

Real World / Second Life



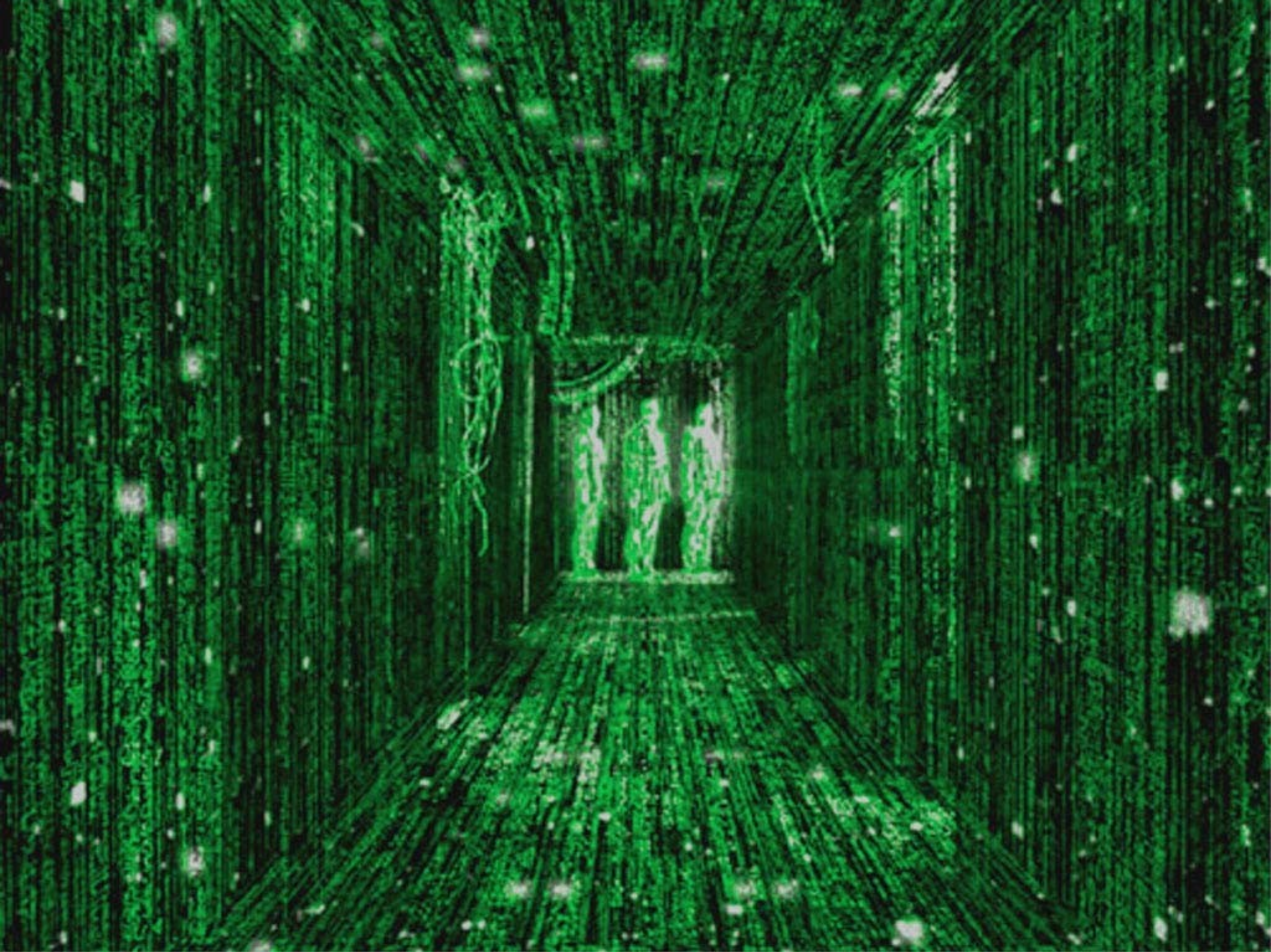
Joining the Real and the Virtual

Jonathan Ozer

January 30th, 2008
Linux.Conf.Au 2008
Melbourne, Australia

free your mind













**re-imagine
reality**



DANGER OF DEATH

**Warning:
this can kill
you!**

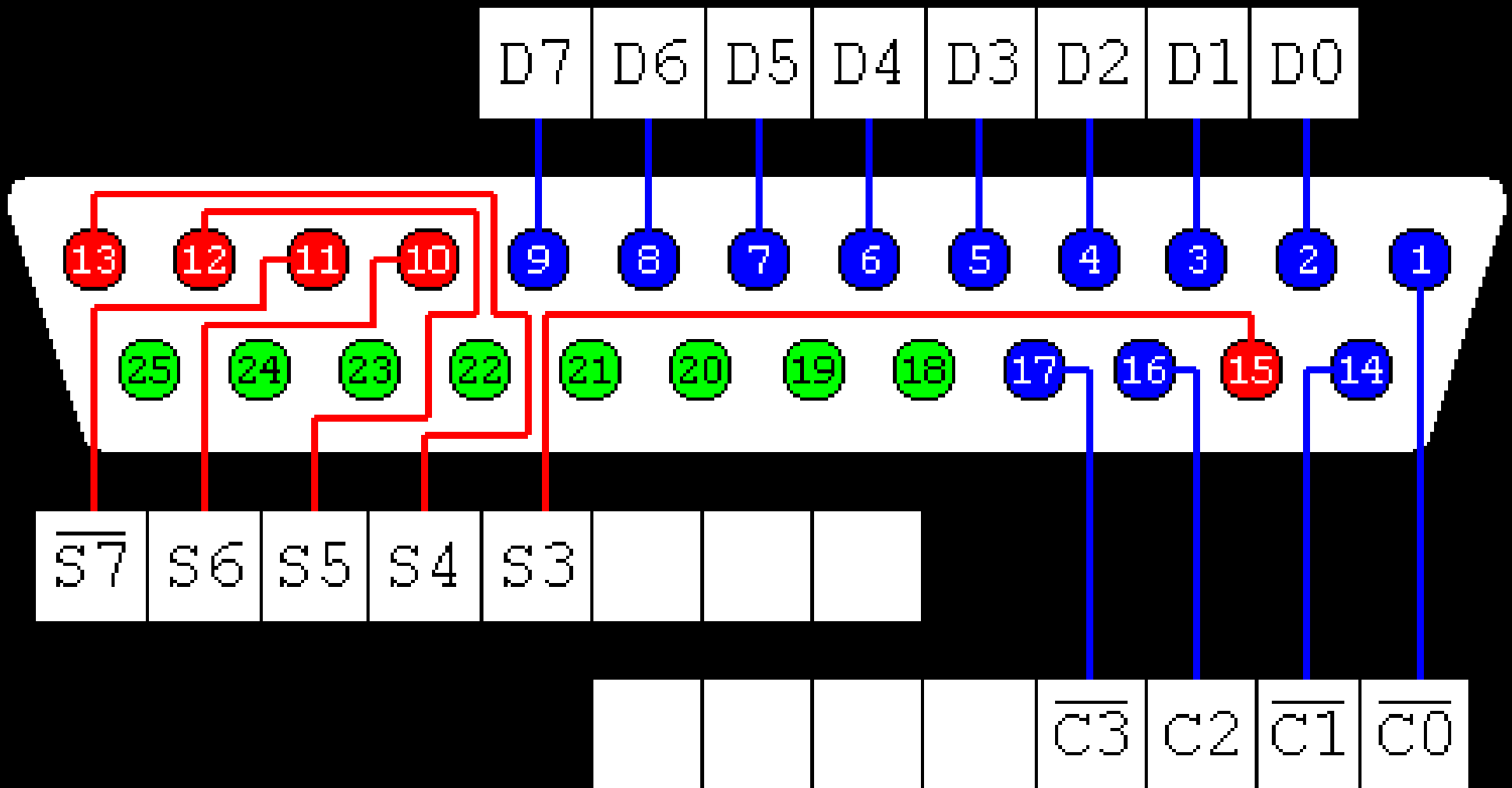
**I accept no
responsibility for
what you do with the
wild ideas I'm about
to put in your
head ;-)**

Choices, choices!
Parallel, RS232,
PS2, PCI, USB,
IR, Bluetooth, ...

the parallel port
is **good** because
it's "dumb"

no flow control
no comms protocol

just flip bits

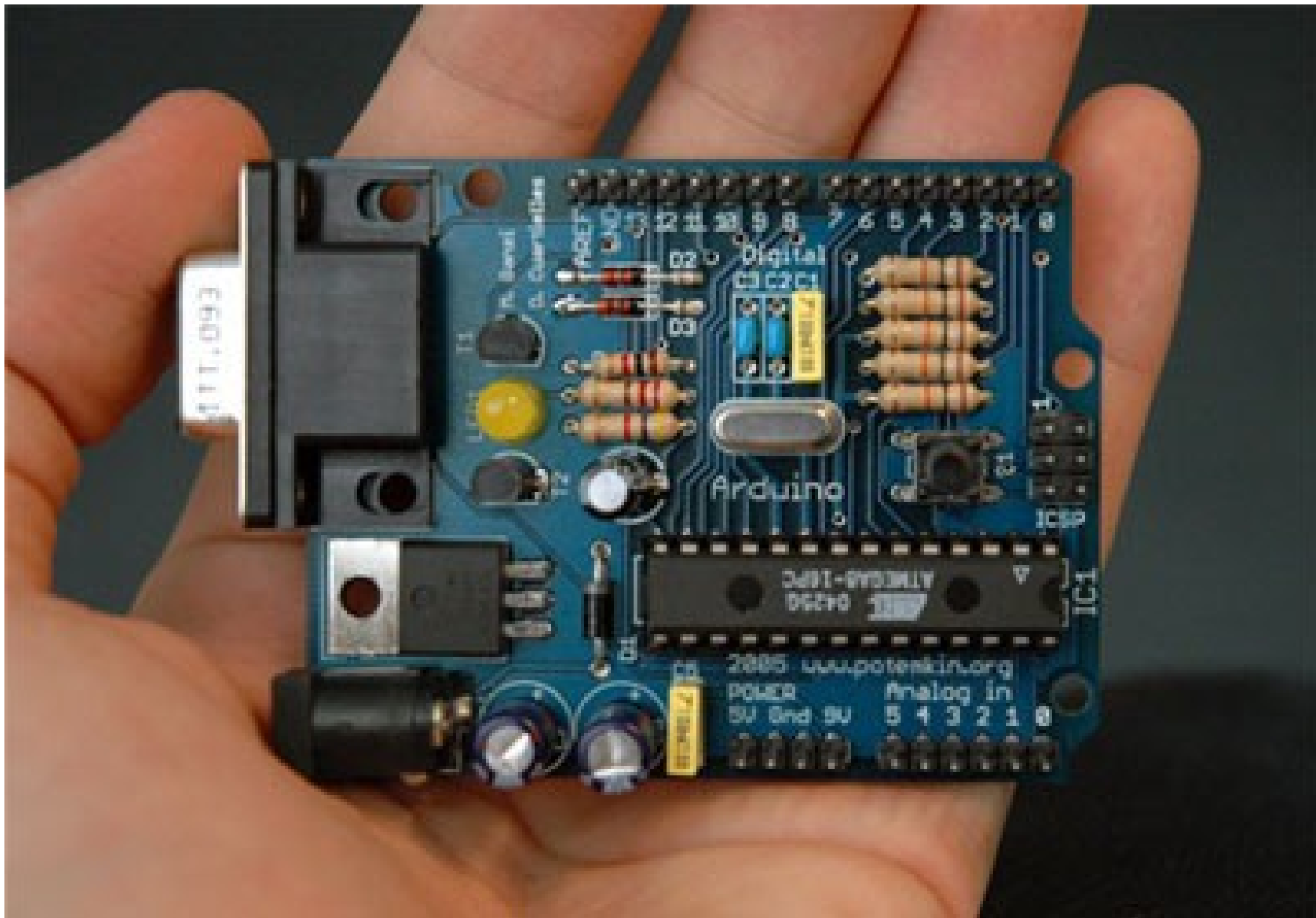


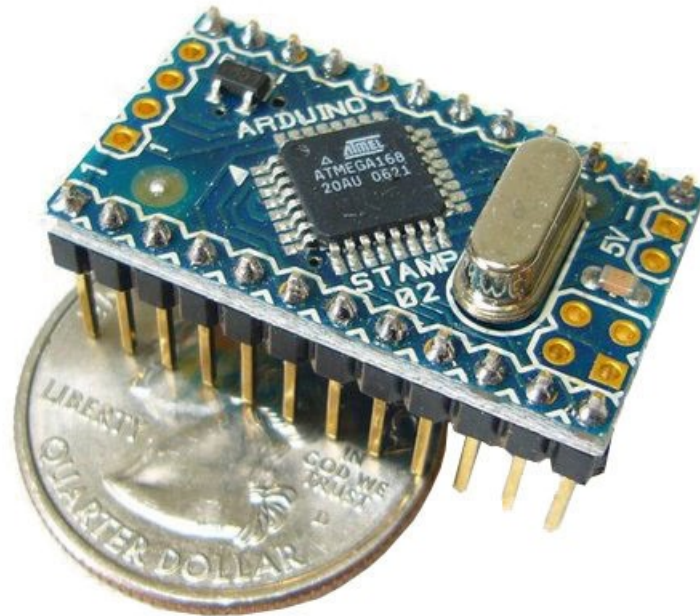
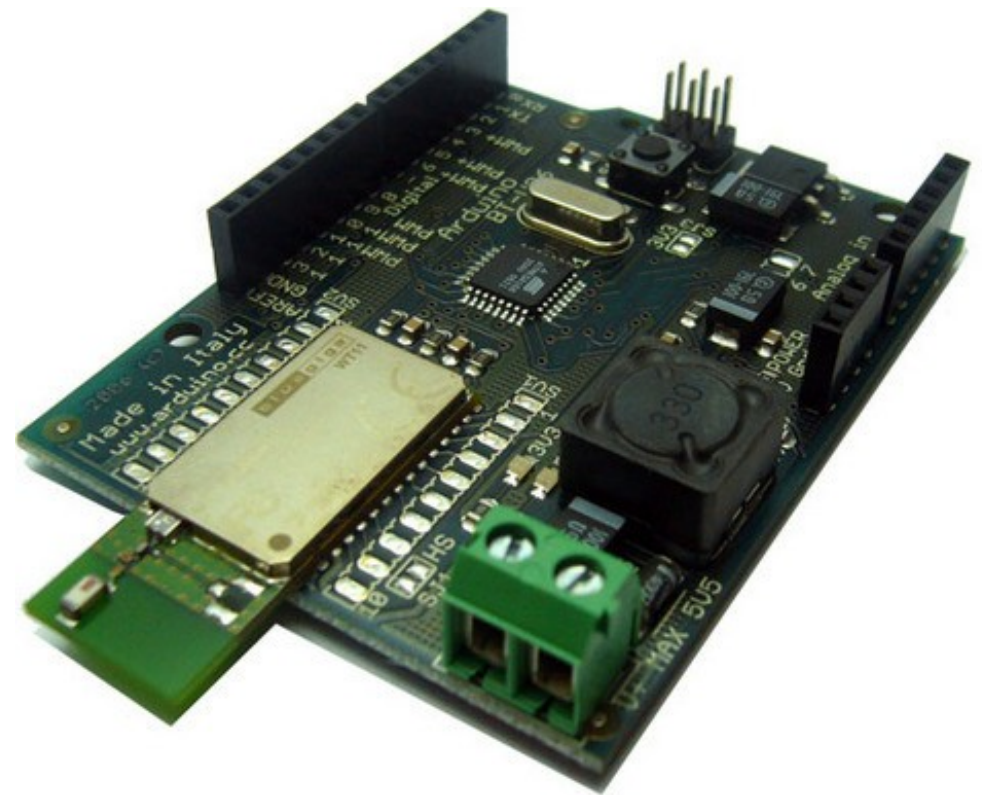
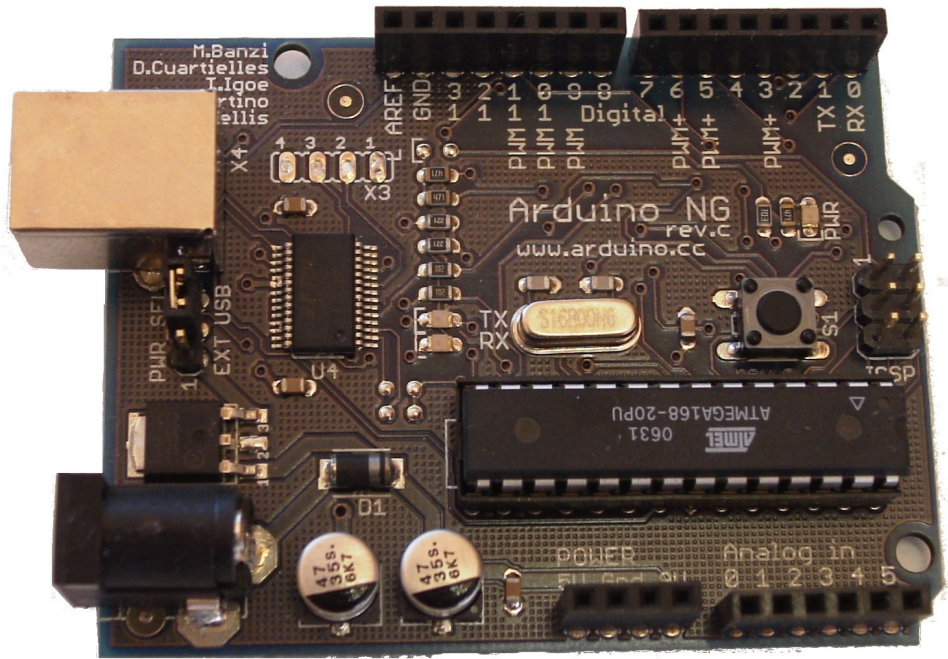
the parallel port
is **bad** because
it's "dumb"

**scripting
language
support very
poor**

**use a trivial
C helper**

Introduction to Arduino





Arduino IDE Installation

Extract archive for your OS

On Debian and derived distros:

```
# aptitude remove brltty
# aptitude install libftdi0 \
  sun-java5-jre gcc-avr avr-libc
# update-alternatives --config java
(select java-1.5.0-sun)
```

Introduction to Linden Scripting Language

State machine

**states
and
triggers
(or “events”)**

LSL

Building Blocks

**HTTP out of
Second Life**

XML-RPC into Second Life

Email out of Second Life

Email into Second Life

Modified SL client

**Custom SL
client using
libsecondlife**

**Private
SL sim**

Introduction to Electronics

Voltage, Current, and Resistance

Voltage
(Volts, V)
is like pressure

Current
(Amps, A)
is like flow rate

**Resistance
(Ohms, R)
is like... well,
resistance**

Ohm's Law:

$$V = I \times R$$

Ohm's Law:

$$V = I \times R$$

$$I = V / R$$

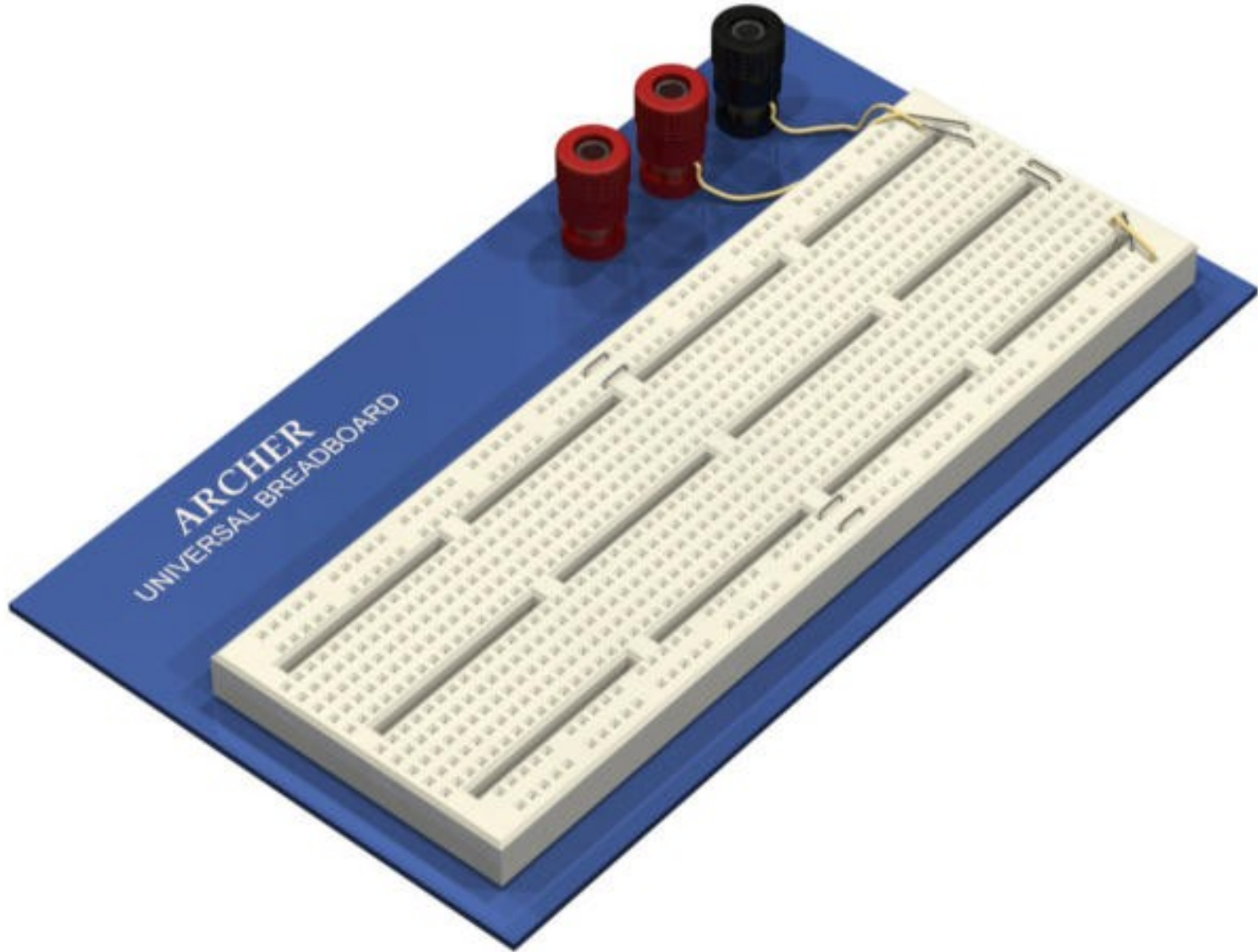
Ohm's Law:

$$V = I \times R$$

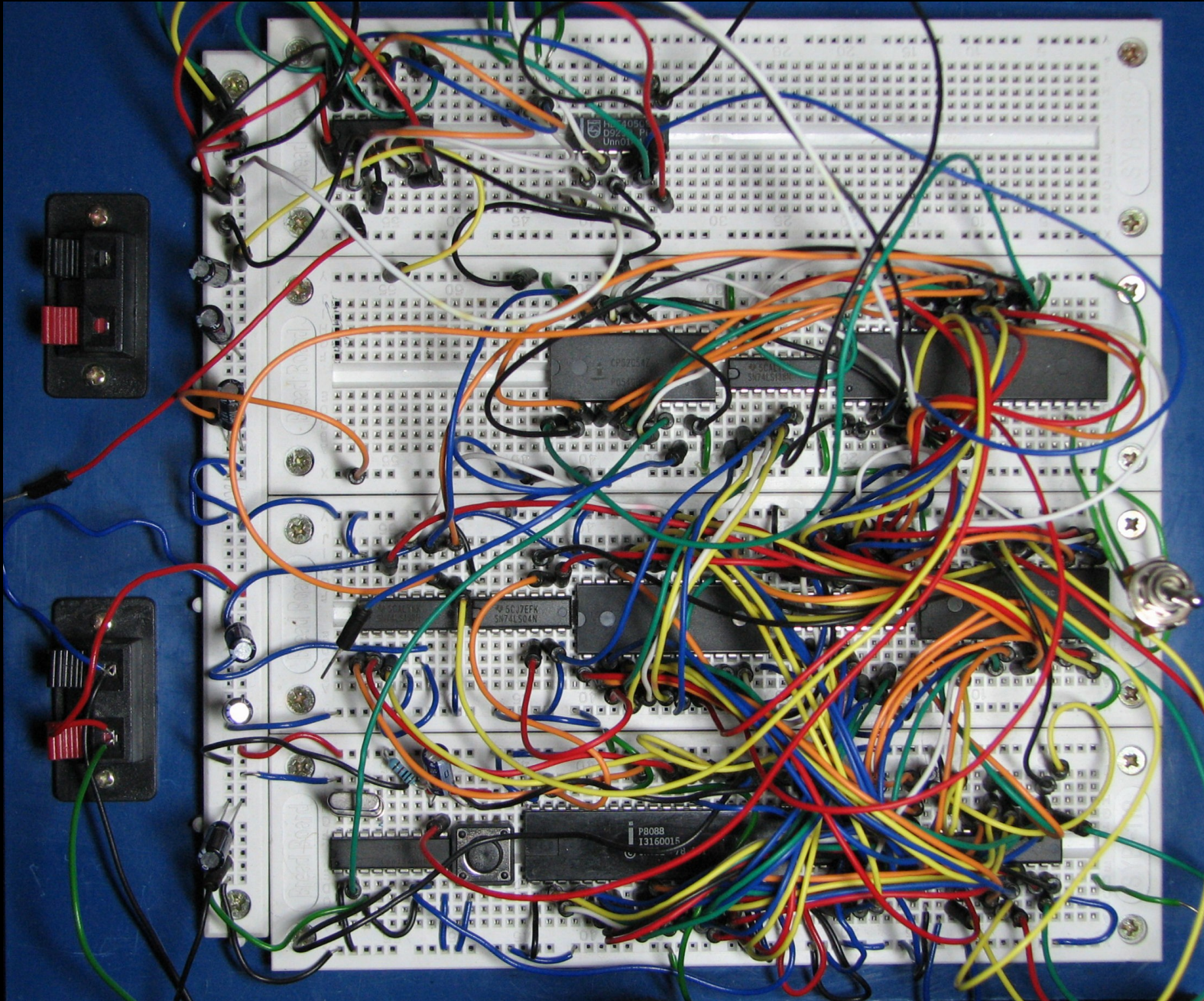
$$I = V / R$$

$$R = V / I$$

Breadboard



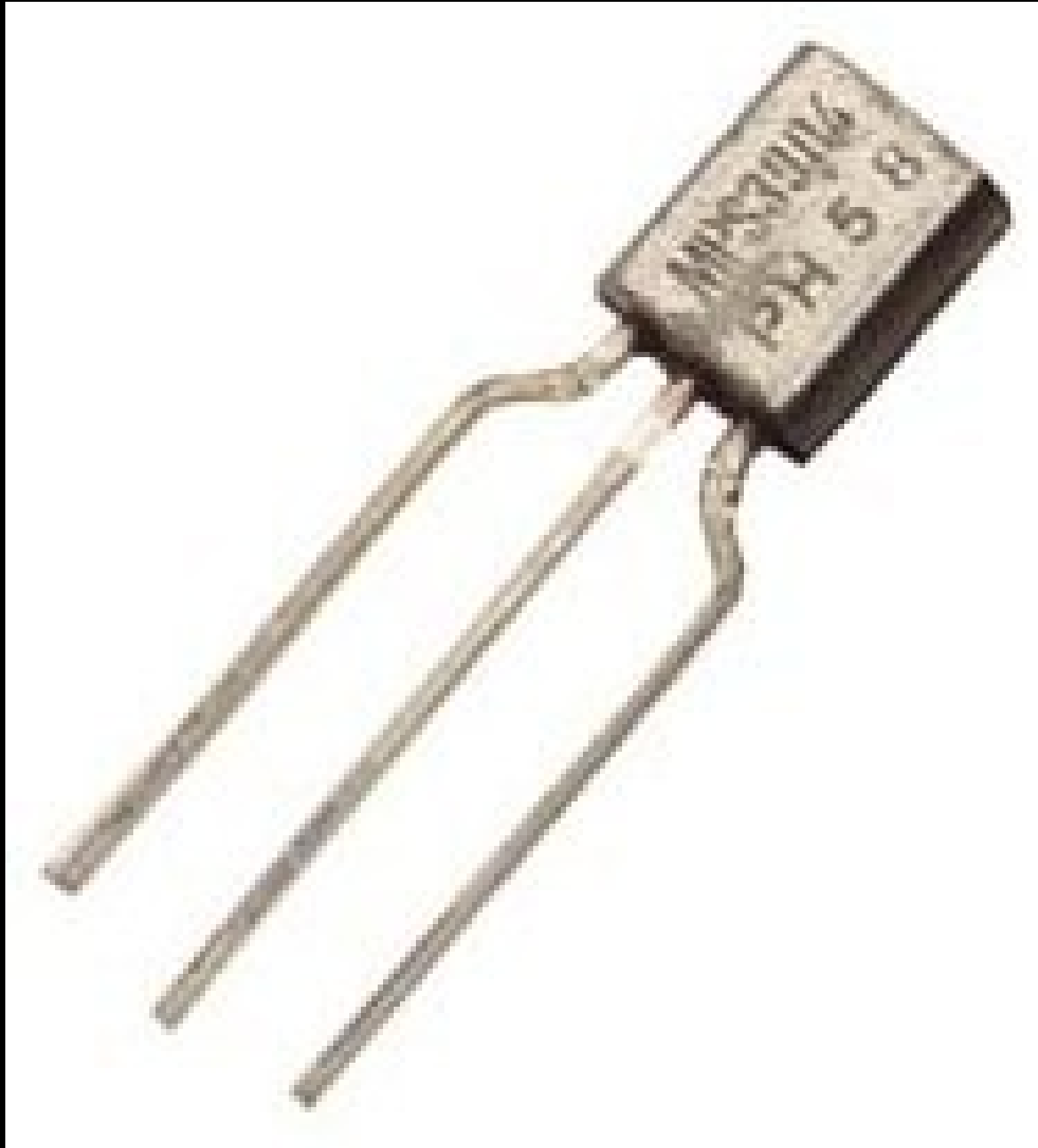
Breadboard



Resistor



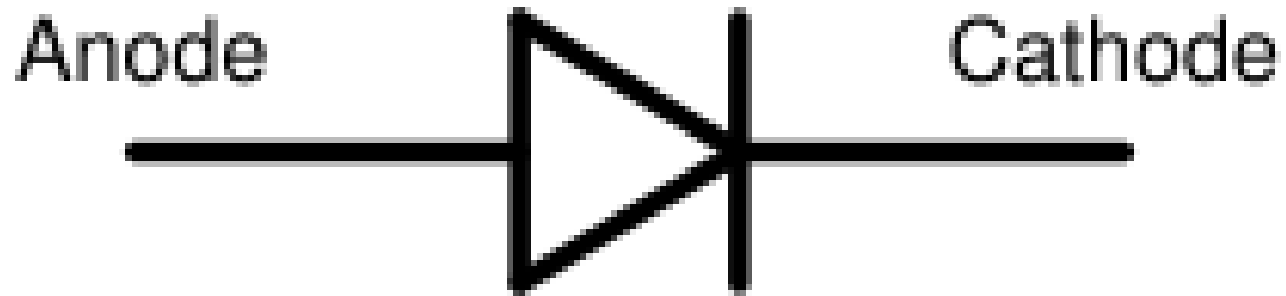
Transistor



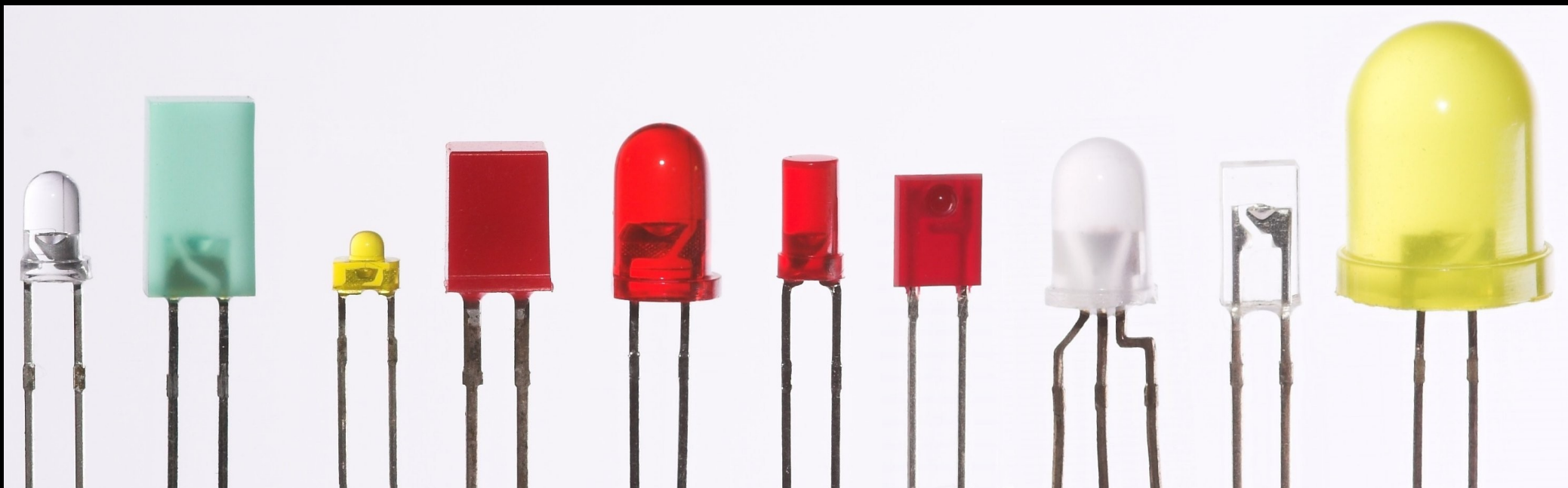
Multimeter



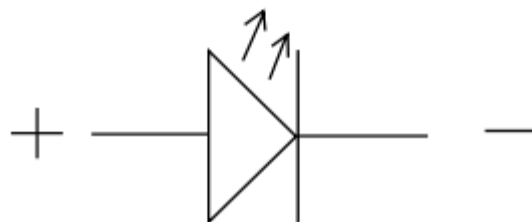
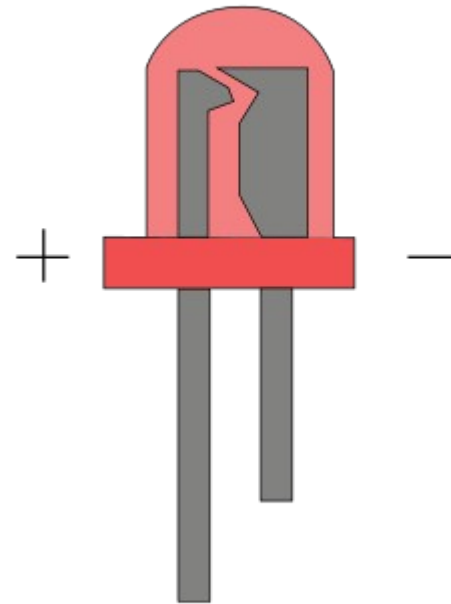
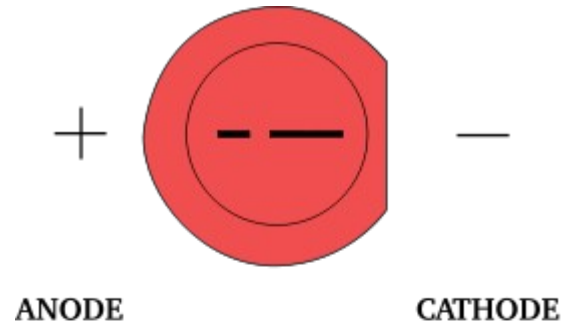
Diode



LED



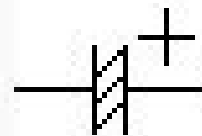
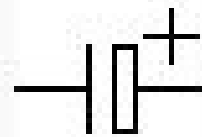
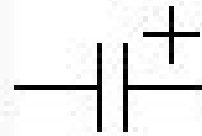
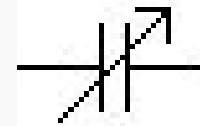
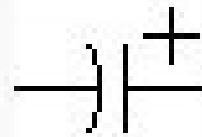
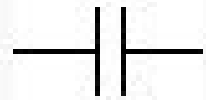
LED



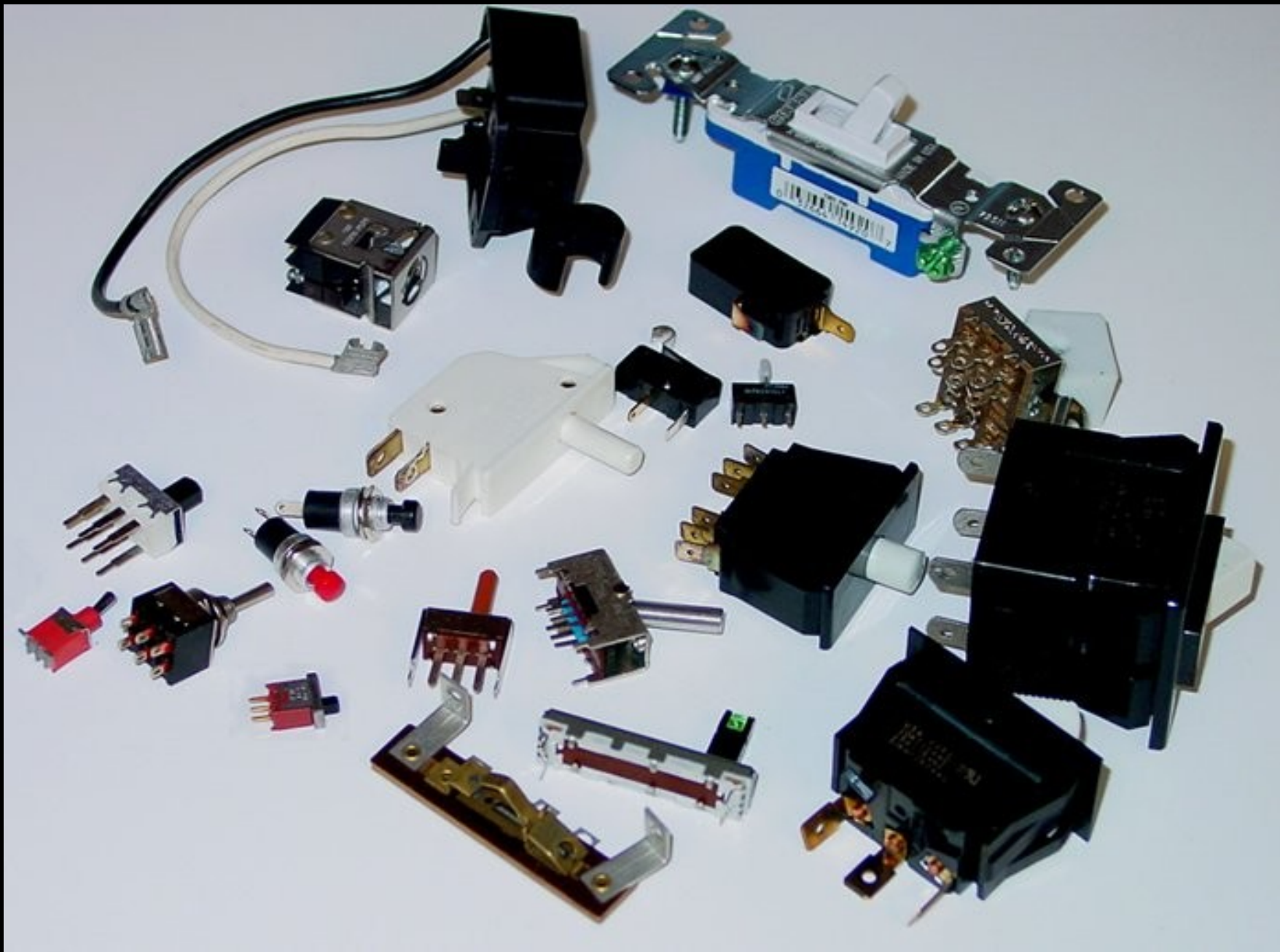
Capacitor

Capacitor symbols

Capacitor Polarized
capacitors Variable
capacitor



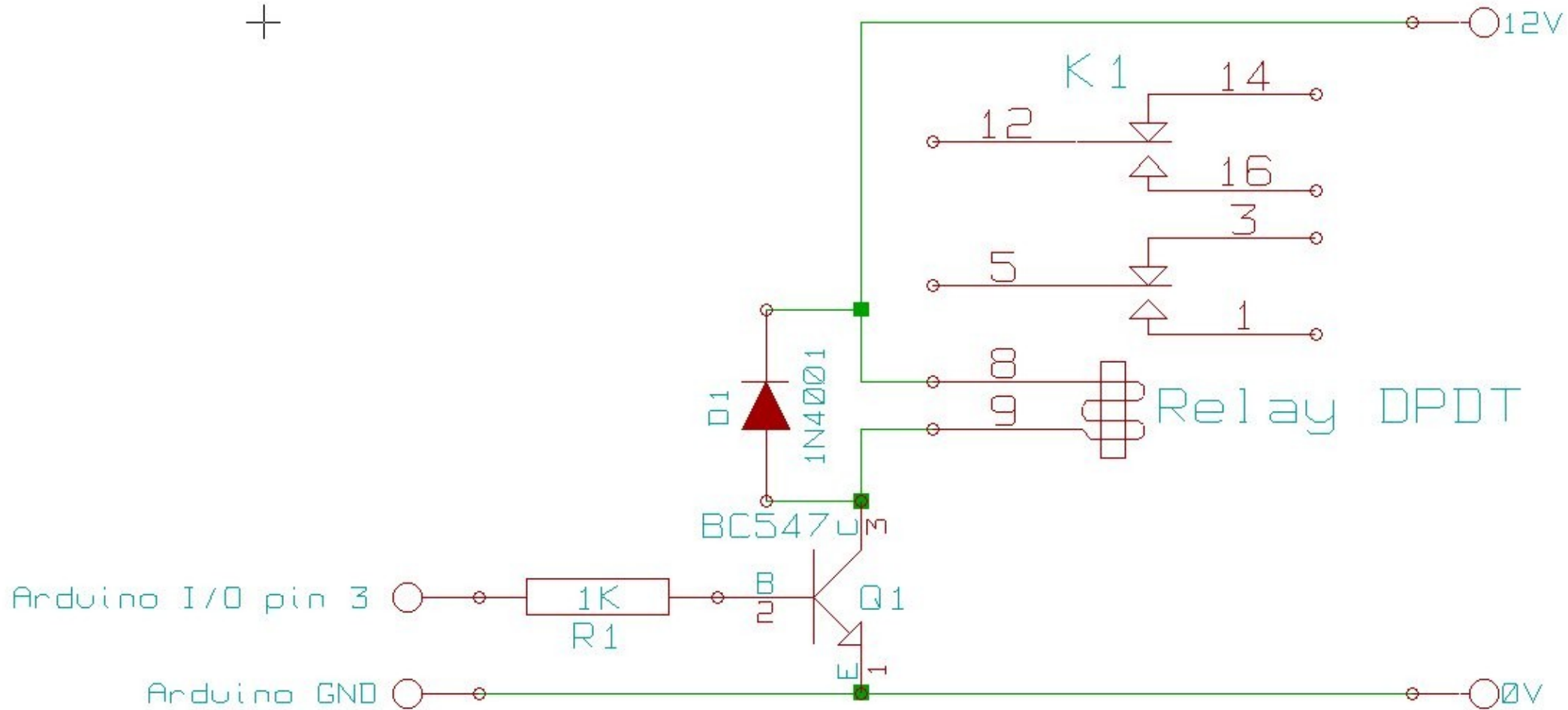
Switch



Hardware Building Blocks

Transistor / Relay

+



free your mind

**hardware is
malleable**

**use scripts as
glue**

More information



Skeleton site now up at:

www.secondlifeintegration.com

Join the Second Life group:

“Second Life Integration”

These slides are at:

jon.oxer.com.au/talks

Thanks for listening :-)

Ohm sweet ohm



Not just a pretty face



Who goes there?



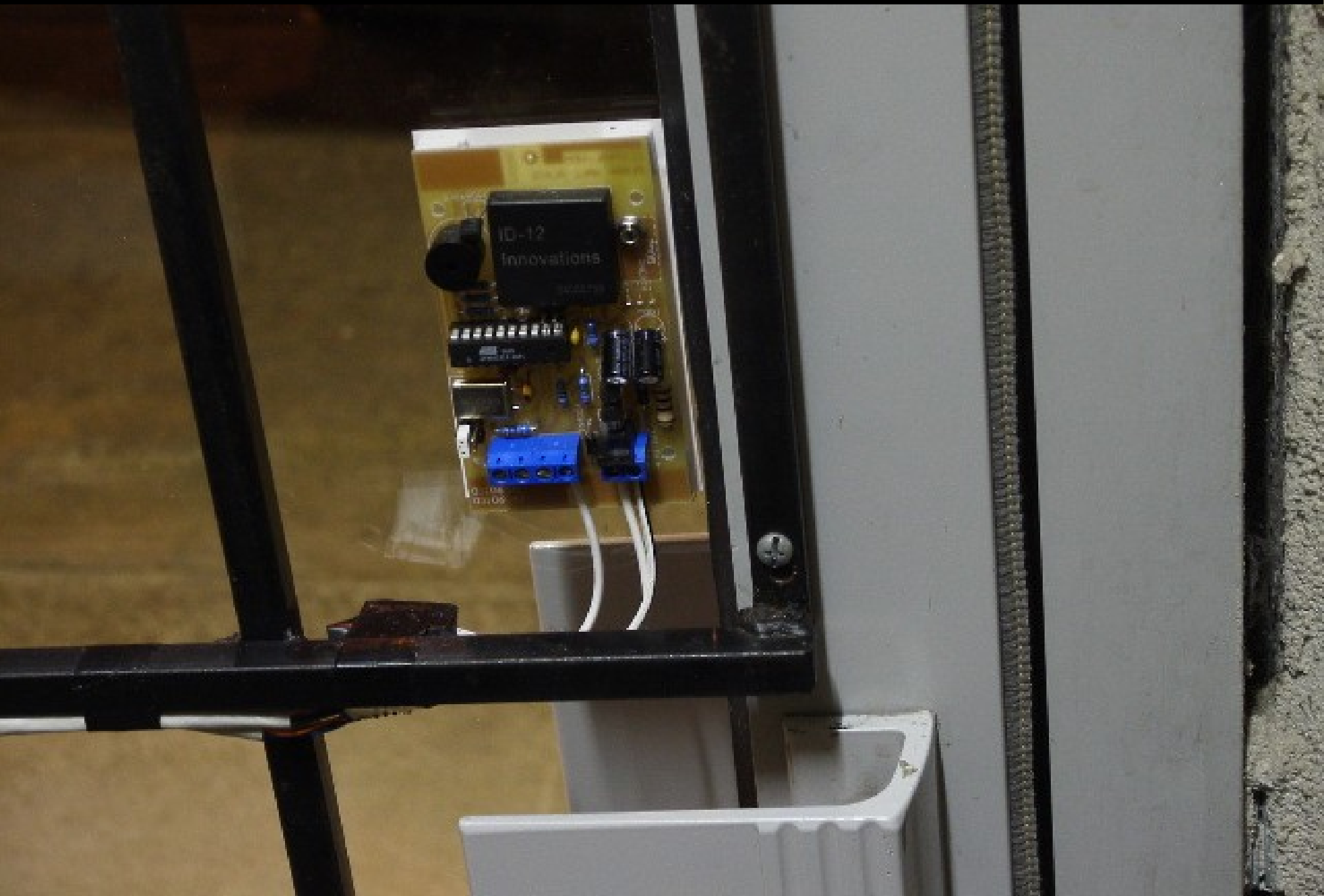
Let there be light



Magnet power!



What am I?



Curtains for lazy people



Curtains for lazy people



Price check on aisle 3!



Watering for lazy people



PHP phone home

