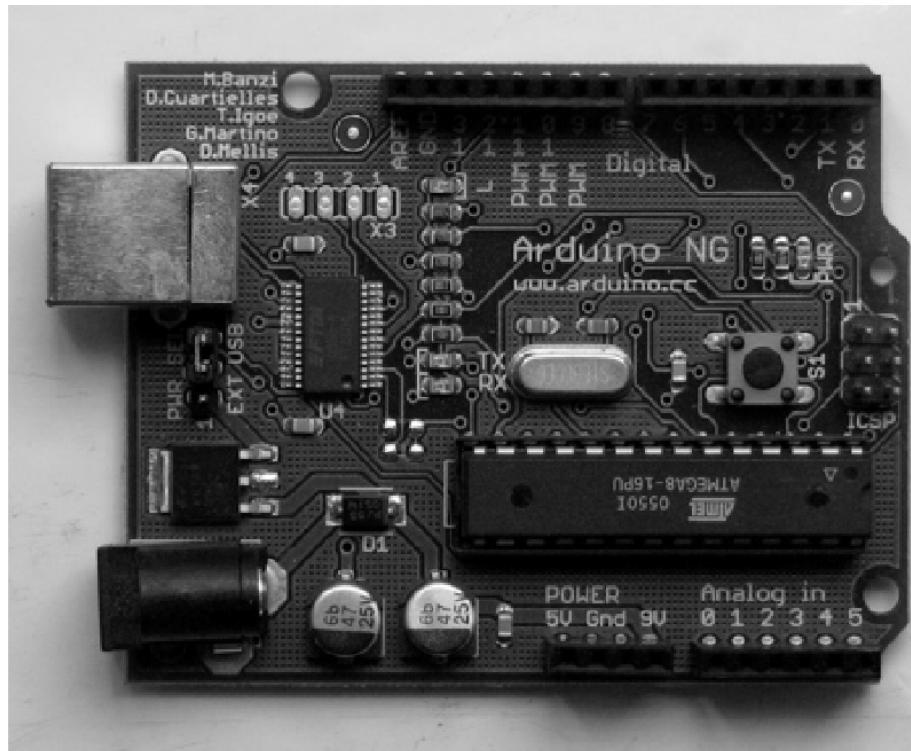


Intro to the Arduino

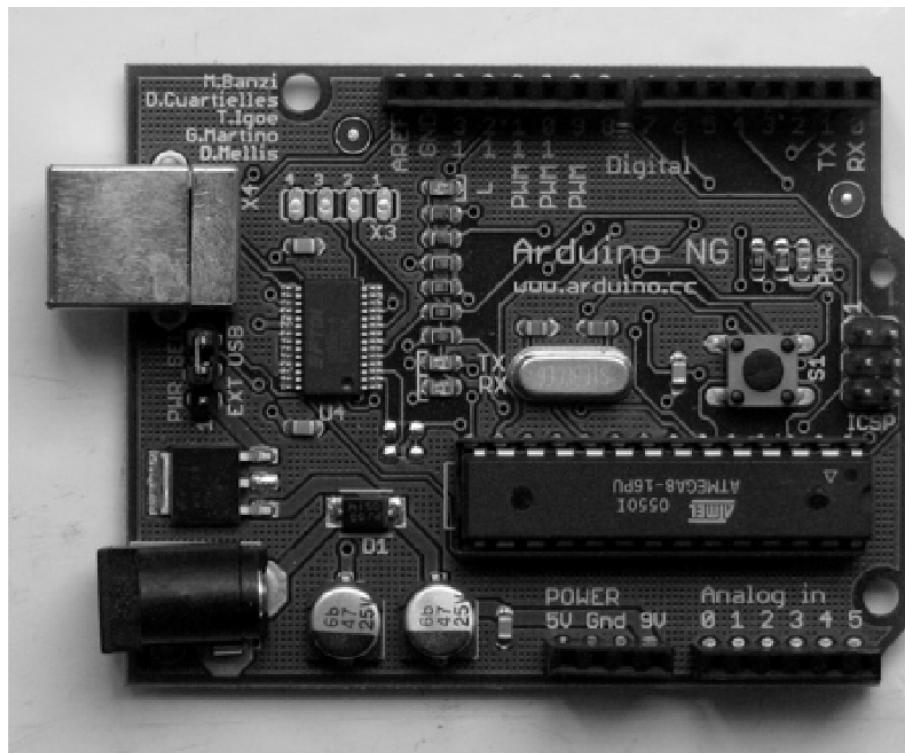
What is Arduino?

- Physical computing platform
- Open source
- “Hardware Abstracted” Wiring Language
- USB programmable
- Large community
- Inexpensive (\$31.95 from Sparkfun)

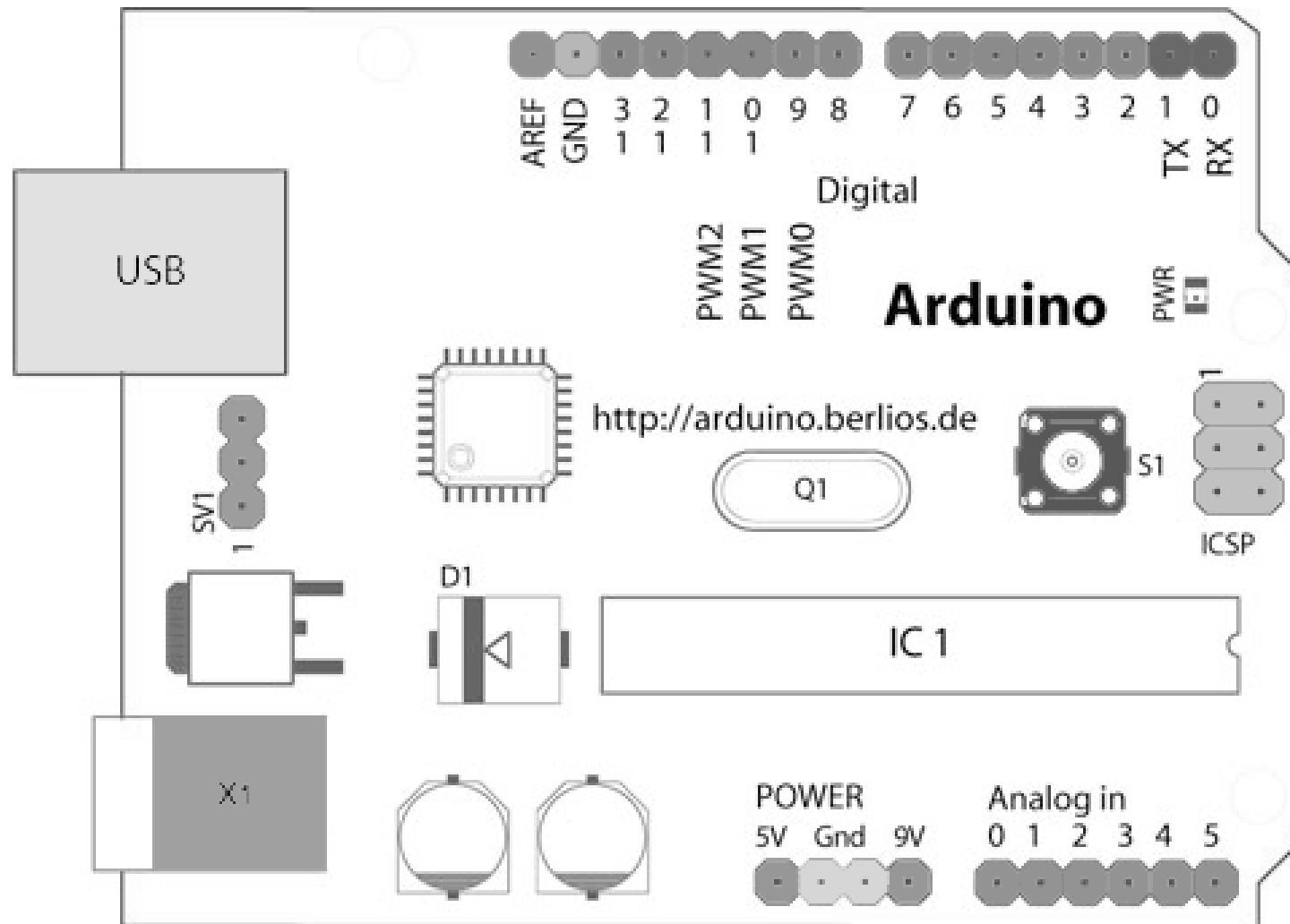


What is Arduino?

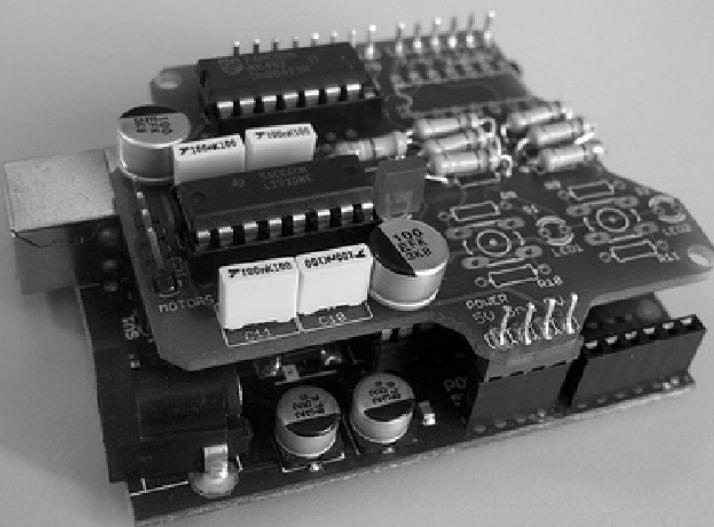
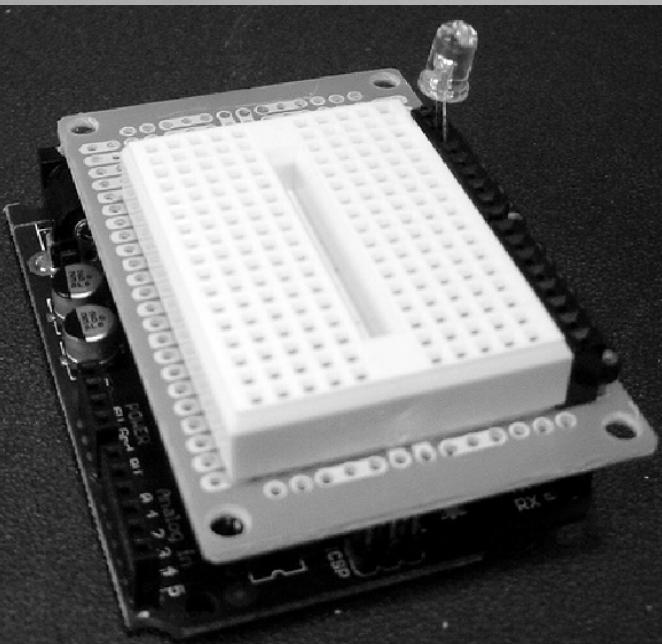
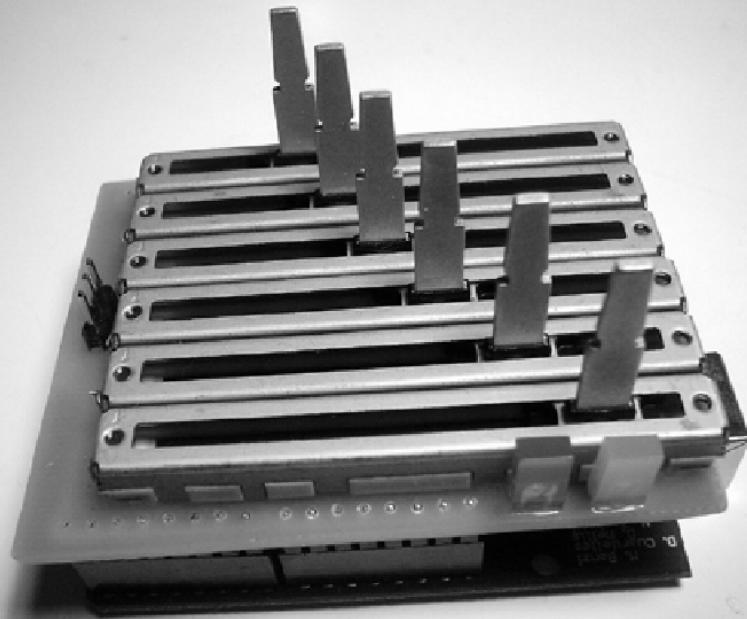
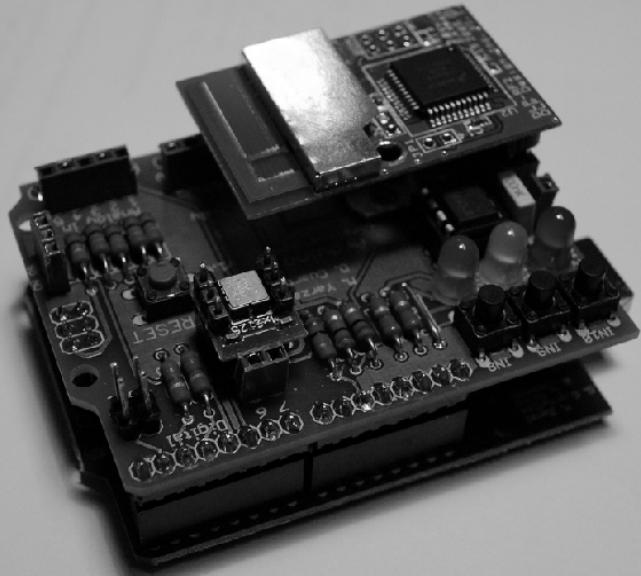
- Based on ATmega8
 - w. USB interface
 - Voltage regulator
 - The “power” is in:
 - Standard board design
 - Wiring language
 - Open Source



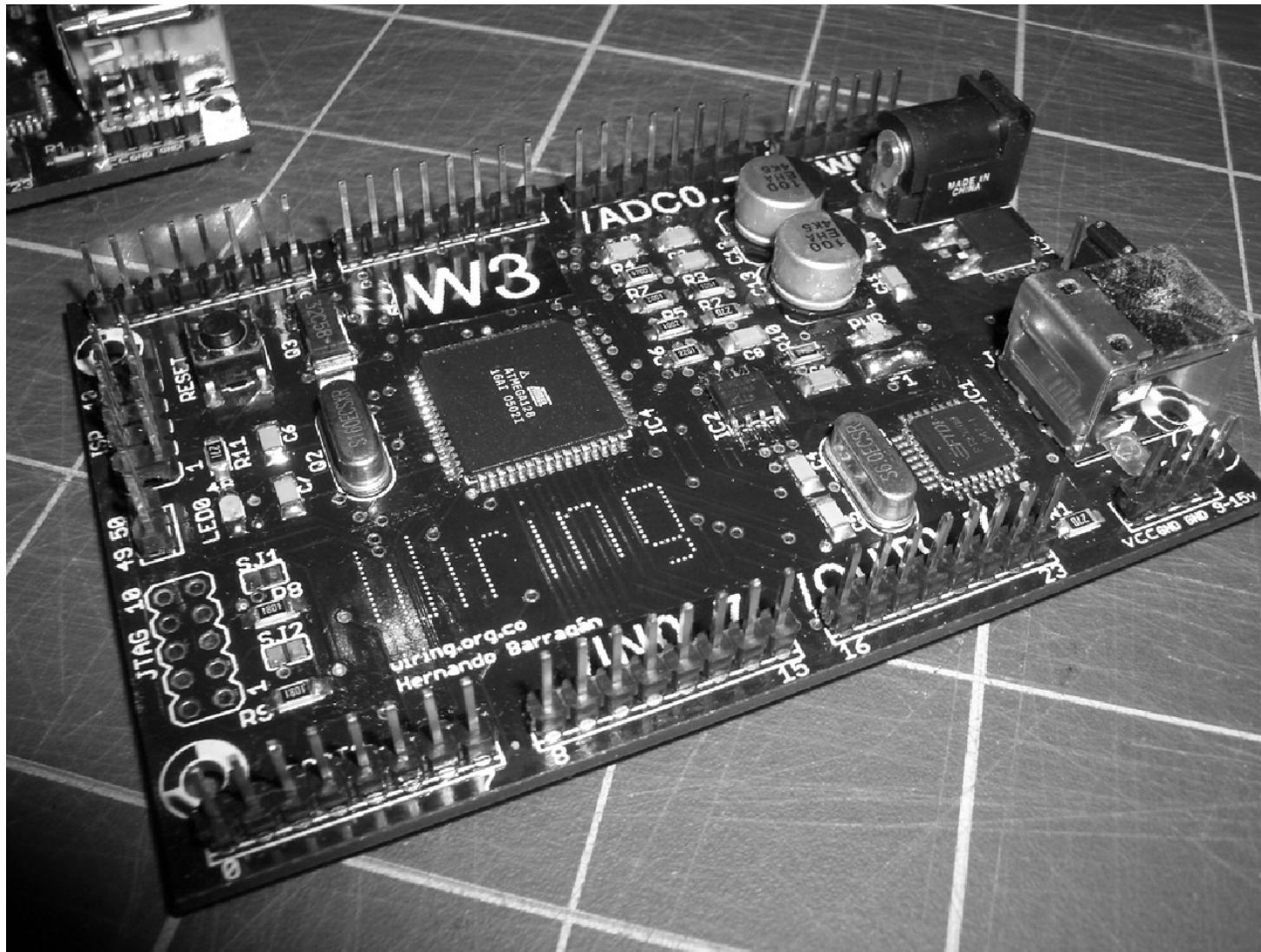
Arduino Board Overview



“Shields”



Big Brother: Wiring (\$79.95)



Arduino Project Examples:

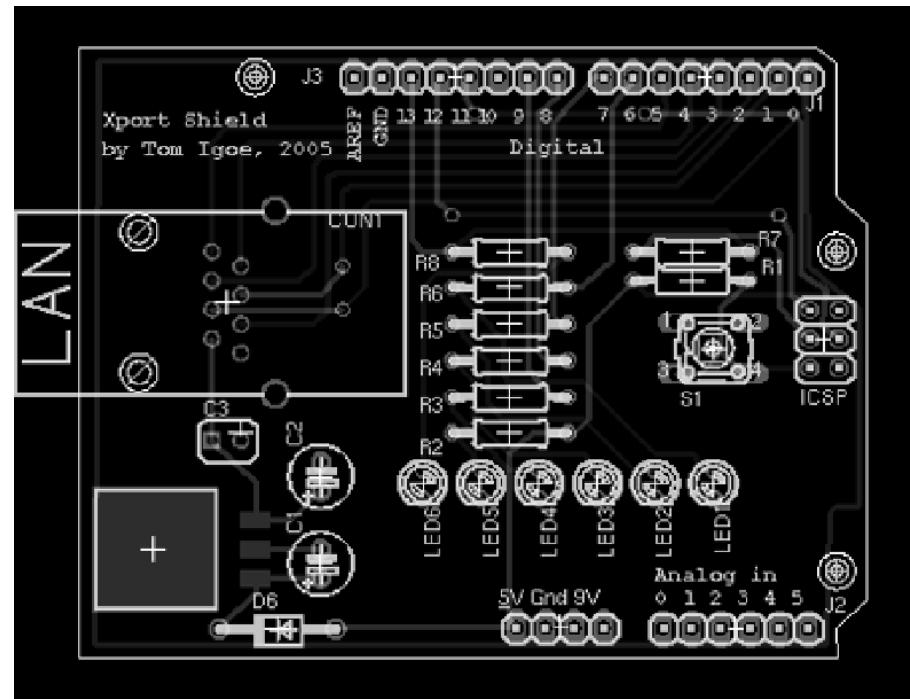
- LED Matrix from processing
 - <http://www.youtube.com/watch?v=kkJDWrM-K4U>
- Arduino Flash Control
 - <http://www.youtube.com/watch?v=7T1jmj4KCIA>
- Google Earthwalk
 - <http://www.youtube.com/watch?v=zoNwJ931aql>
- Ultrasonic grass
 - <http://www.youtube.com/watch?v=bZIKbuZaJSQ>
- Piezo pong
 - <http://www.youtube.com/watch?v=nXLDyBFsqdg>
- Accelerometer and Flash
 - <http://www.youtube.com/watch?v=49WBPll03EE>
- Interaction “Soapbox”
 - <http://www.youtube.com/watch?v=TwhOYmNCqrg>

PHY2PHY



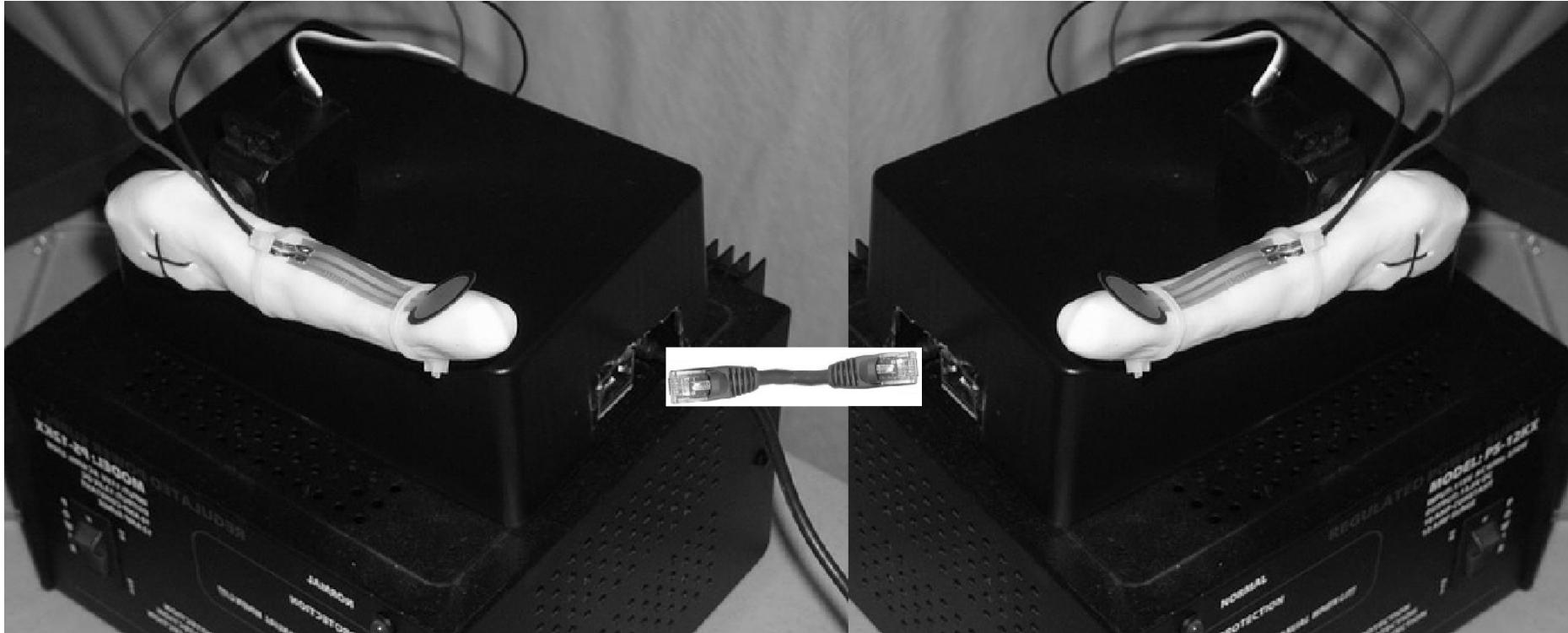
Connecting **physical** people
and things over IP

Arduino plus XPort for IP



- Using Arduino shield for Lantronix Xport

Touch to Touch 1



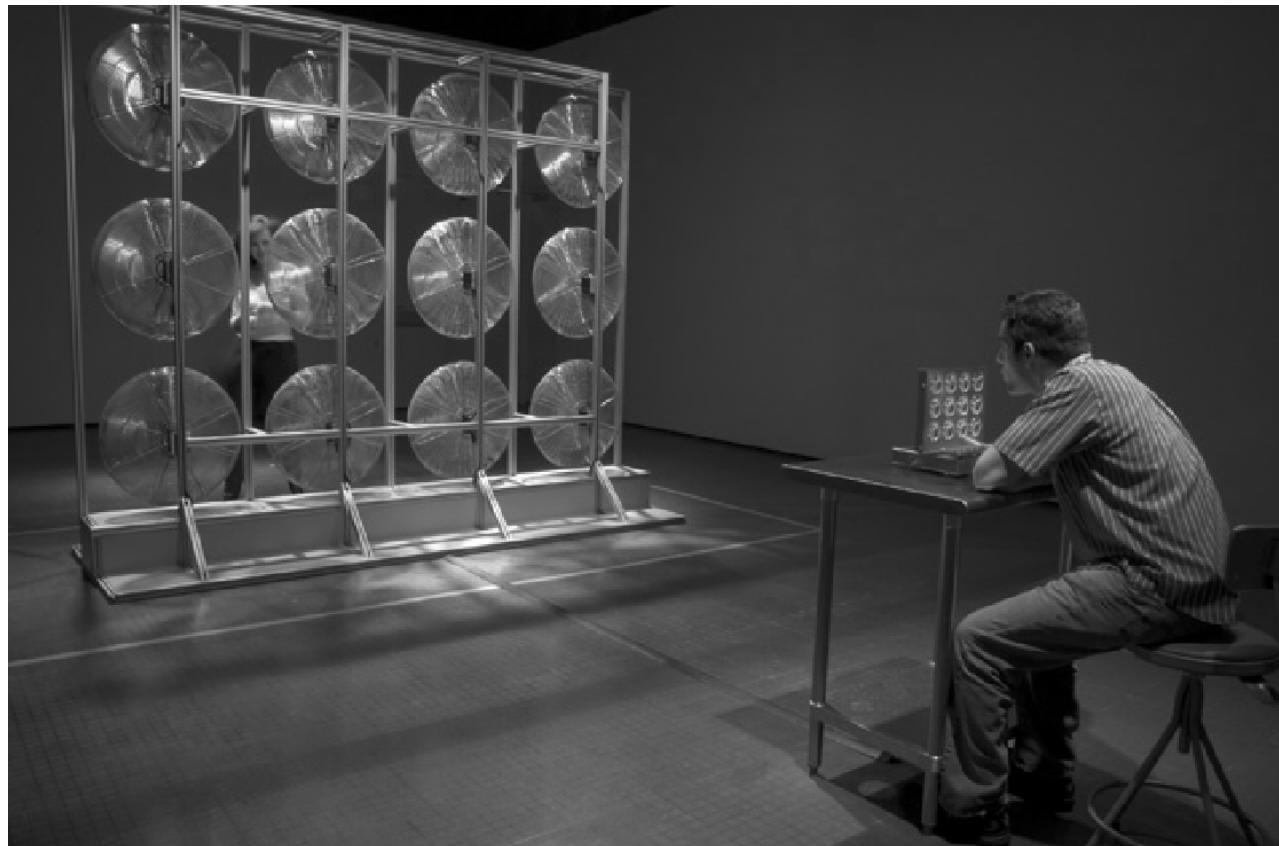
“Touch Macquette”, Thomas Edwards, 2006

Touch to Touch 2



“lyt_A”, FoAM, 2006 (<http://www.fo.am>)

Breath to Breath



“Blow Up”, Scott Snibbe, 2005

Massage to Massage



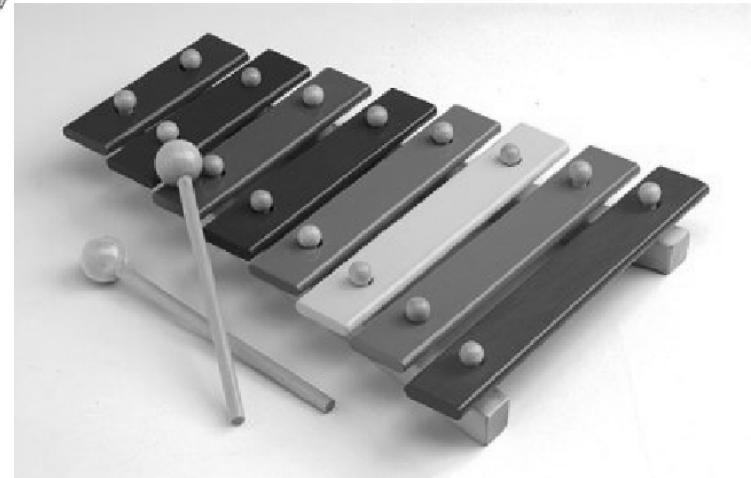
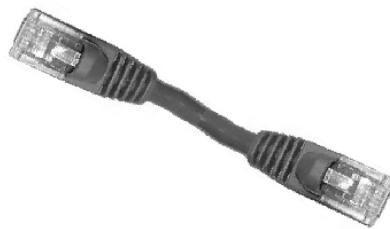
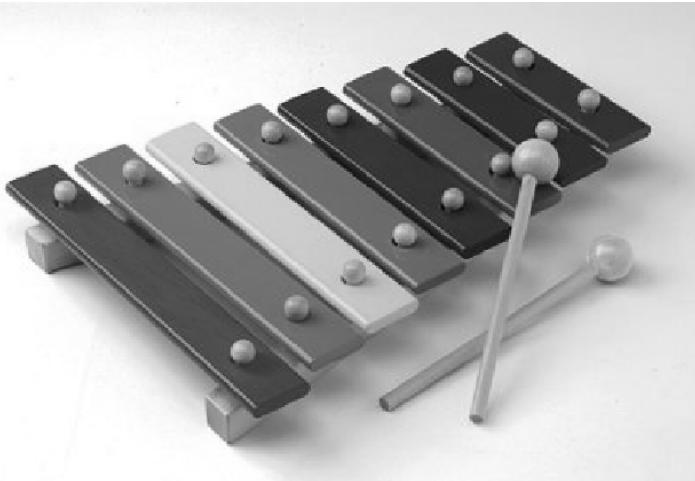
**Sharper Image
Shiatsu Massage
Cushion**

Pin to Pain?



“Voodoo Word”,
Mike Larsson

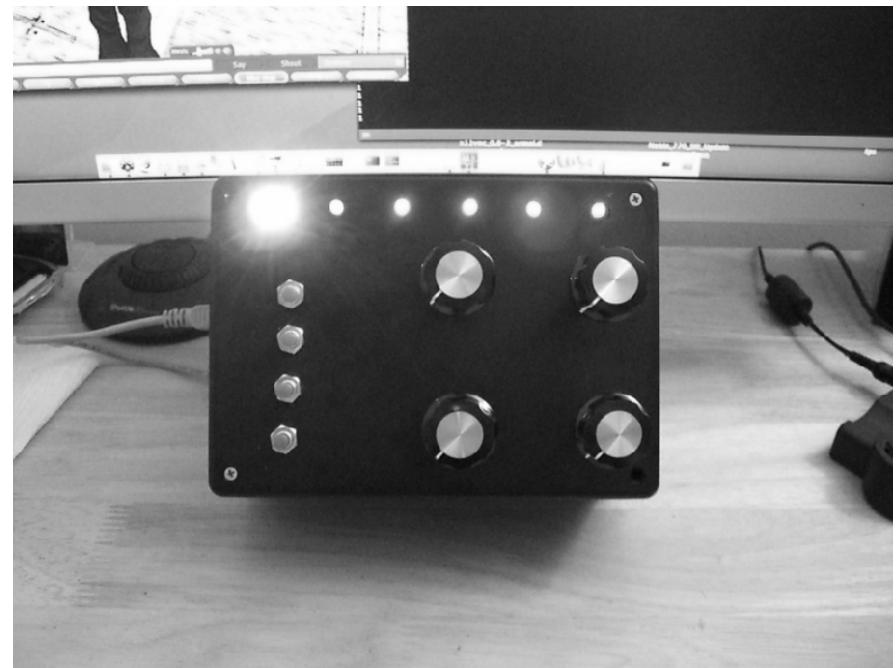
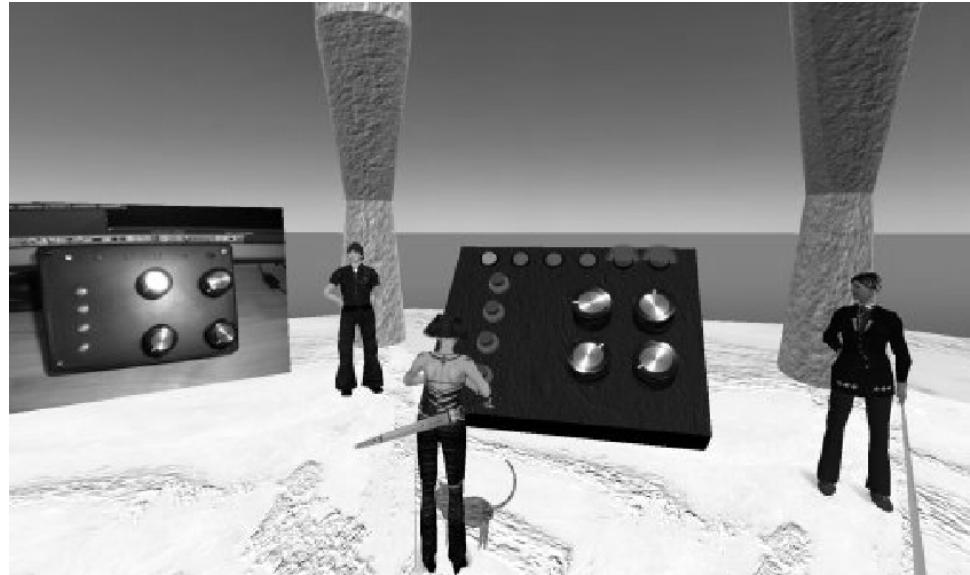
Xylophone to Xylophone



Change to Change



PHY SL to PHY RL



Andy Fundinger / wwward

http://wwward.typepad.com/blog/2007/01/realworld_contr.html