

GETTING PHYSICAL:

Networked Hardware with Node.js
(and friends)

Ted Hayes

ted.hayes@liminastudio.com
log.liminastudio.com

GETTING PHYSICAL:

Networked Hardware with Node.js
(and friends)

0x73DB07

ted.hayes@liminastudio.com
log.liminastudio.com



WORKSHOP NOTES!

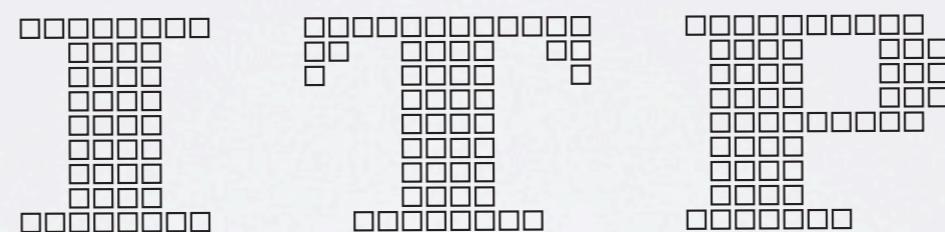
<http://log.liminastudio.com/?p=1075>

ABOUT T3DB0T

Director of Nefarious Experimentation



Adjunct Professor at ITP @ NYU



Director of Interactive Electronics

RAB



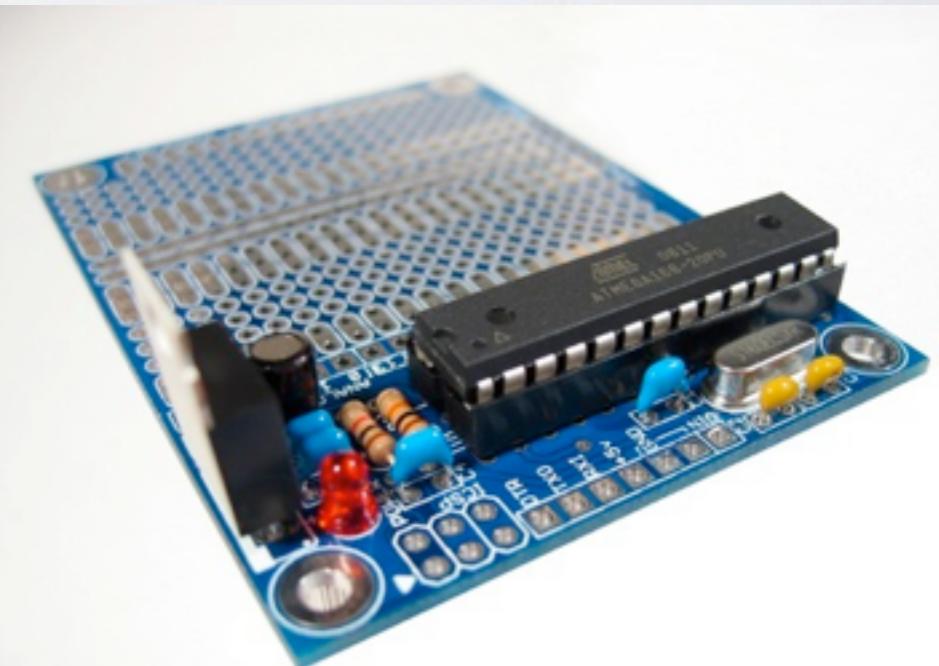
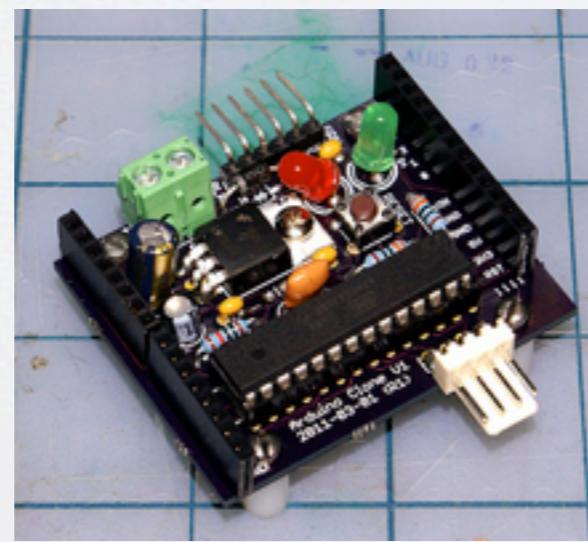
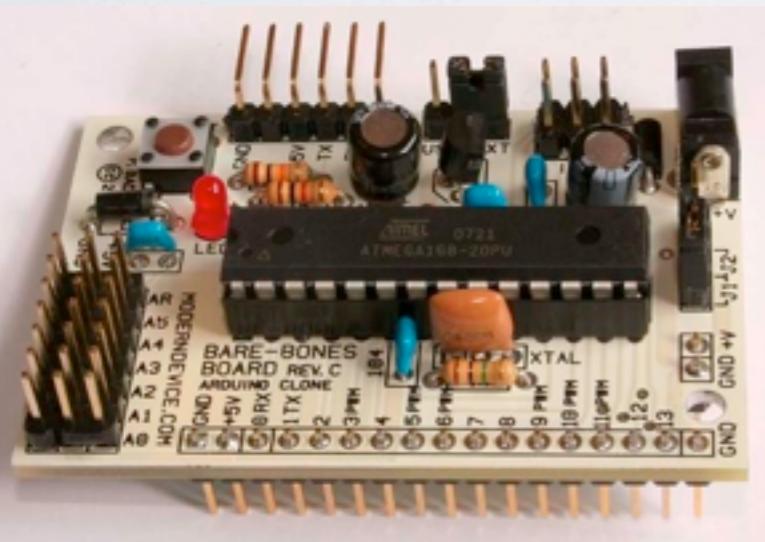
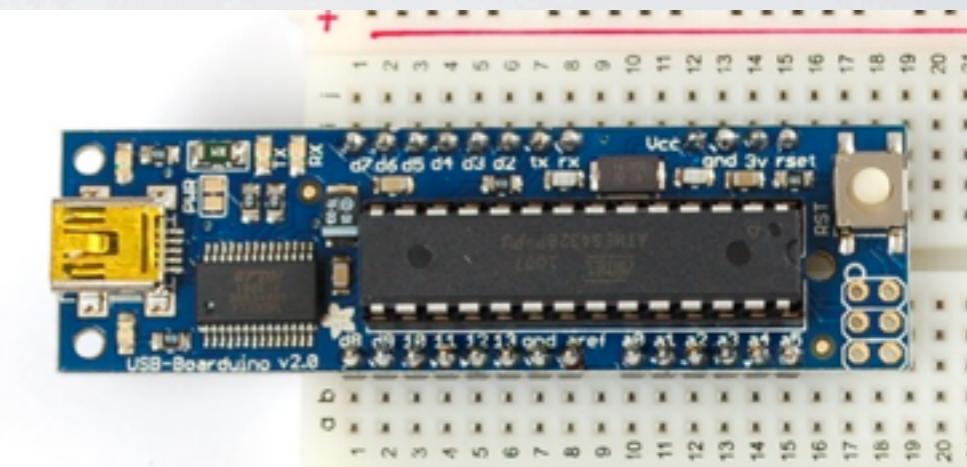
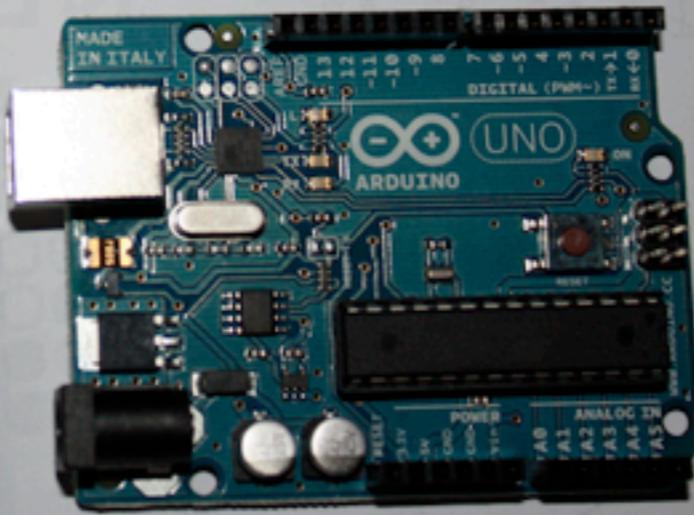
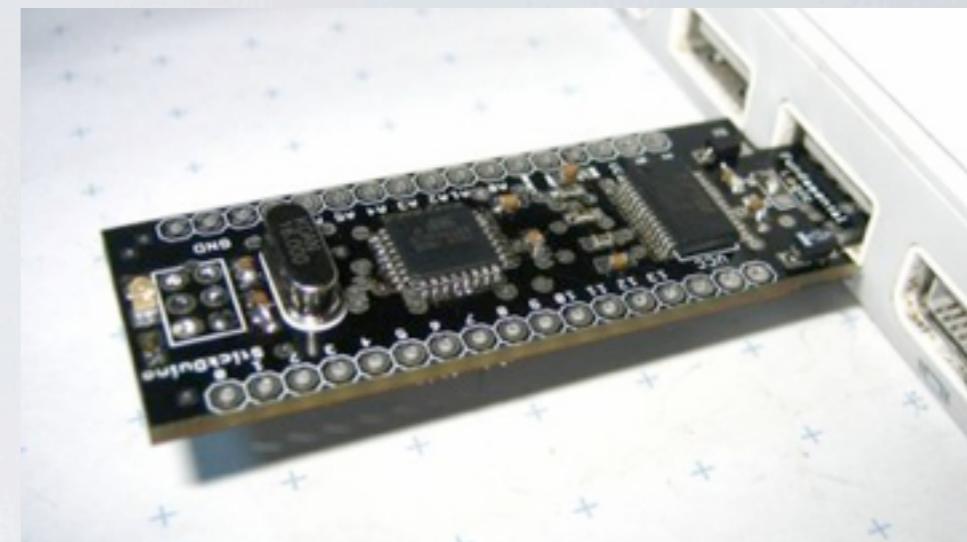
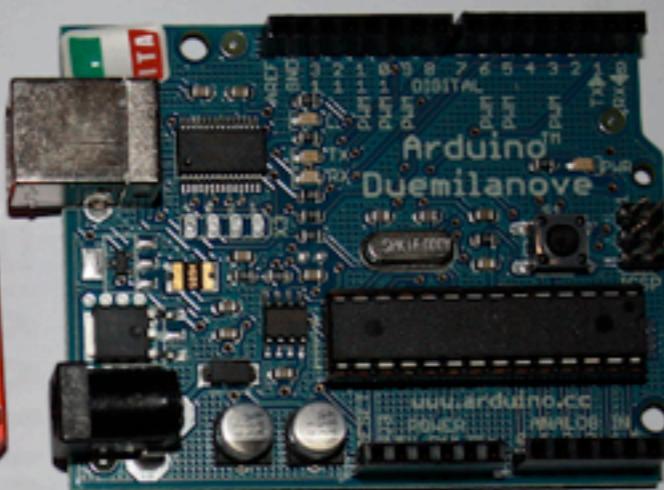
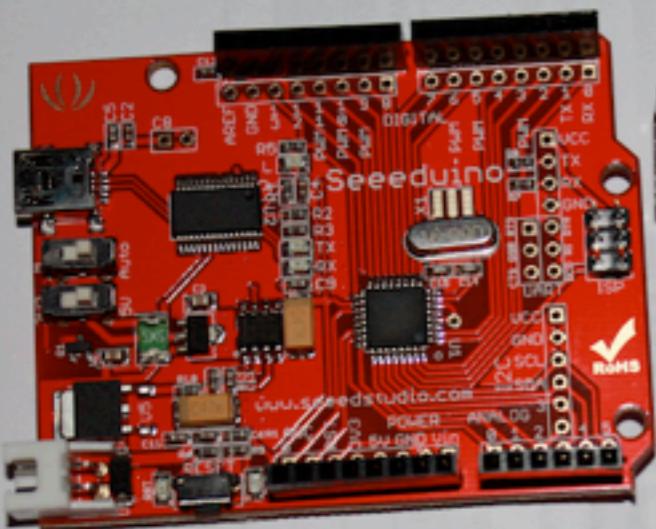
KITCHEN TABLE CODERS

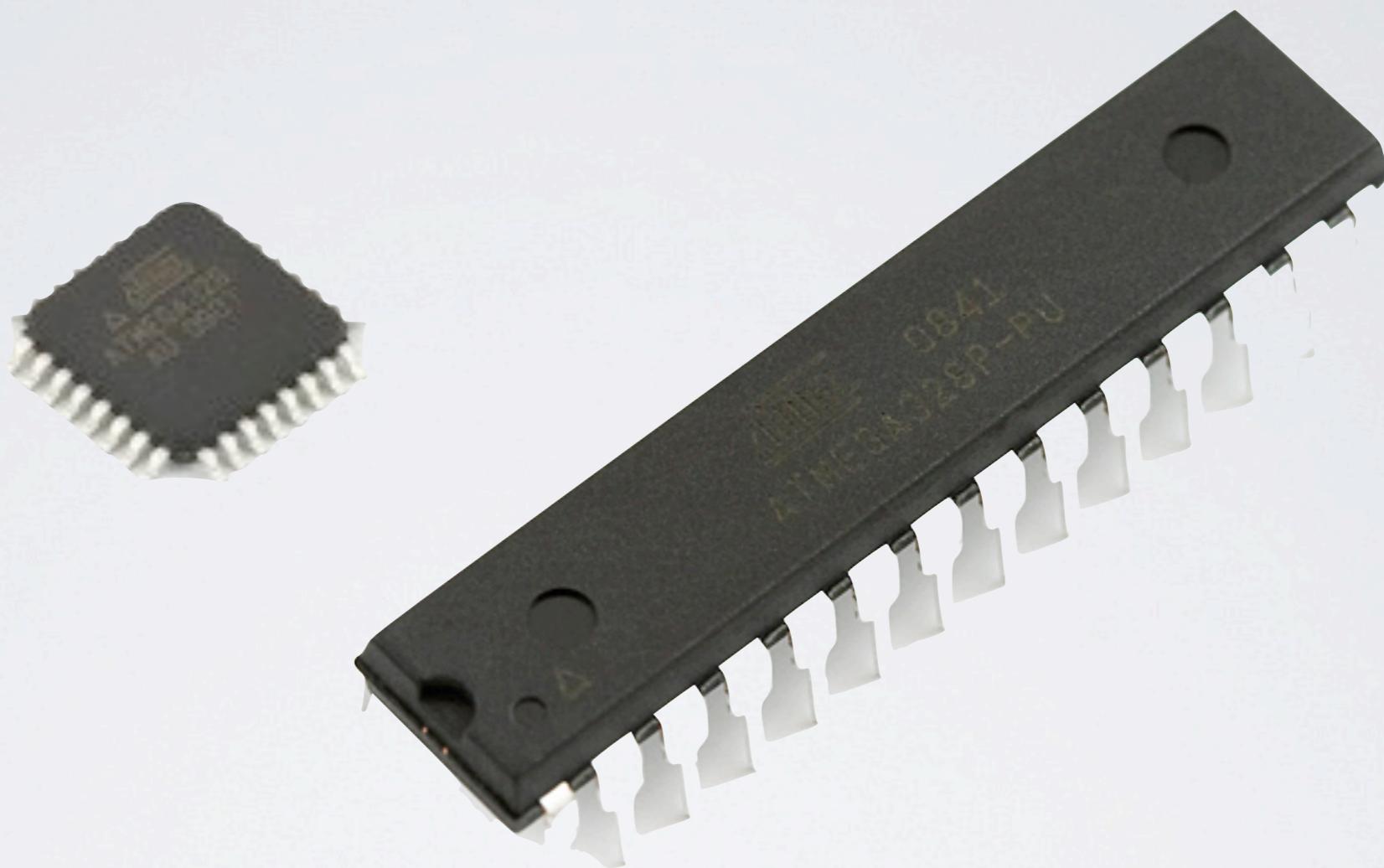
<http://kitchentablecoders.com>

WHO'S DONE...

- Physical Computing / Hardware?
 - Network programming?
 - Node.js?
 - Websockets?

ARDUINOS EVERYWHERE!





Atmel ATmega328

WIRELESS CONNECTIONS

Roving Networks RN-171

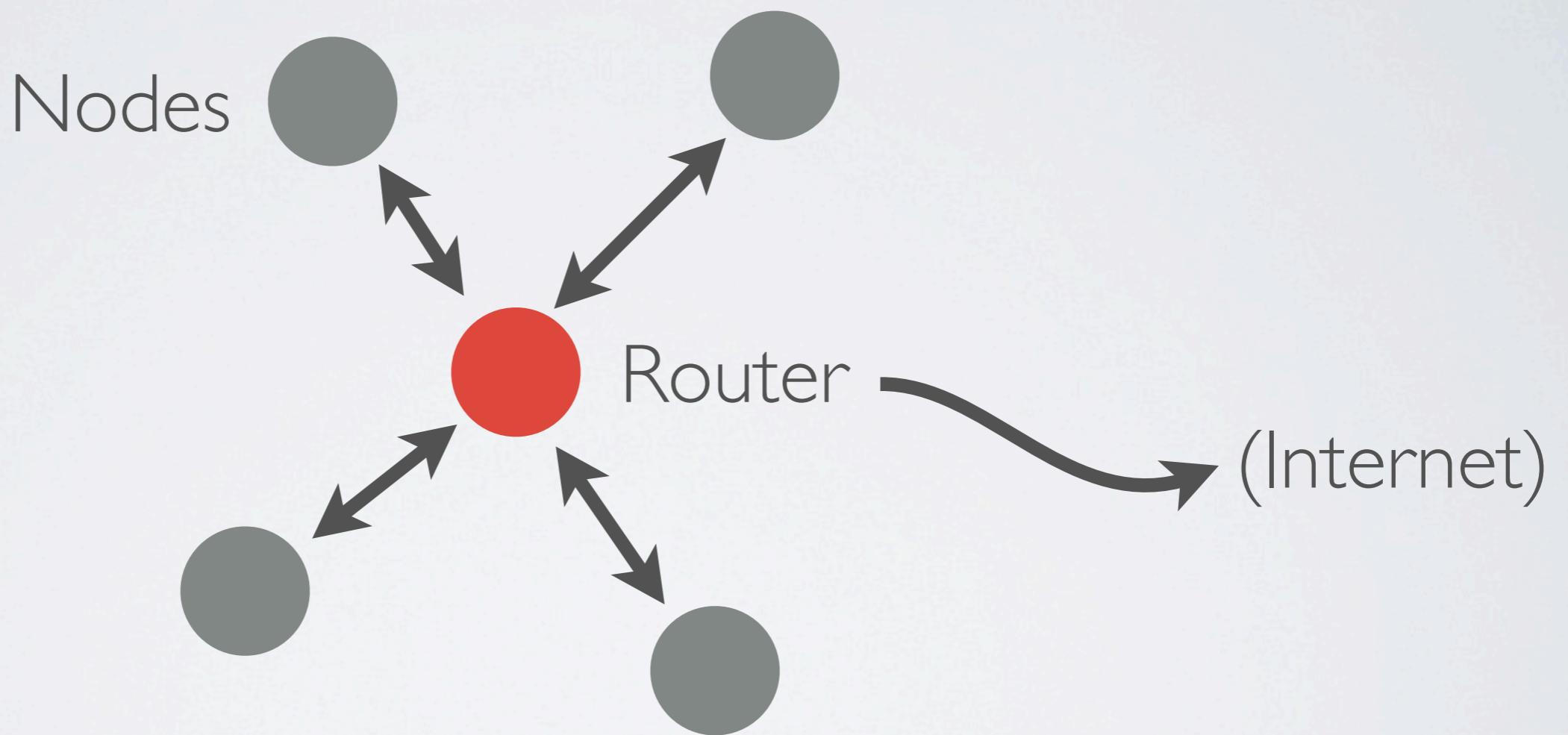


Digi XBee

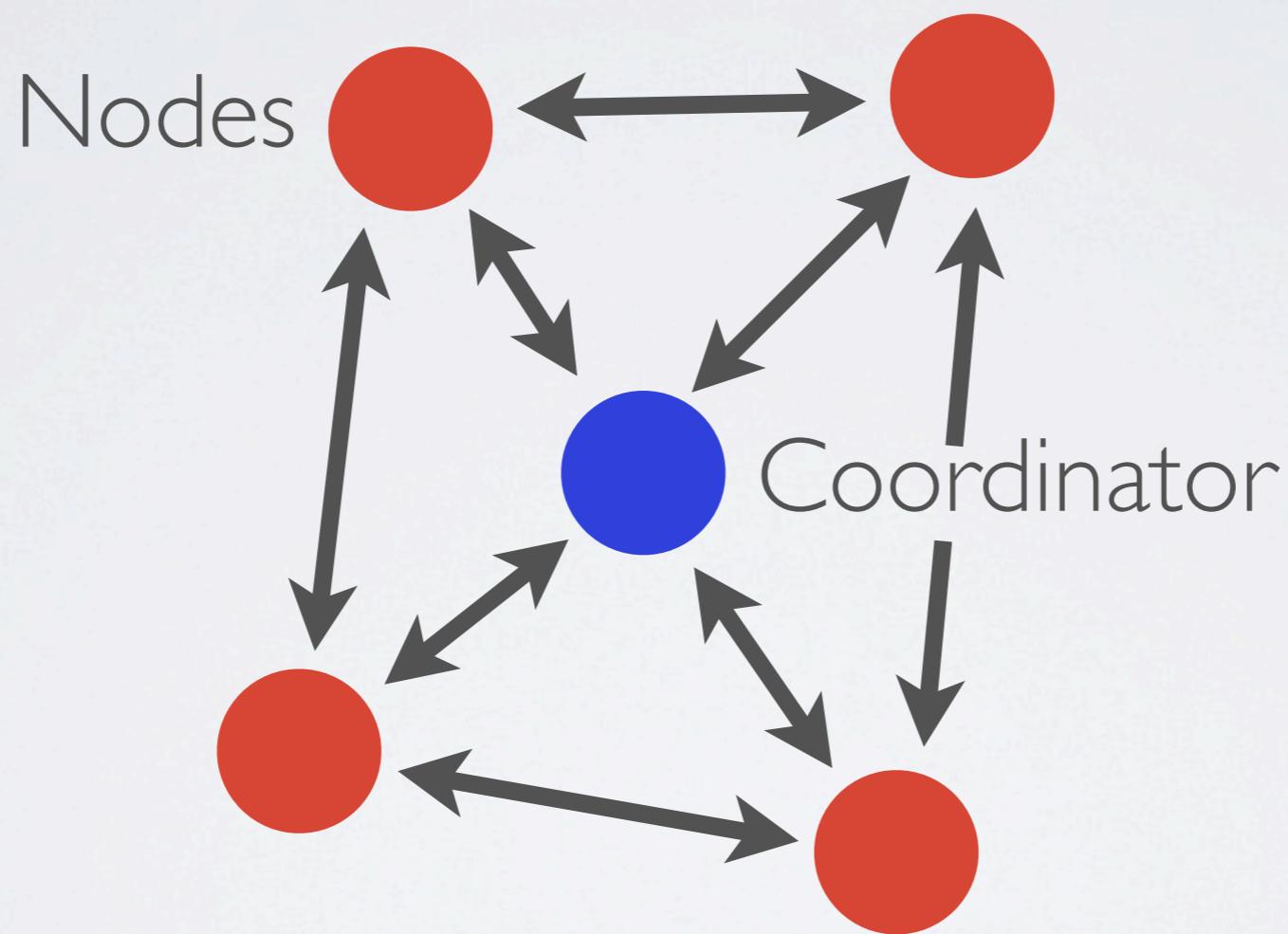


Roving Networks RN-XV

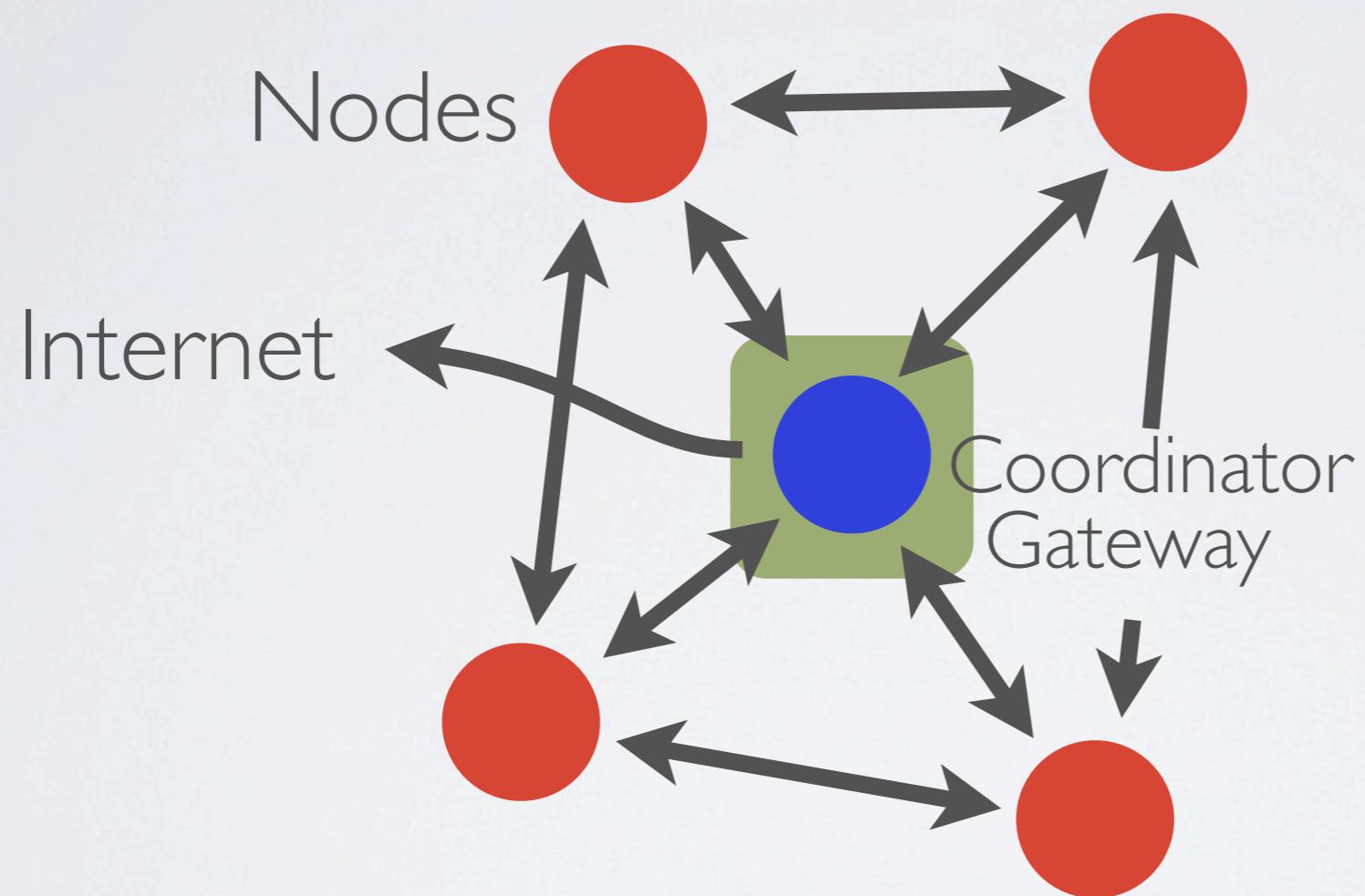
Star Topology - WiFi



Mesh Topology - Zigbee

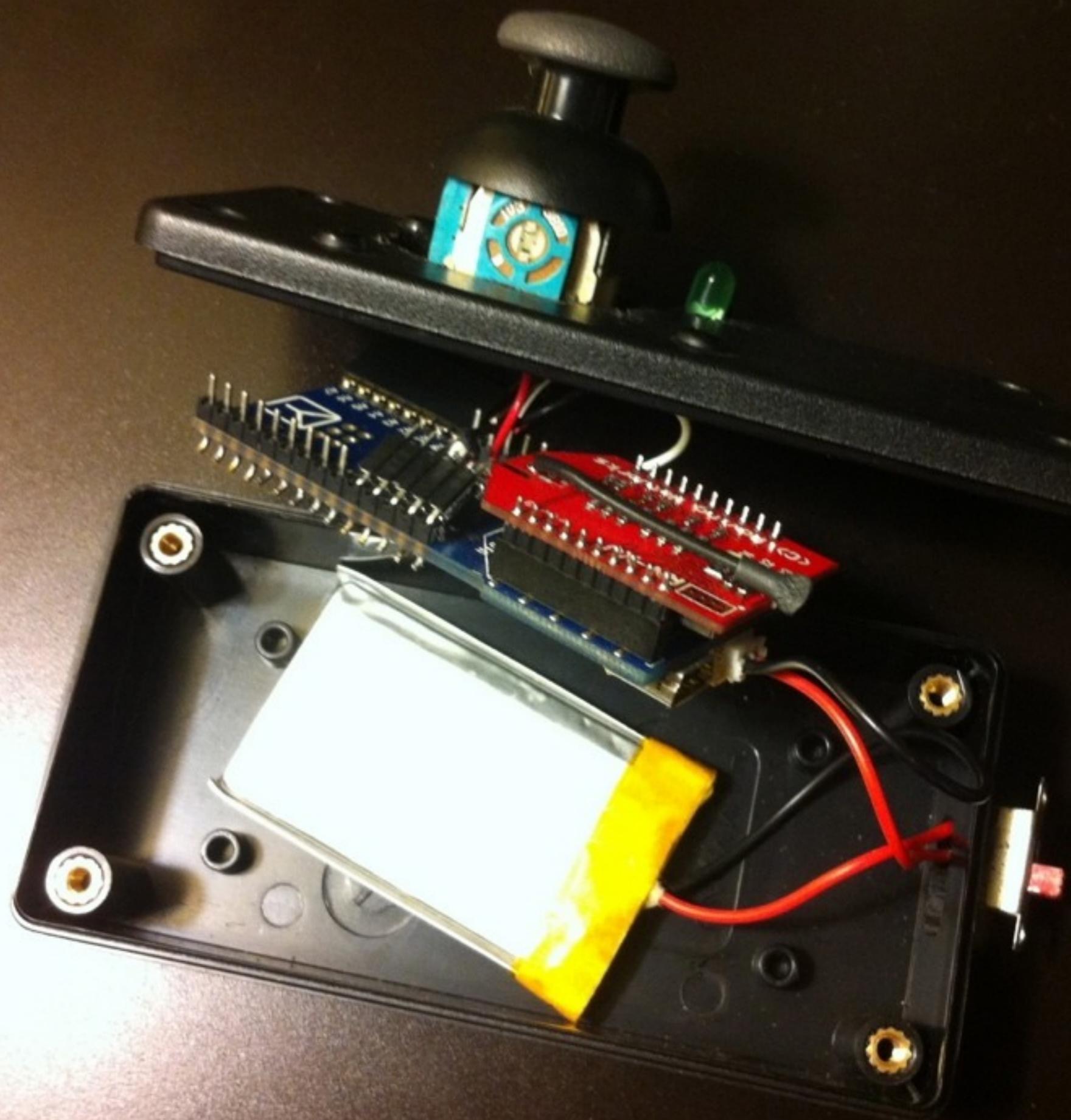


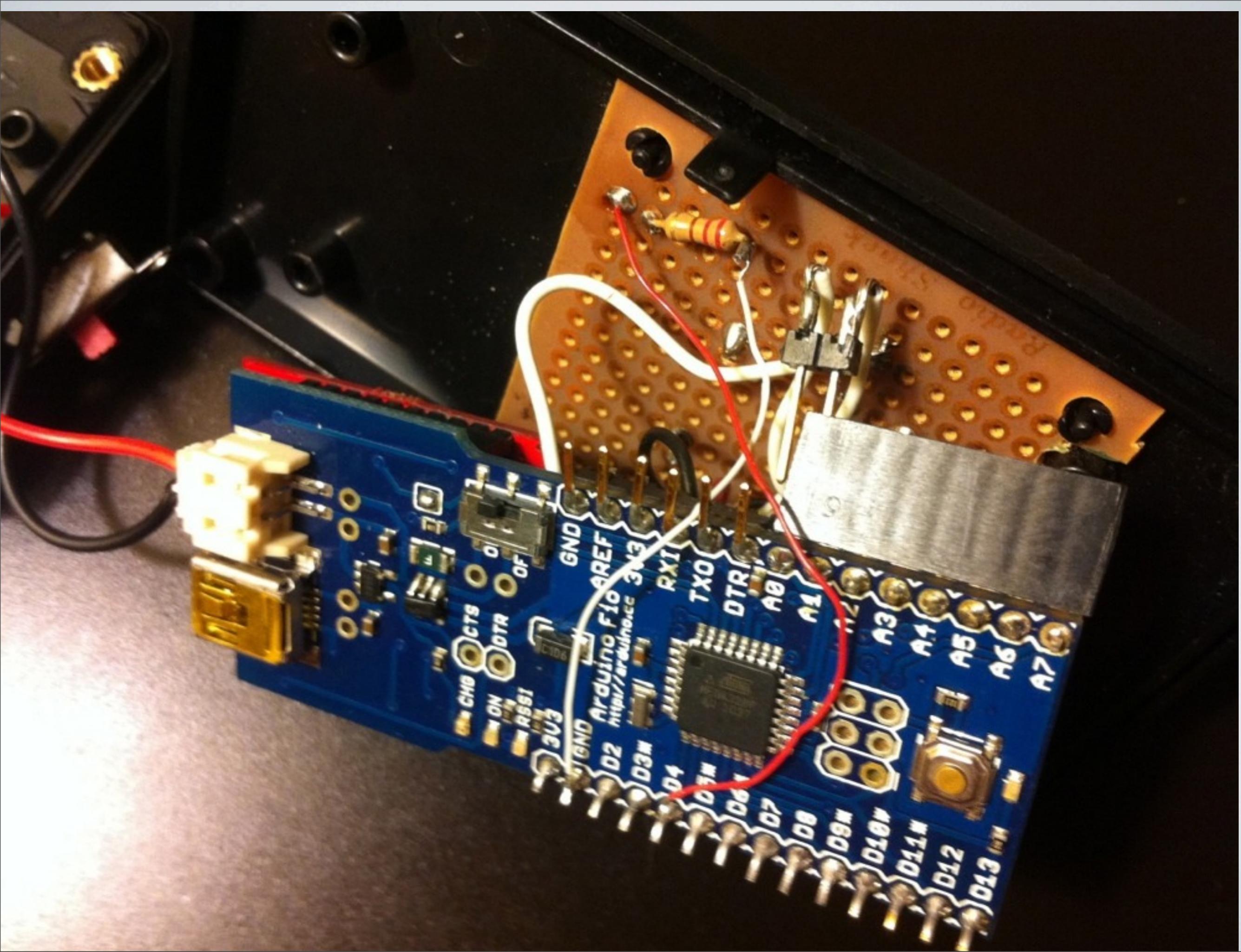
Mesh Topology - Zigbee Connecting to the Internet?

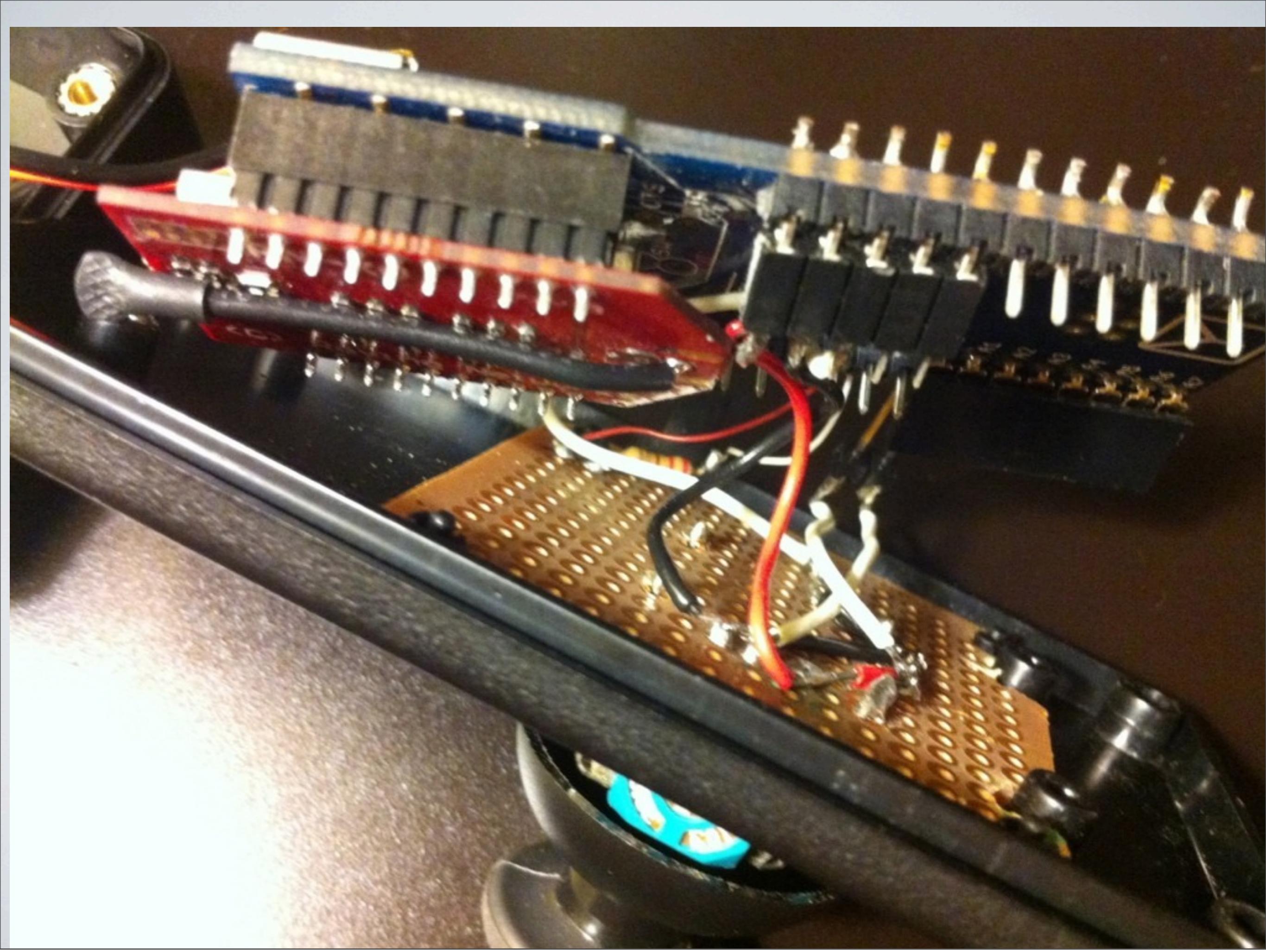


SOCKETS, YAY!

- Sockets have been around for a while
- HTTP cuts out after the transaction is done
 - REST is not a persistent connection
 - Games and other applications require a persistent, bidirectional connection

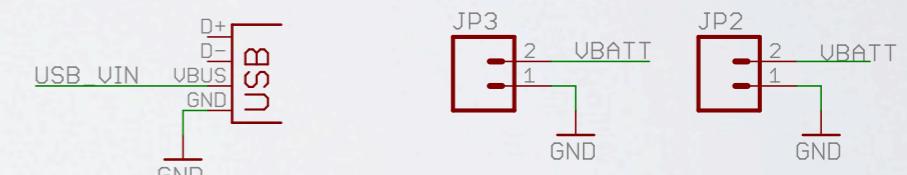
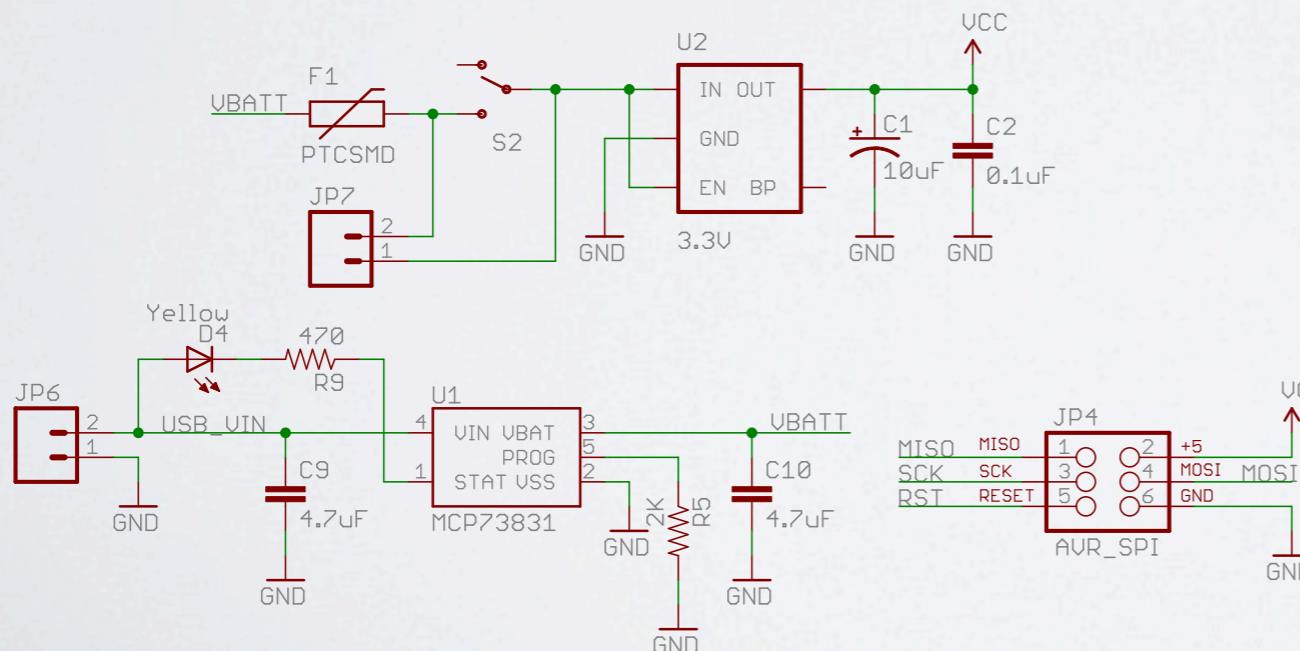
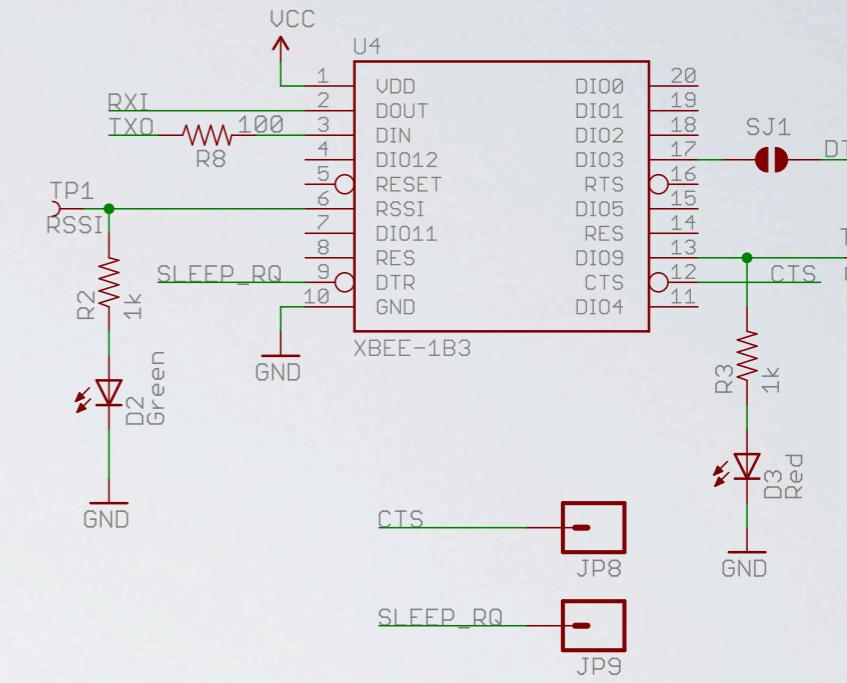
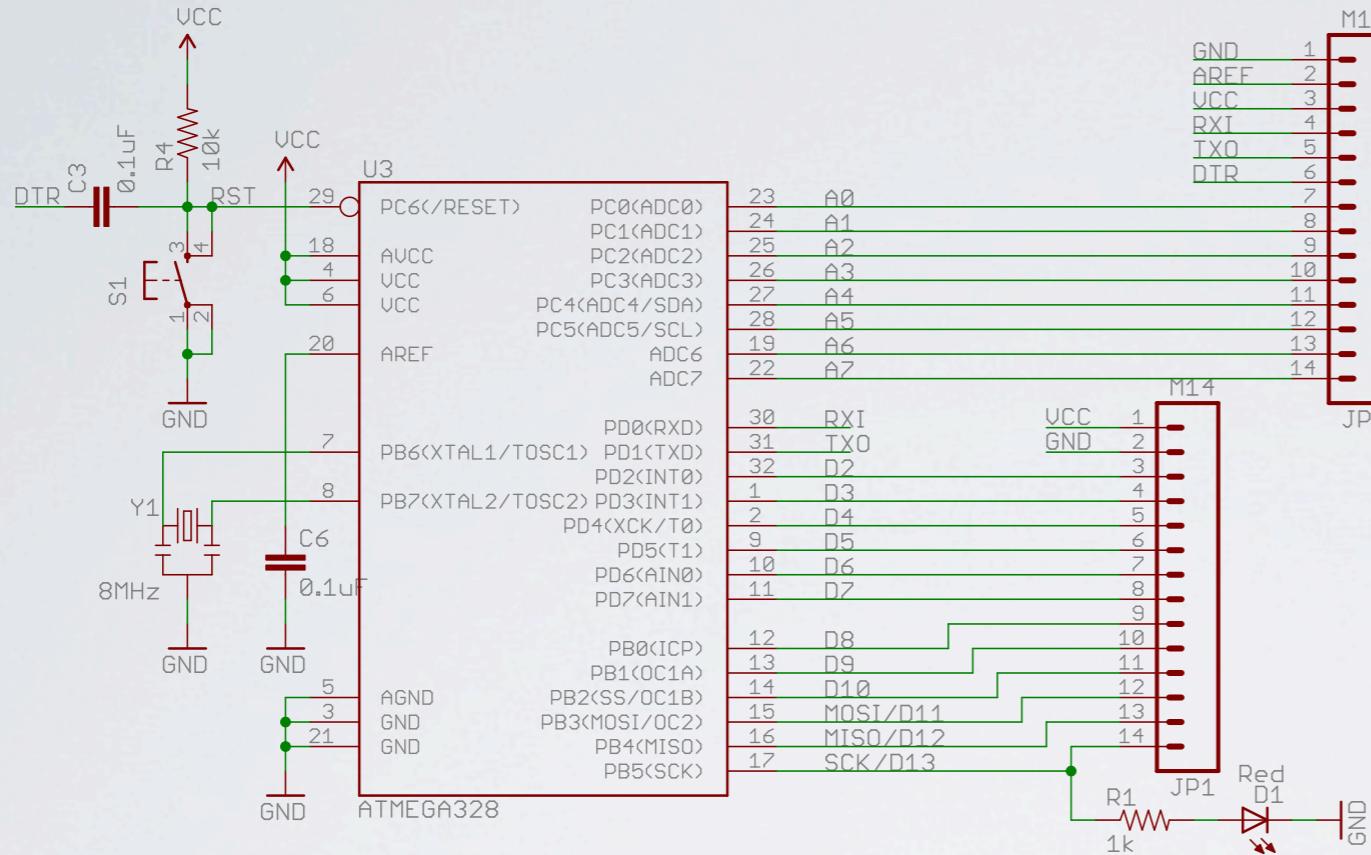






Thursday, October 4, 12

Original design (LilyPad Arduino v1.6) by L. Buechley and N. Seidle
 Released under the Creative Commons Attribution Share-Alike 3.0 License
<http://creativecommons.org/licenses/by-sa/3.0>
 Design by: S. Kobayashi and N. Seidle



FIO_LOGO	
TITLE: Arduino-Fio-v23	SFE
Document Number: Shigeru Kobayashi	REV:
Date: 8/23/2010 9:58:10 AM	Sheet: 1/1

SO MANY TECHNOLOGIES

- Technologies
 - WiFi
 - ZigBee
 - NFC
 - RFID
 - Etc.
- Devices
 - Tweet-a-Watt
 - Botanicalls
 - Koubachi
 - Nest
 - Belkin Wemo
 - WiThings bathroom scale
 - Modlet
 - ‘Ambient’ Devices
 - Chumby
 - Karotz
 - Glowy orbs, etc.
 - Etc., etc., etc.
- Device Platforms / Cloud Services
 - Cosm (formerly Pachube)
 - IFTTT (If This Then That)
 - Twine
 - Aiko
 - iDigi (XBee, ZigBee)