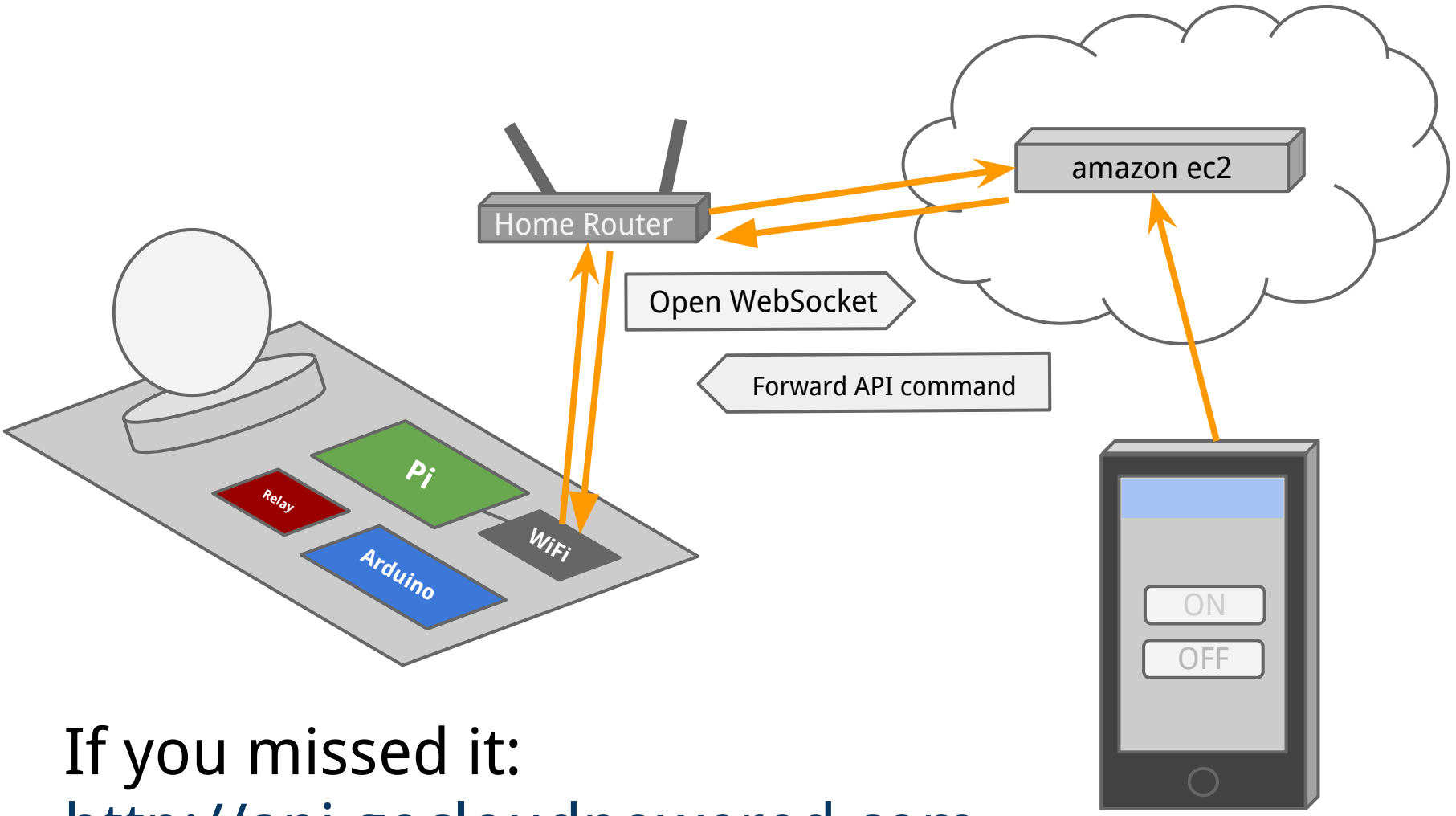

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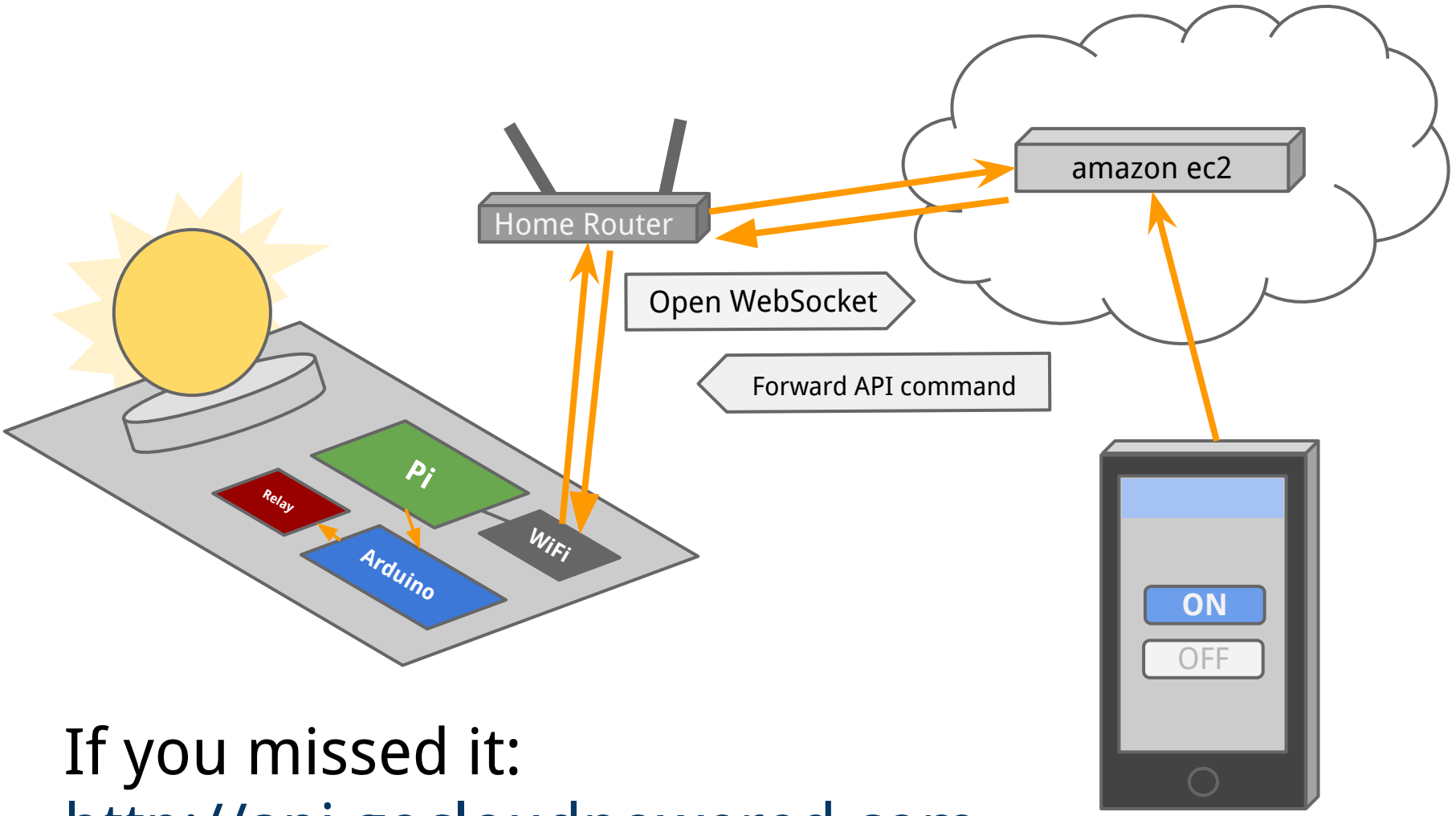

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Cloudpower API

Will be accessible as a REST api for any web enabled thing to hit

http://api.gocloudpowered.com/api/v1/device/:device-id/:outlet

GET request - get the state of an outlet
POST request - set the state of an outlet

Roadmap

Prototype 2

- get wifi credentials by reading QR code using built in camera
- measure power (current) using TI MSP430AFE + Current Transformer / shunt or similar setup

Prototype 3

- multiple power sockets
- reduce power usage
- web ui + phonegap app

One last time:
http://api.gocloudpowered.com

Template Slide

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