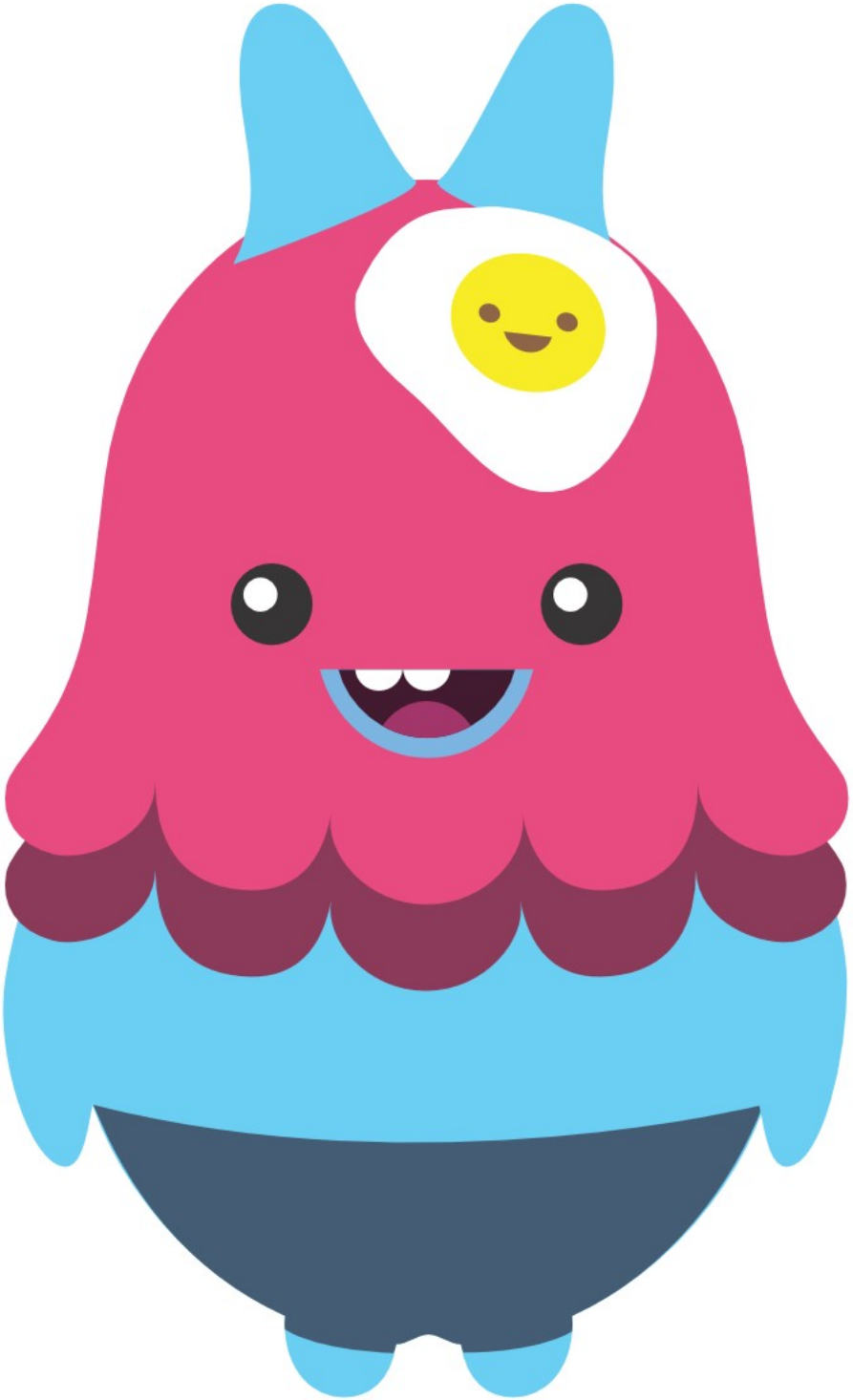
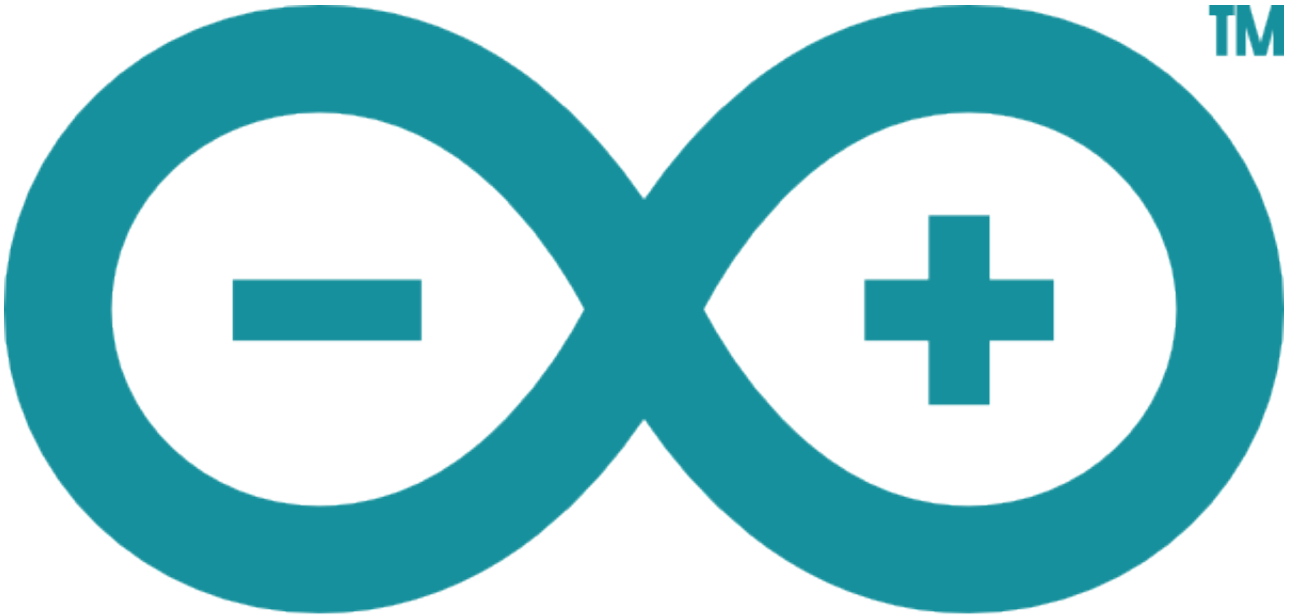


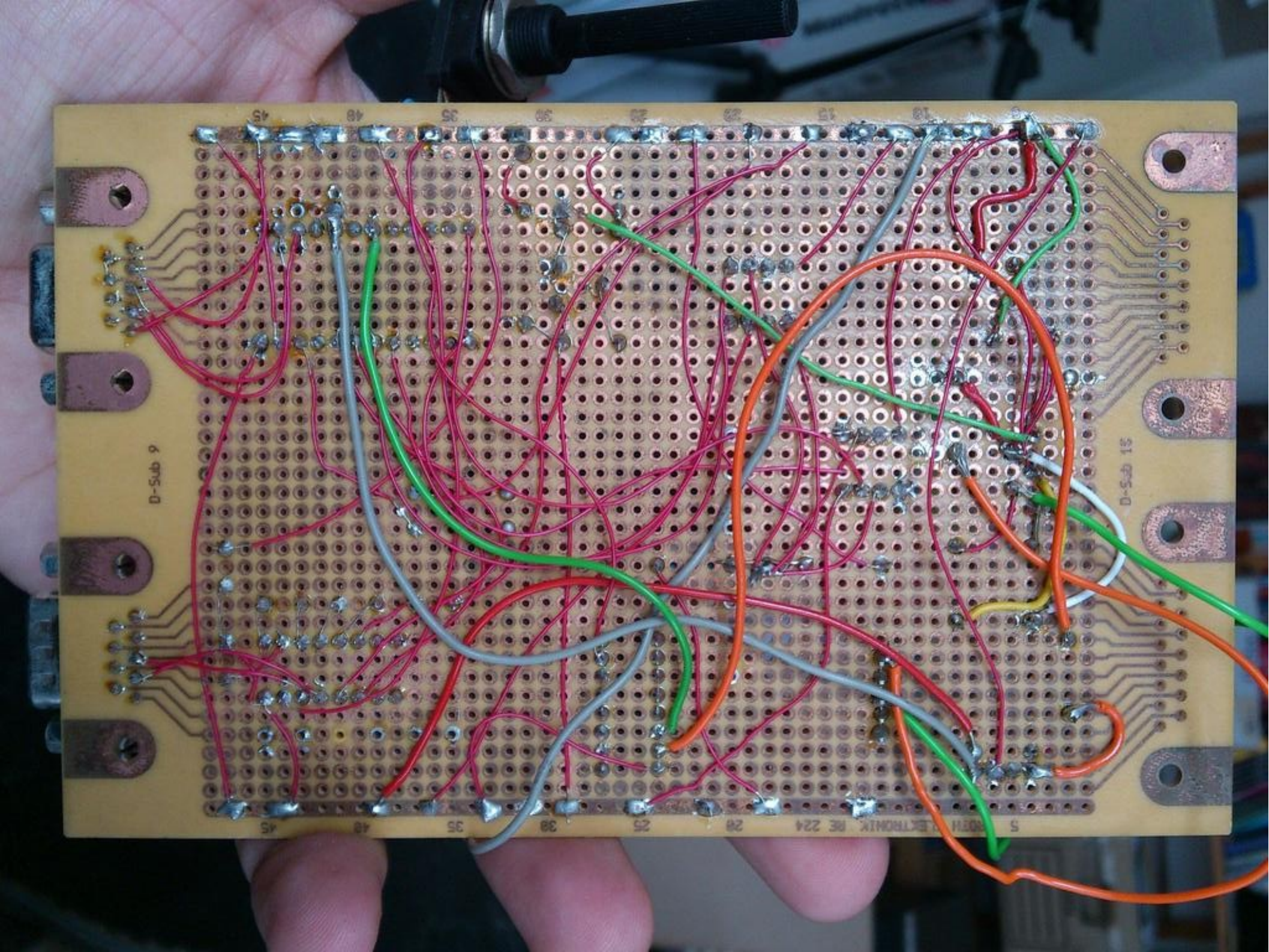

ARDUINO

ARDUINO VERKSTAD

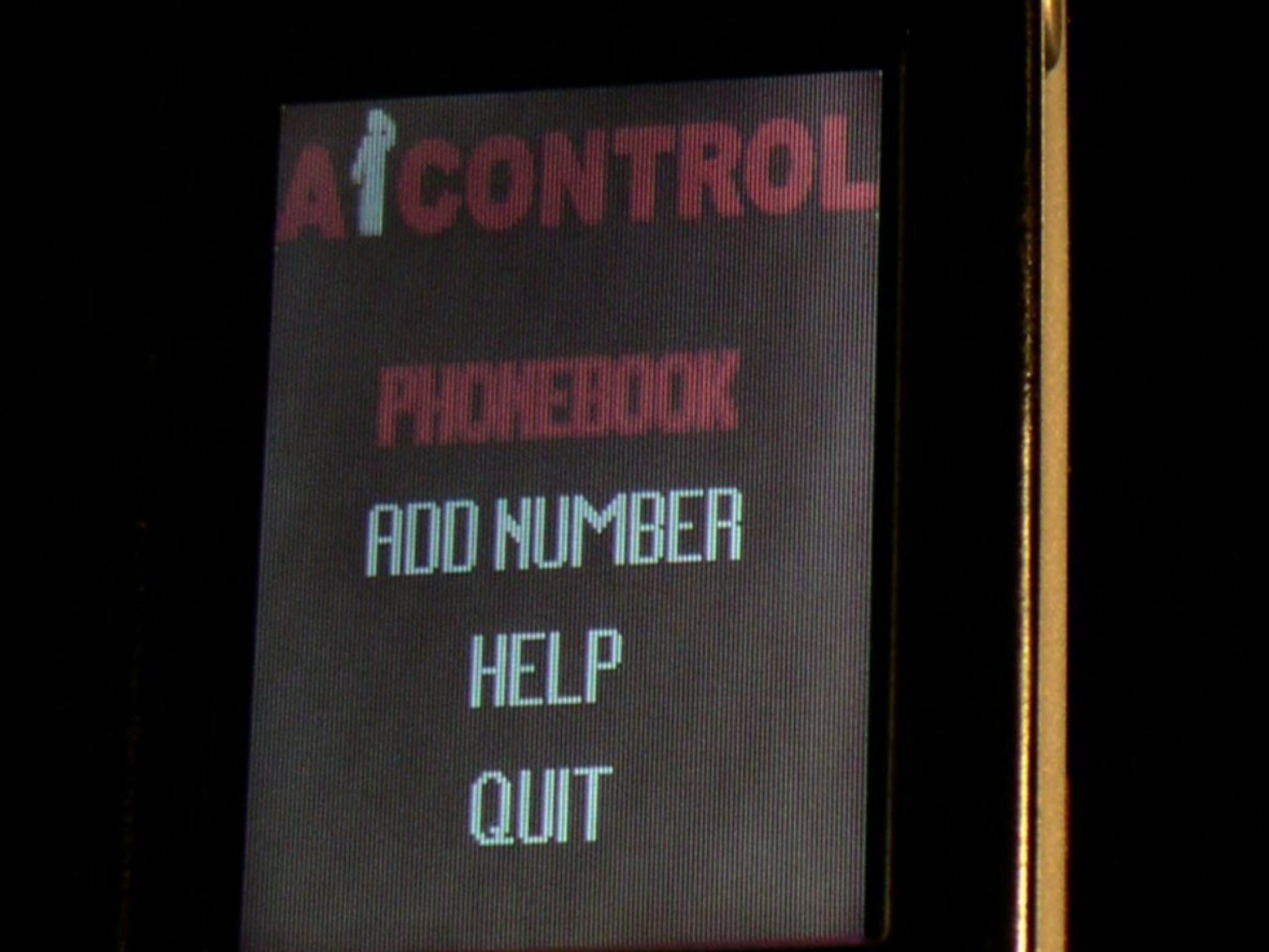
MALMÖ UNIVERSITY

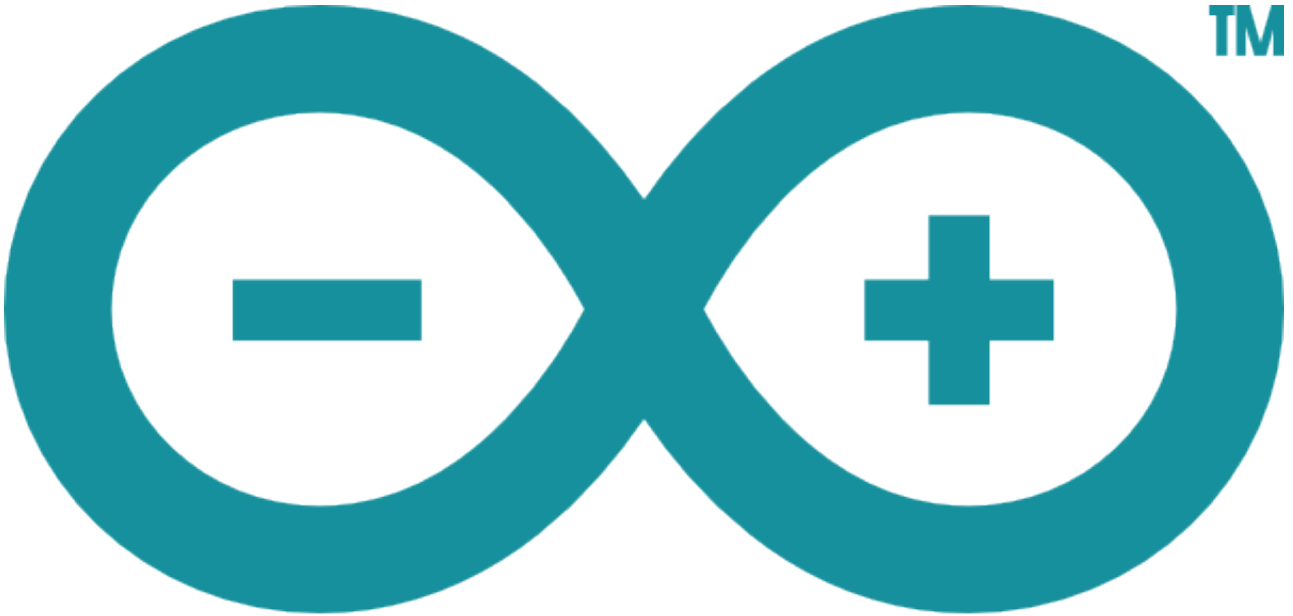
source: *kylebean.co.uk*

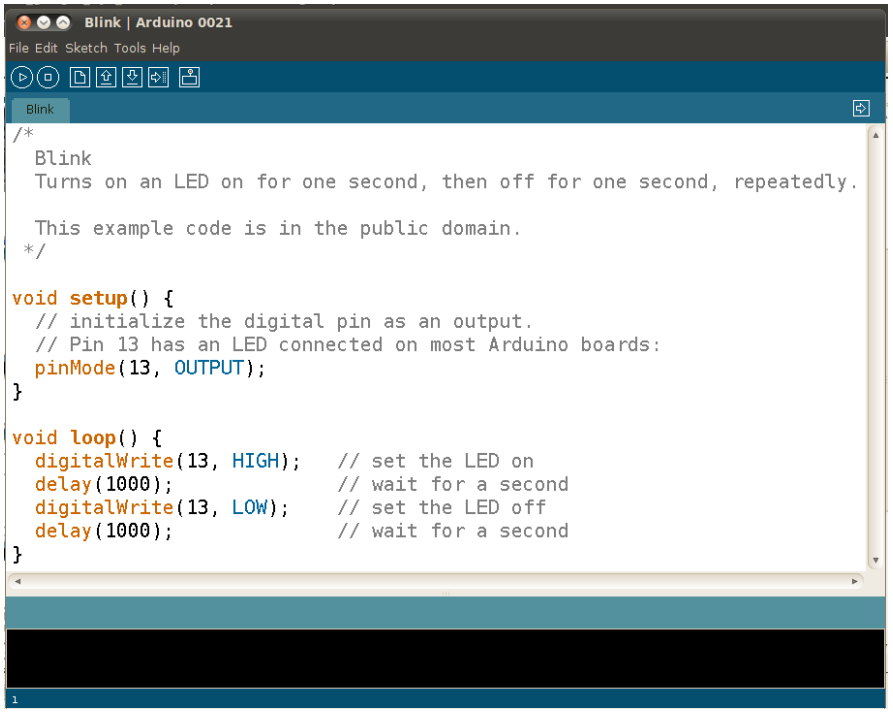
NULL
SERIAL

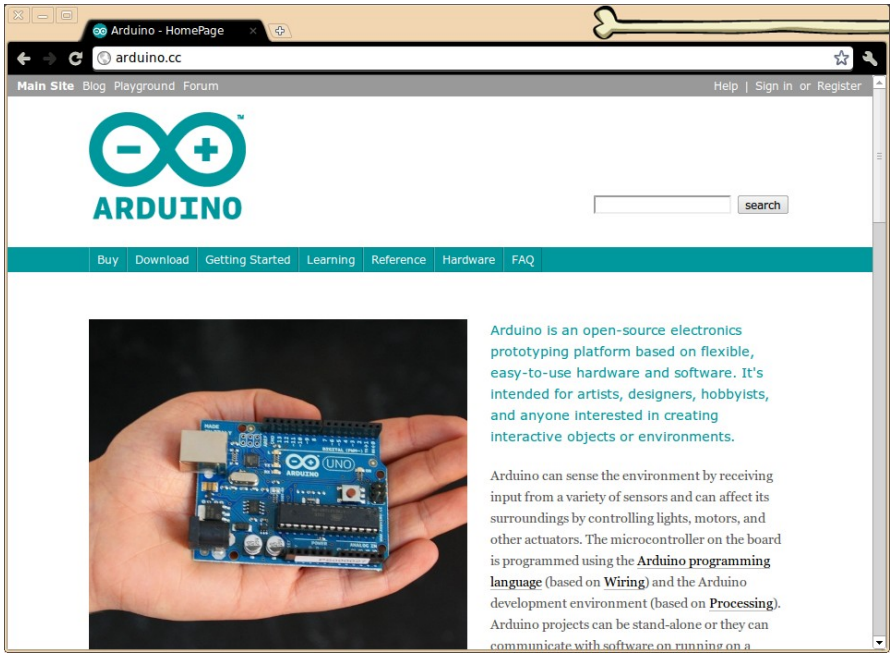

D-Sub 9
D-Sub 15

alcontrol

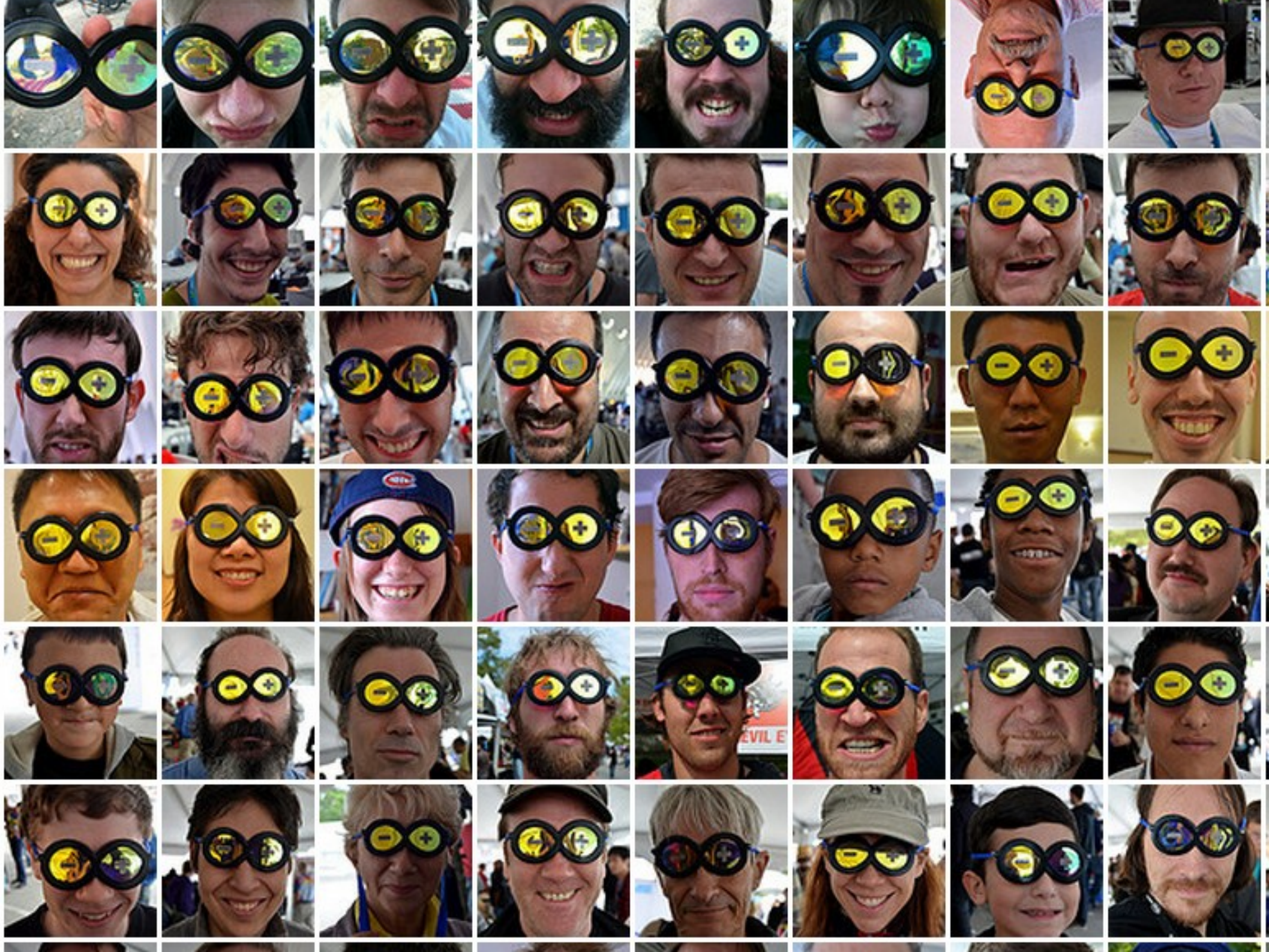

A1 CONTROL
PHONEBOOK
ADD NUMBER
HELP
QUIT

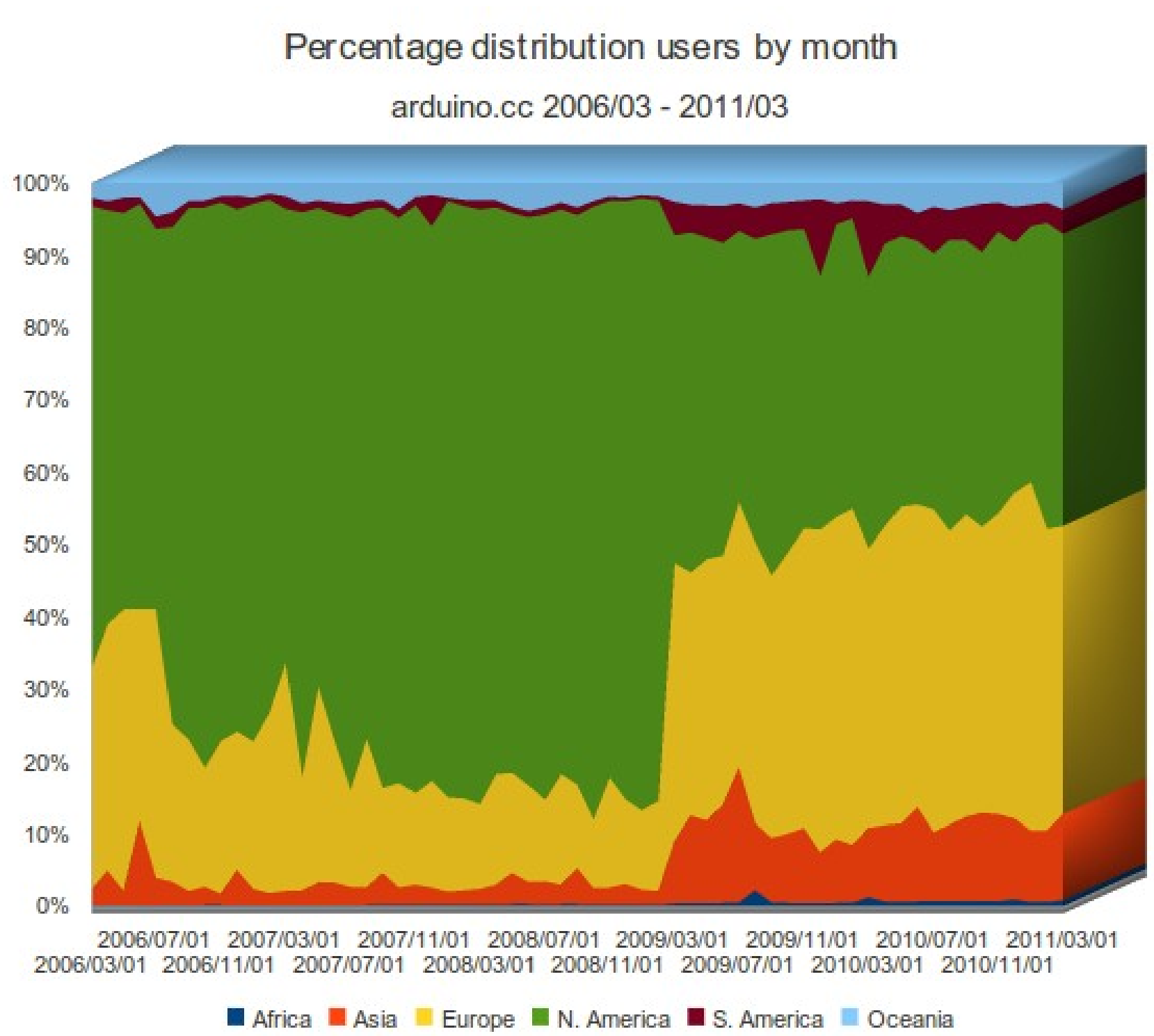

ARDUINO


Blink | Arduino 0021
File Edit Sketch Tools Help
Blink
/*
Blink
Turns on an LED on for one second, then off for one second, repeatedly.
This example code is in the public domain.
*/
void setup() {
// initialize the digital pin as an output.
// Pin 13 has an LED connected on most Arduino boards:
pinMode(13, OUTPUT);
}
void loop() {
digitalWrite(13, HIGH); // set the LED on
delay(1000); // wait for a second
digitalWrite(13, LOW); // set the LED off
delay(1000); // wait for a second
}


Arduino - HomePage
arduino.cc
Main Site Blog Playground Forum
Help | Sign in or Register
ARDUINO
search
Buy Download Getting Started Learning Reference Hardware FAQ
Arduino is an open-source electronics prototyping platform based on flexible, easy-to-use hardware and software. It's intended for artists, designers, hobbyists, and anyone interested in creating interactive objects or environments.
Arduino can sense the environment by receiving input from a variety of sensors and can affect its surroundings by controlling lights, motors, and other actuators. The microcontroller on the board is programmed using the Arduino programming language (based on Wiring) and the Arduino development environment (based on Processing). Arduino projects can be stand-alone or they can communicate with software on running on a

Community




Percentage distribution users by month
arduino.cc 2006/03 - 2011/03
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
2006/07/01
2007/03/01
2007/11/01
2008/07/01
2009/03/01
2009/11/01
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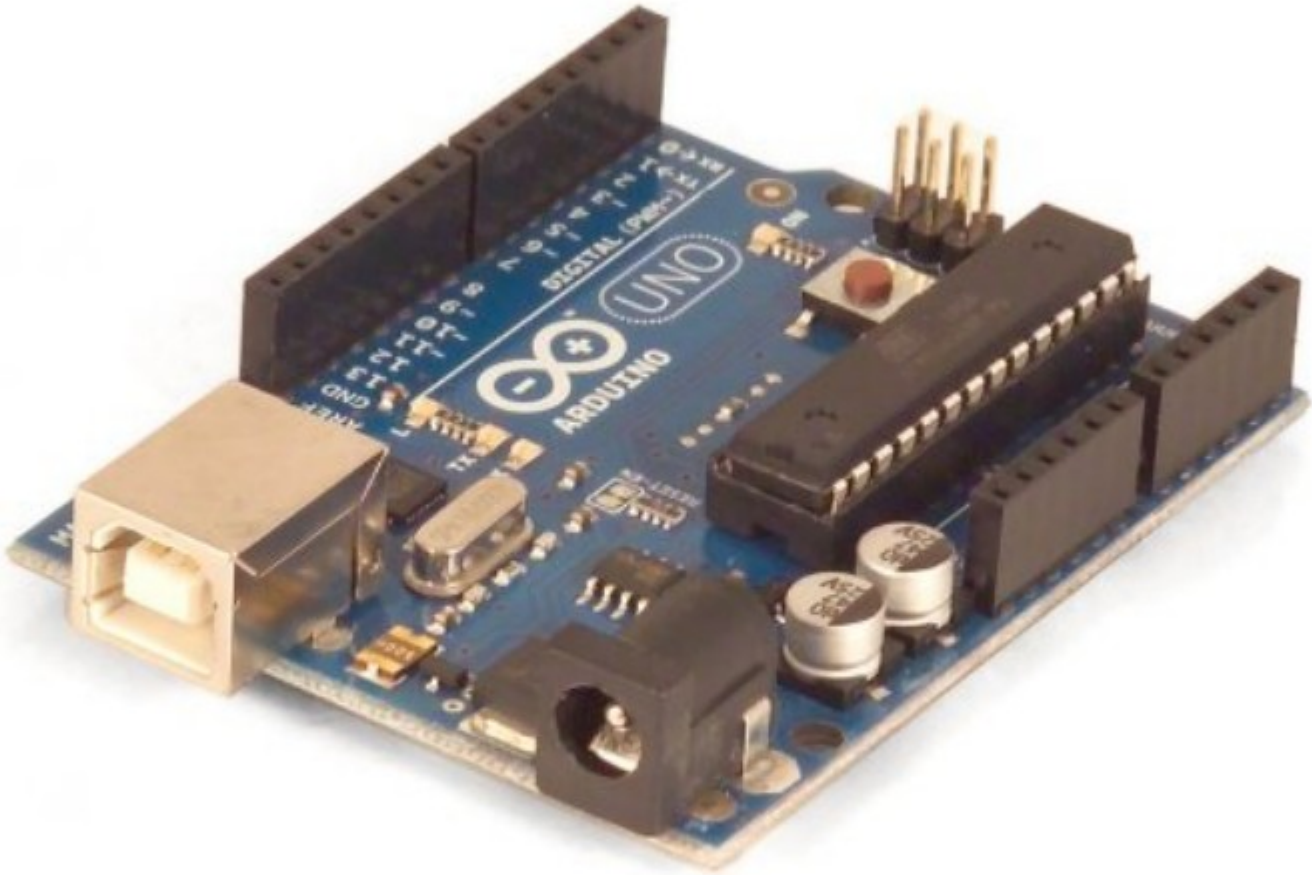
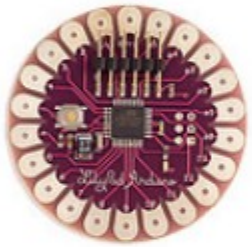
Africa
Asia
Europe
N. America
S. America
Oceania


UNO
ARDUINO
DIGITAL (PWM~)



XBee

tinkerkit

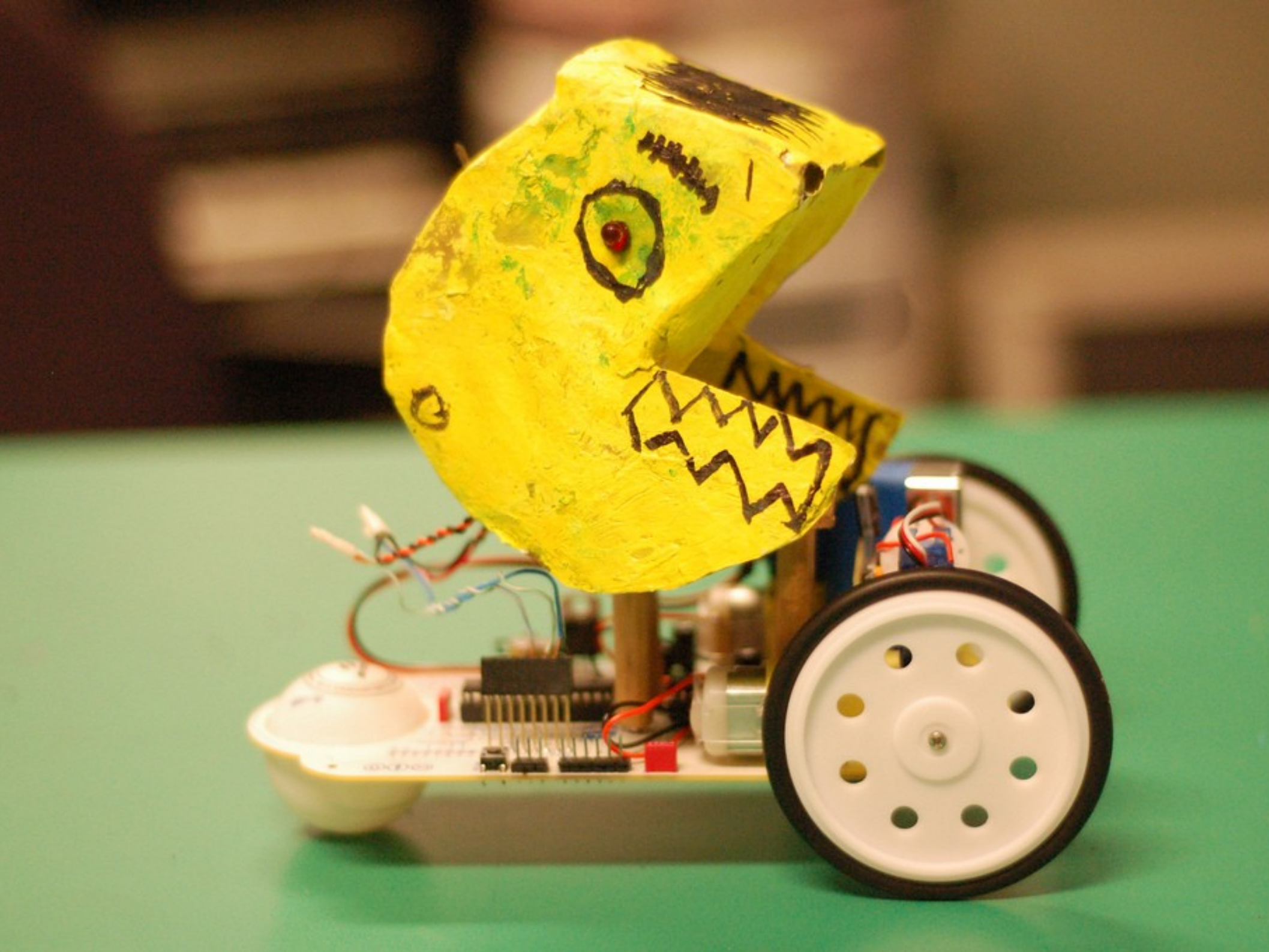
What we try to do is to …

- Help people creating with technology
- Build a coherent development experience to link education and professional work
- Incorporate user feedback into our R&D
- Answer complex questions about computing paradigms: embedded, ubiquitous, palpable, wearable …
- Break the magic rule of the 2,8

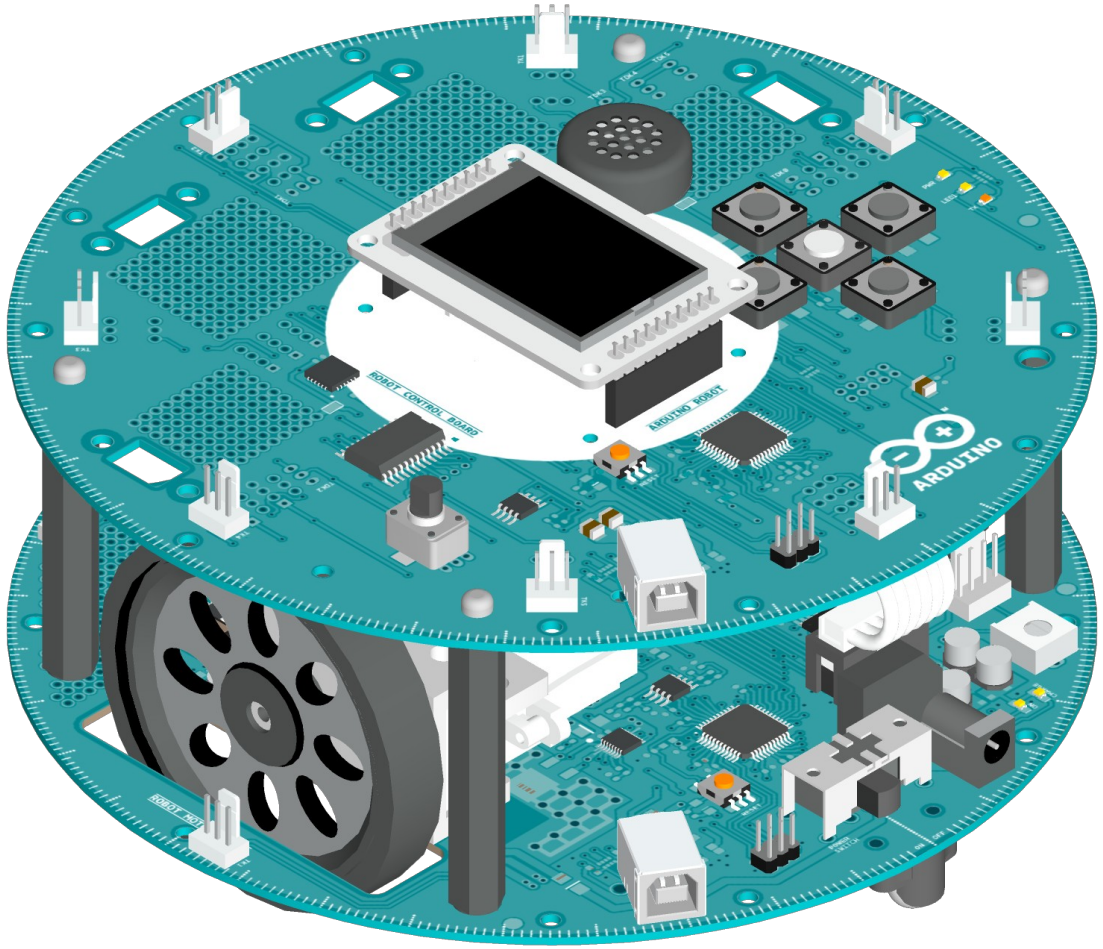
Makers, who are those people?

- People with an interest in ...
- People that likes to give
  (Sharing is Caring)

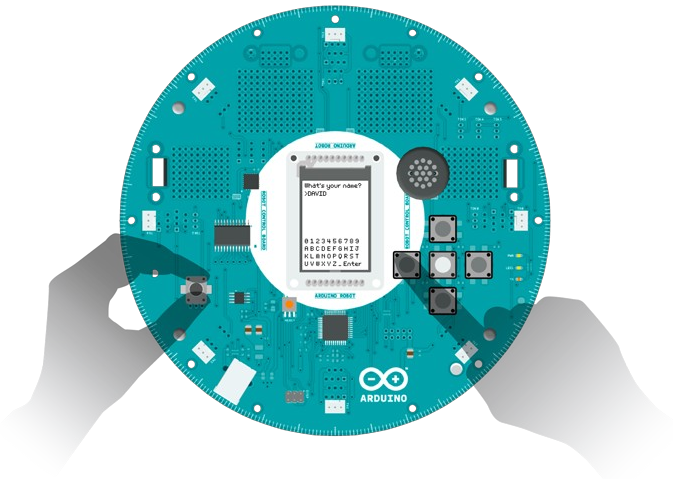
Which kind of things are they doing?

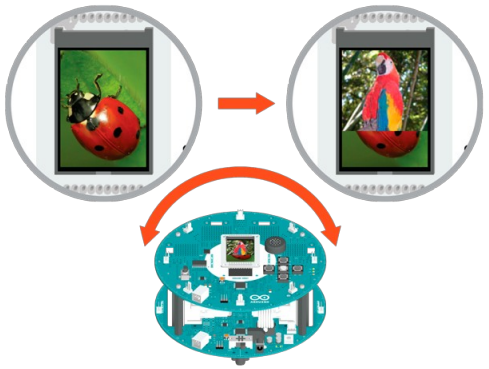


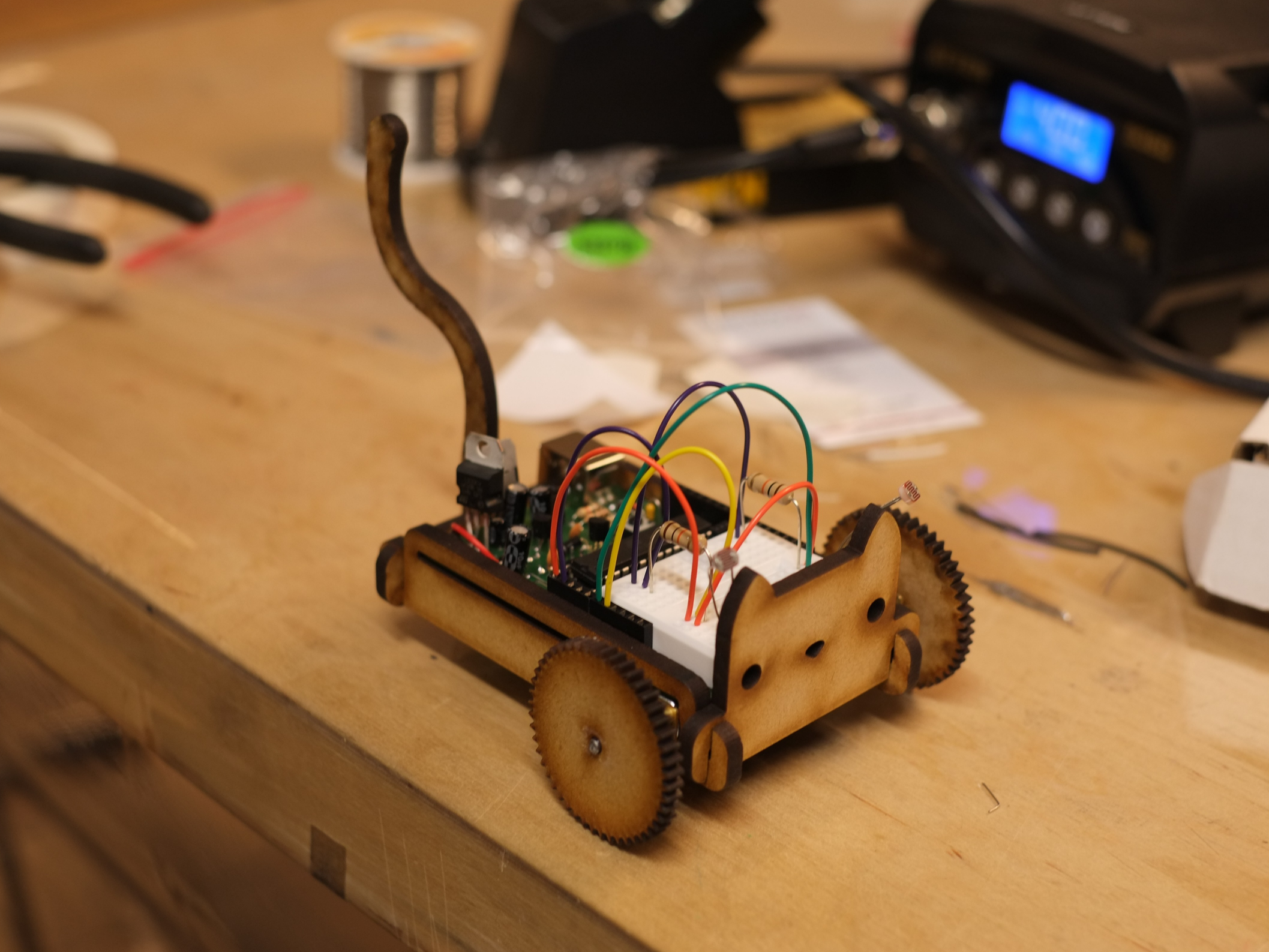
I <3 Robots

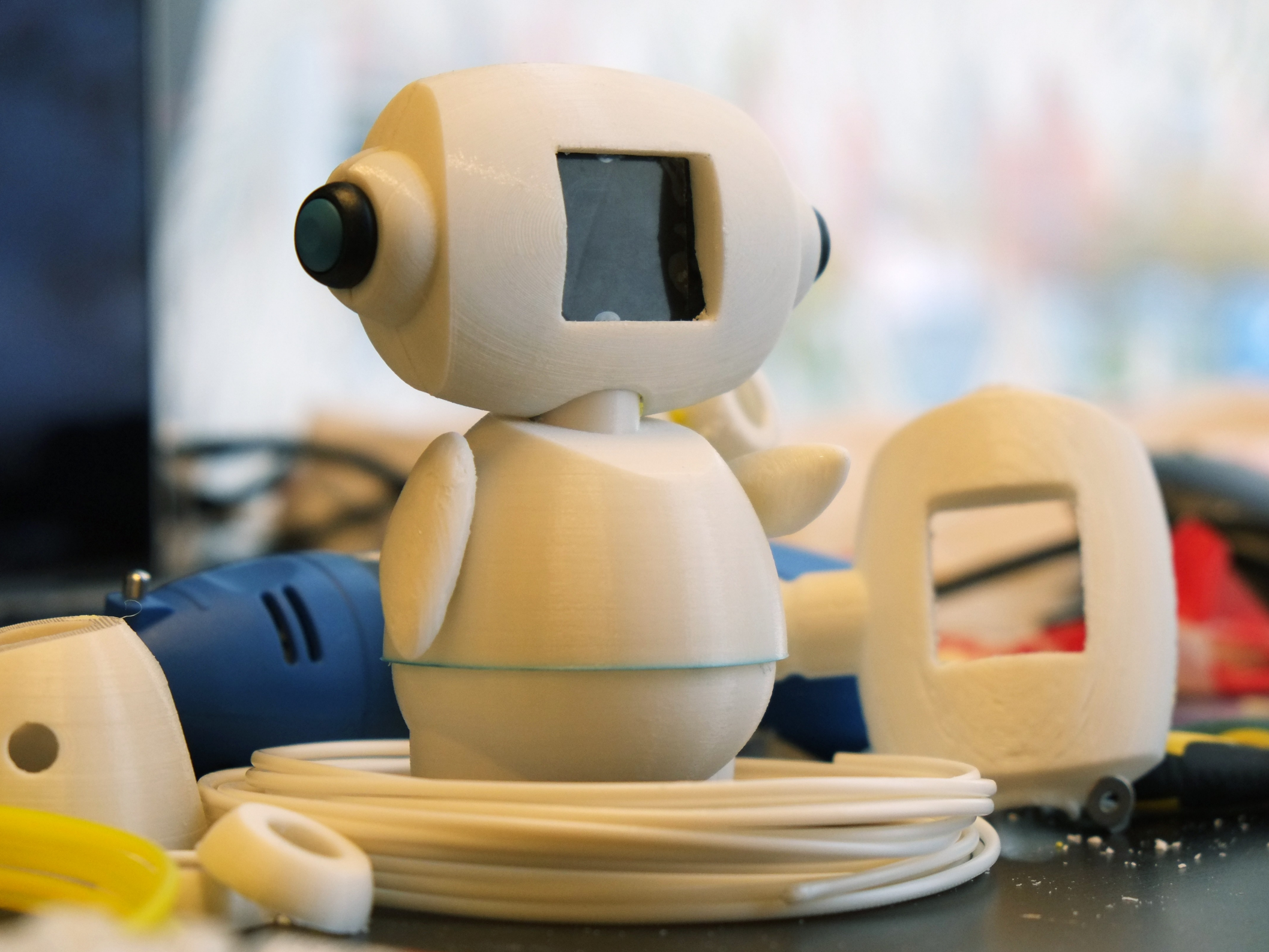

ROBOT CONTROL BOARD
ARDUINO ROBOT
ARDUINO

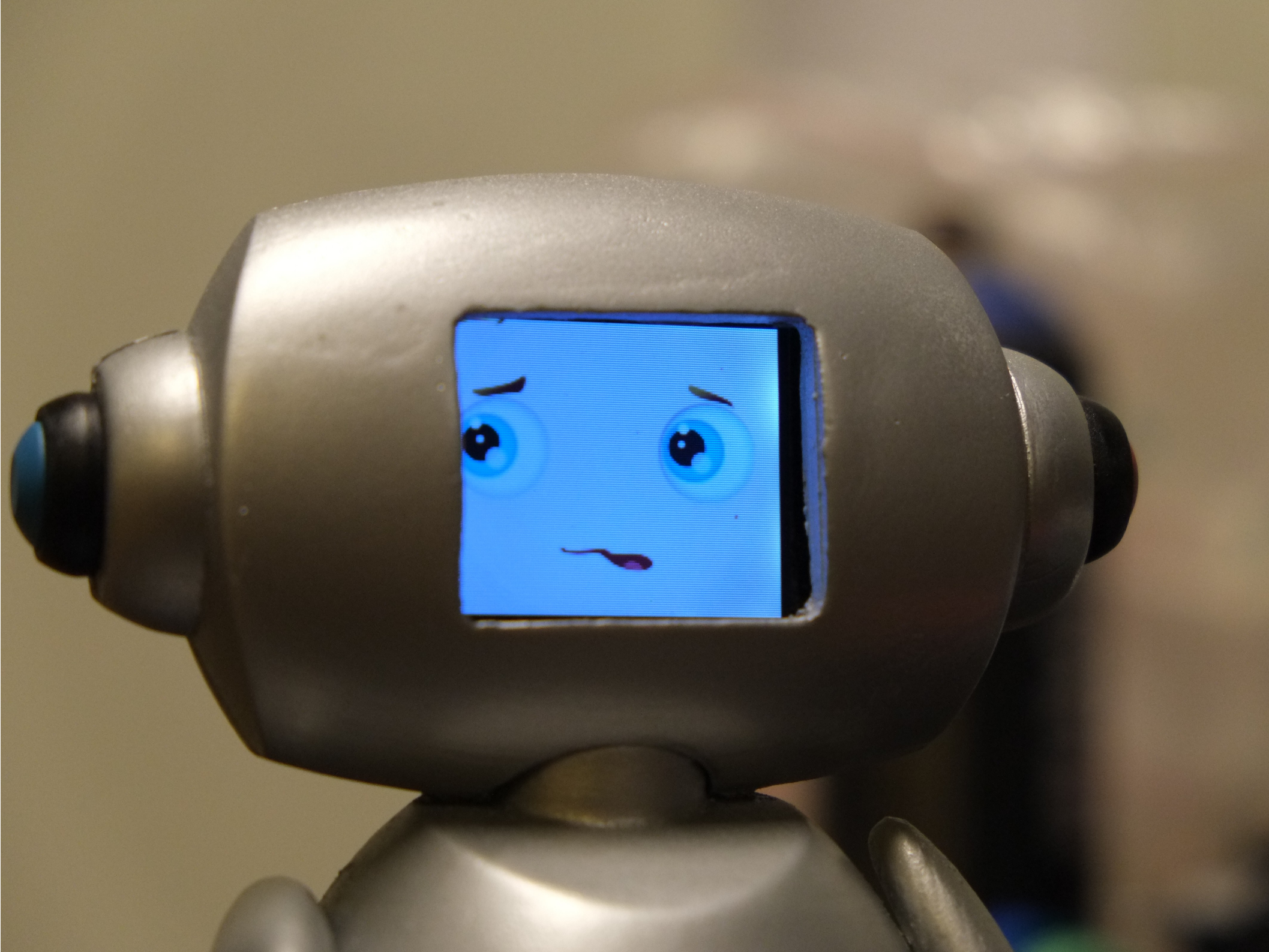
B
A


What's your name?
>DAVID
ARDUINO ROBOT
ARDUINO

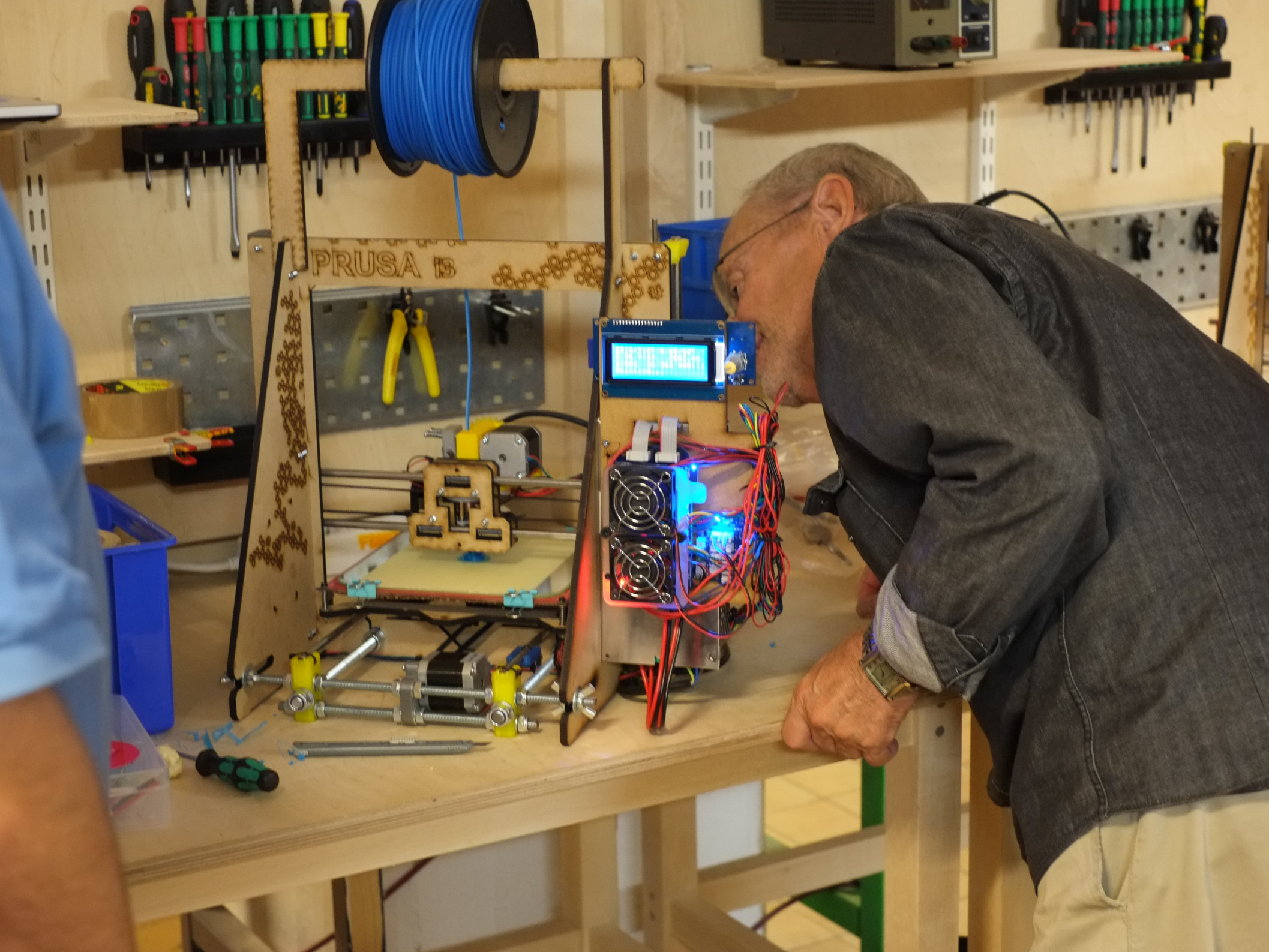




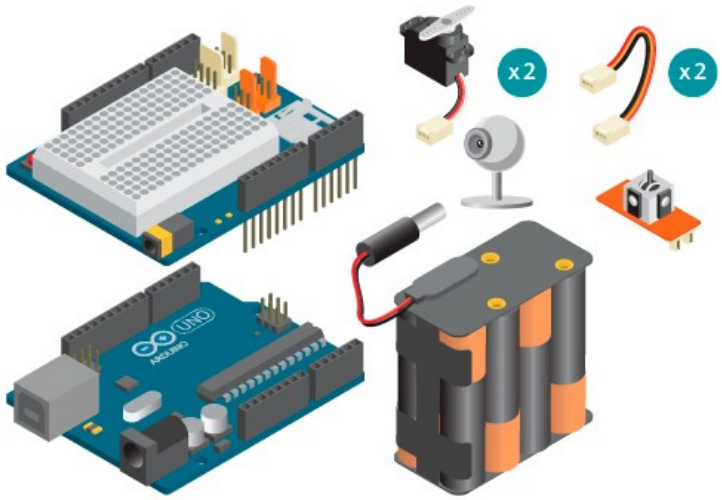


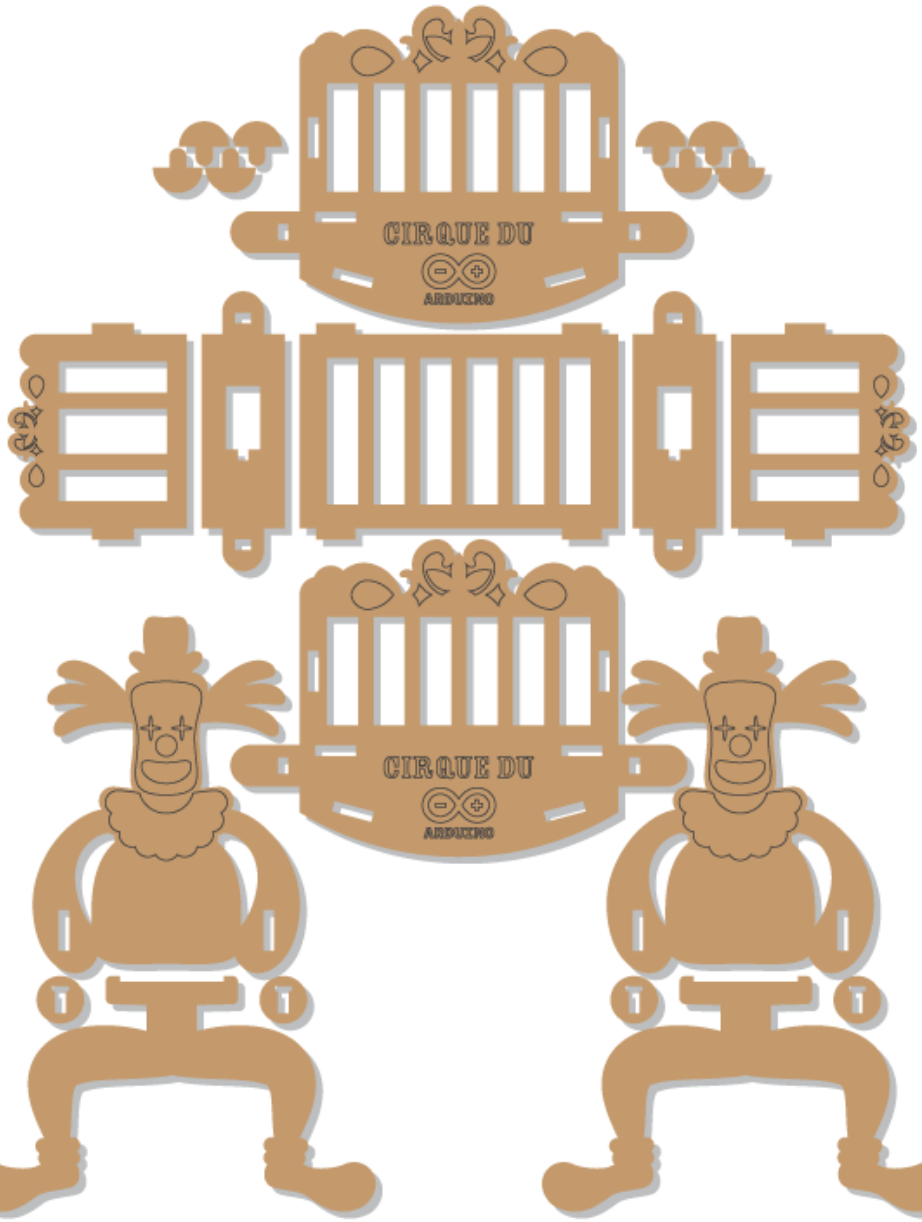


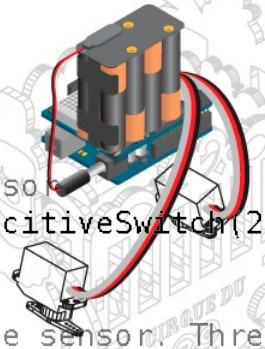
mandiri
citi


PRUSA i3

Creating curriculum for schools







```
//Declare the capacitive sensor
CapacitiveSwitch sensor=CapacitiveSwitch(2,3);

void setup(){
  //initialize the capacitive sensor. Threshold is 400
  sensor.config(400);

  //initialize the servo motor
  pull.attach(9);
}
void loop(){
  if(sensor.getState()){
        //If the capacitive sensor is touched, pull the st
    pull.write(0);
  }else{
        //Otherwise, loosen the strings
```

ARDUINO VERKSTAD EDUCATION

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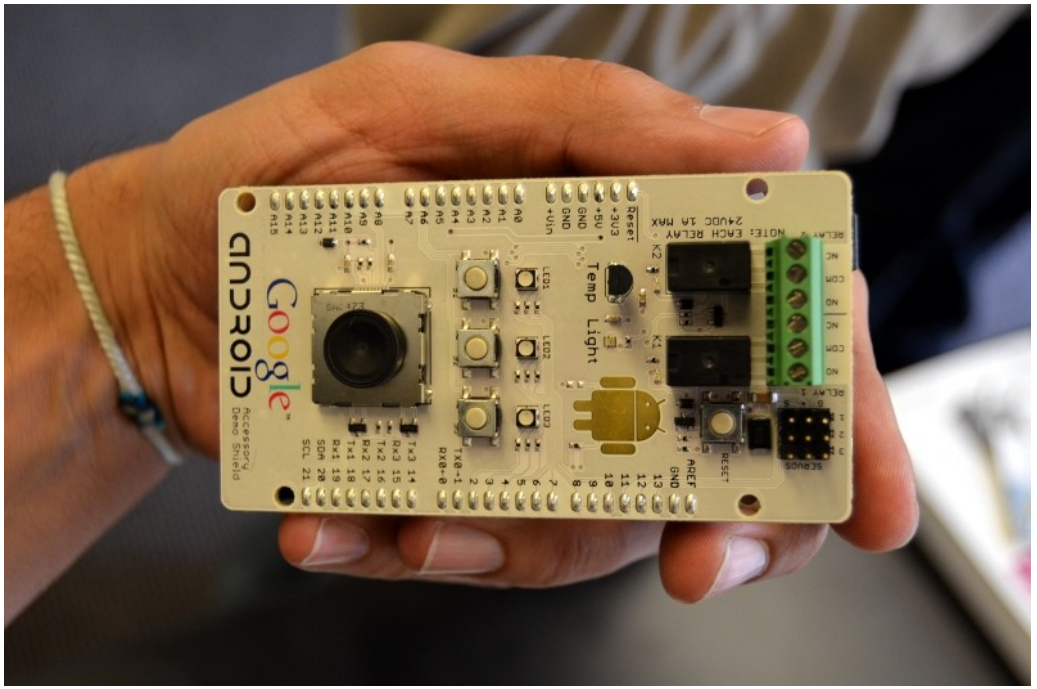
EFARAD CON L
SEFARAD CO
ARAD CON LA TE
SEFARAD CON LA H
SEFARAD SOLID

Internet of Things

- What is it?
- Categories of Devices
- What companies are doing out there

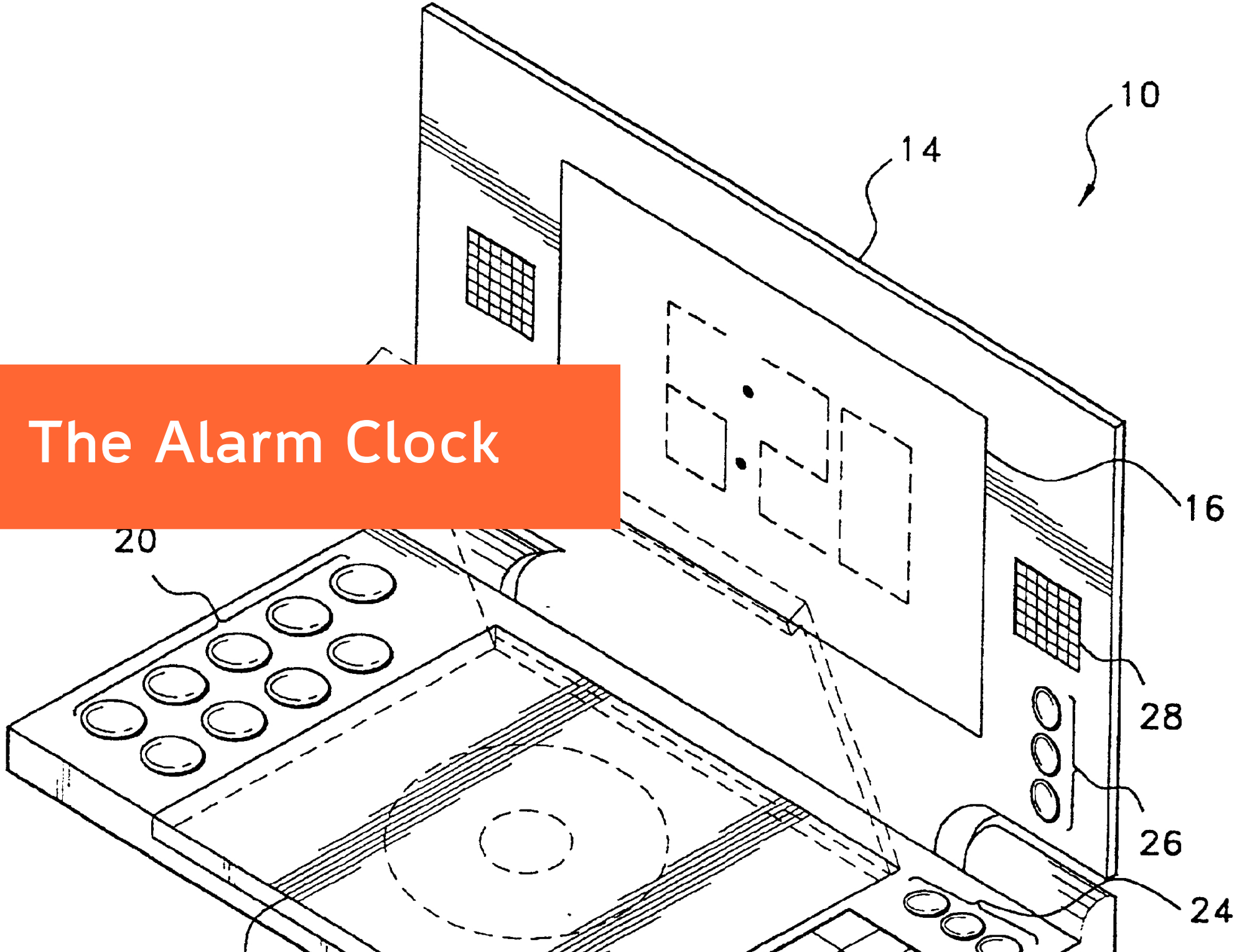

android
Google
Accessory
Demo Shield
Temp
Light
NOTE: EACH RELAY : 24VDC 1A MAX

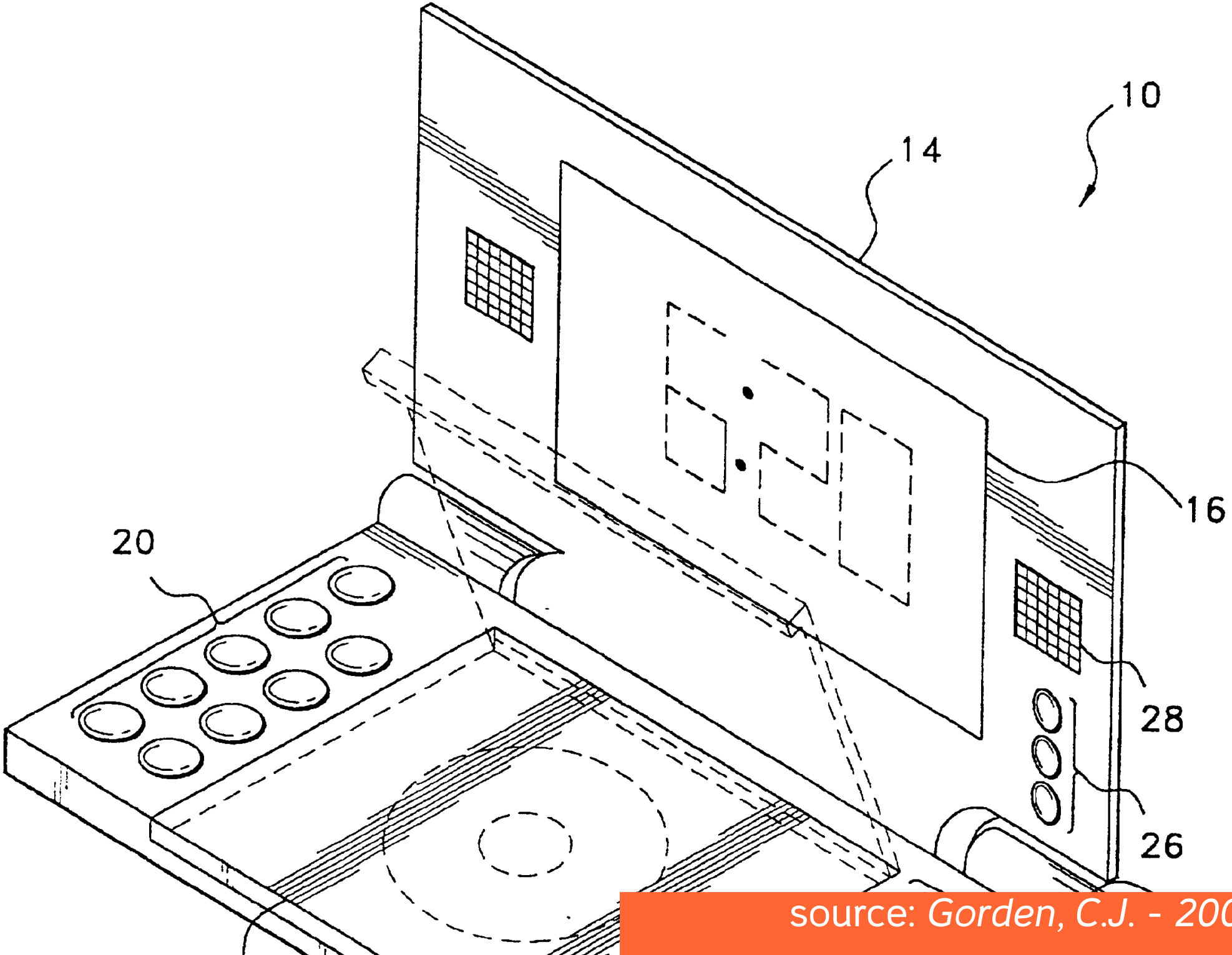
MEGA ADK
ARDUINO
fox Andxoid"
COMMUNICATION
DEVELOPER EDITION
ANALOG IN
DIGITAL
PWM
WWW.ARDUINO.CC

antenova
Telefónica
Telefónica
Investigación y Desarrollo

What is IoT?

The Alarm Clock





source: *Gorden, C.J. - 2002*

The Kindle

amazonkindle
May 9, 2010
The New York Times
Kindle Edition, © 2010 The New York Times Company
Greek Debt Woes Ripple Outward, From Asia to U.S.
ance-Presse — Getty Images
n Wien, a Wall Street strategist.
through Europe and finally shook the
the United States is now affecting the broader global economy,
from the ability of Asian corporations to raise money to the outlook for
money-market funds where American savers park their cash.
What was once a local worry about the debt burden of one of Europe's smallest
economies has quickly gone global. Already, jittery investors have forced Brazil
to scale back bond sales as interest rates soared and caused currencies in Asia
like the Korean won to weaken. Ten companies around the world that had
planned to issue stock delayed their offerings, the most in a single week since
next article: A New Setback in Efforts to Contain the Gulf Oil Spill
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onnect to 3G - Chromium
3D Printing Trends Nove
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amazon.co.uk/gp/help/customer/display.html?nodeId=201176040
music Arduino_web whatever New folder STPLN_portal fabriken nice_projects cuartielles research 1s1 mexico
Search All Go
Hello. Sign in Your Account
Try Prime
use Deals Subscribe & Save Amazon Family Outlet Amazon Prime Mobile Apps Amazon Toolbar Amazon Local

Search Help: Topic or Keyword Search Help

Connect to 3G

If you have turned off wireless, turn it back on and connect to a 3G network to buy and download content, download content from the Cloud, sync to receive items, or sync to the furthest page read.

Your Kindle automatically turns 3G coverage off when you connect using Wi-Fi. When you disconnect from a Wi-Fi network or if you move out of Wi-Fi range, your Kindle automatically switches back to 3G coverage.

For Kindle models that include free 3G, wireless connectivity is automatic (with no monthly fees or annual contracts). If you see one of the 3G network indicators (3G, EDGE or GPRS) in the upper right corner of your Kindle screen, your Kindle is already connected wirelessly using 3G.

From **Home**, press the **Menu** button, select **Settings**, and then select **Turn Wireless On**.

About 3G Coverage

Kindle Keyboard 3G comes with Wi-Fi and built-in 3G wireless connectivity with coverage in more than 100 countries and territories.

To check the 3G coverage in your area, go to 3G Coverage in Your Area.

Important Information About the Coverage Map

The map may include areas served by unaffiliated carriers, and may depict their licensed area rather than an approximation of their coverage. Actual coverage may differ substantially from map graphics, and coverag and other construction, signal strength and other factors. Amazon does n

Self-Serv
Track Packag
Manage your
Return or Rep
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Kindle Help F
General Help
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Other He
Sell on Ama
Associates P
Amazon Wel
Publisher an

source: *Amazon UK -*

source: *IT-Times, Korea - 2009*

Types of devices

Vision around the IoT

* *Personal Networks*
    - *they only exist when you're there*

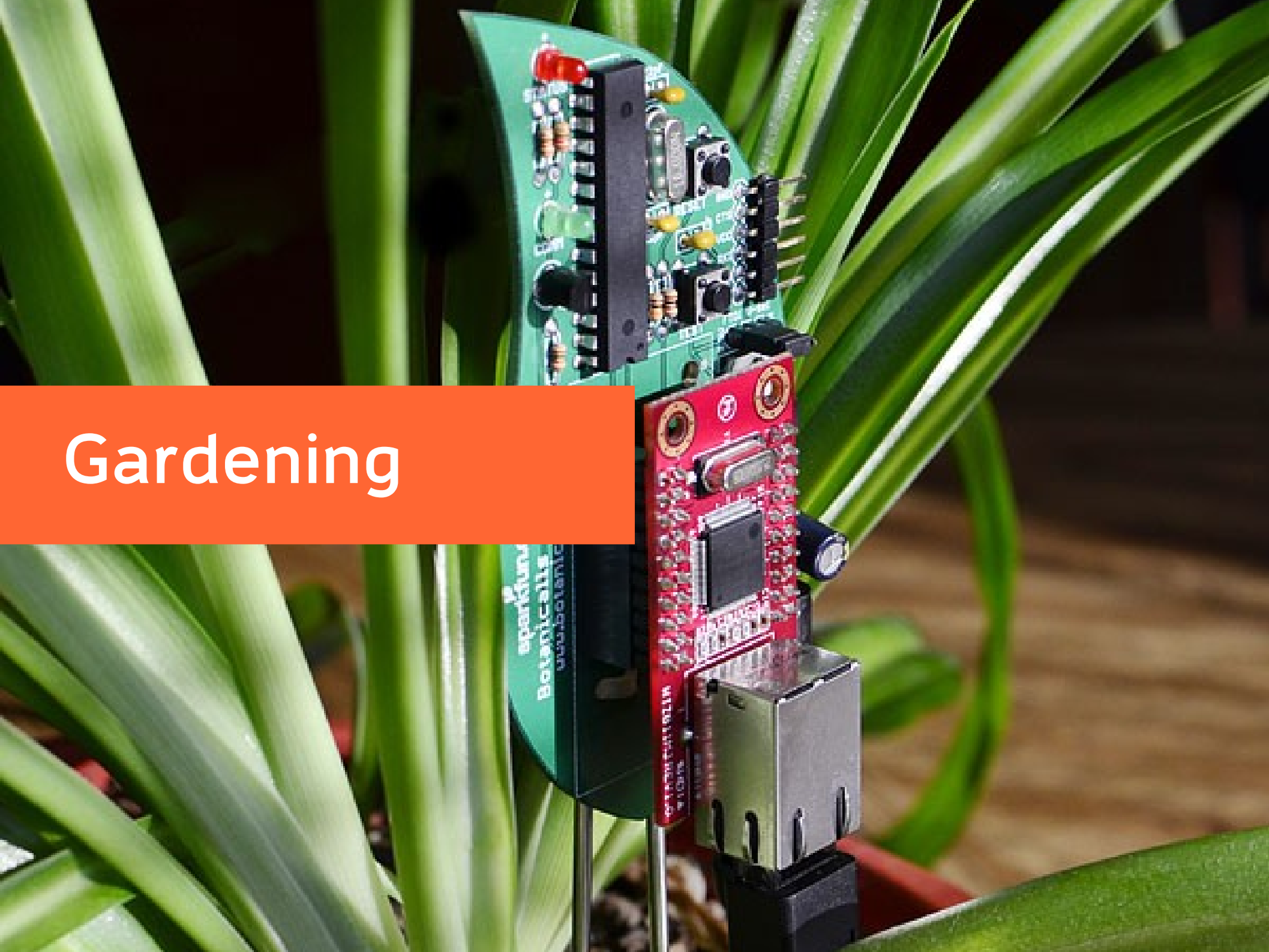
* *Always-On Networks*
    - *they are constantly pushing/pulling data*
        + *public*
        + *private*

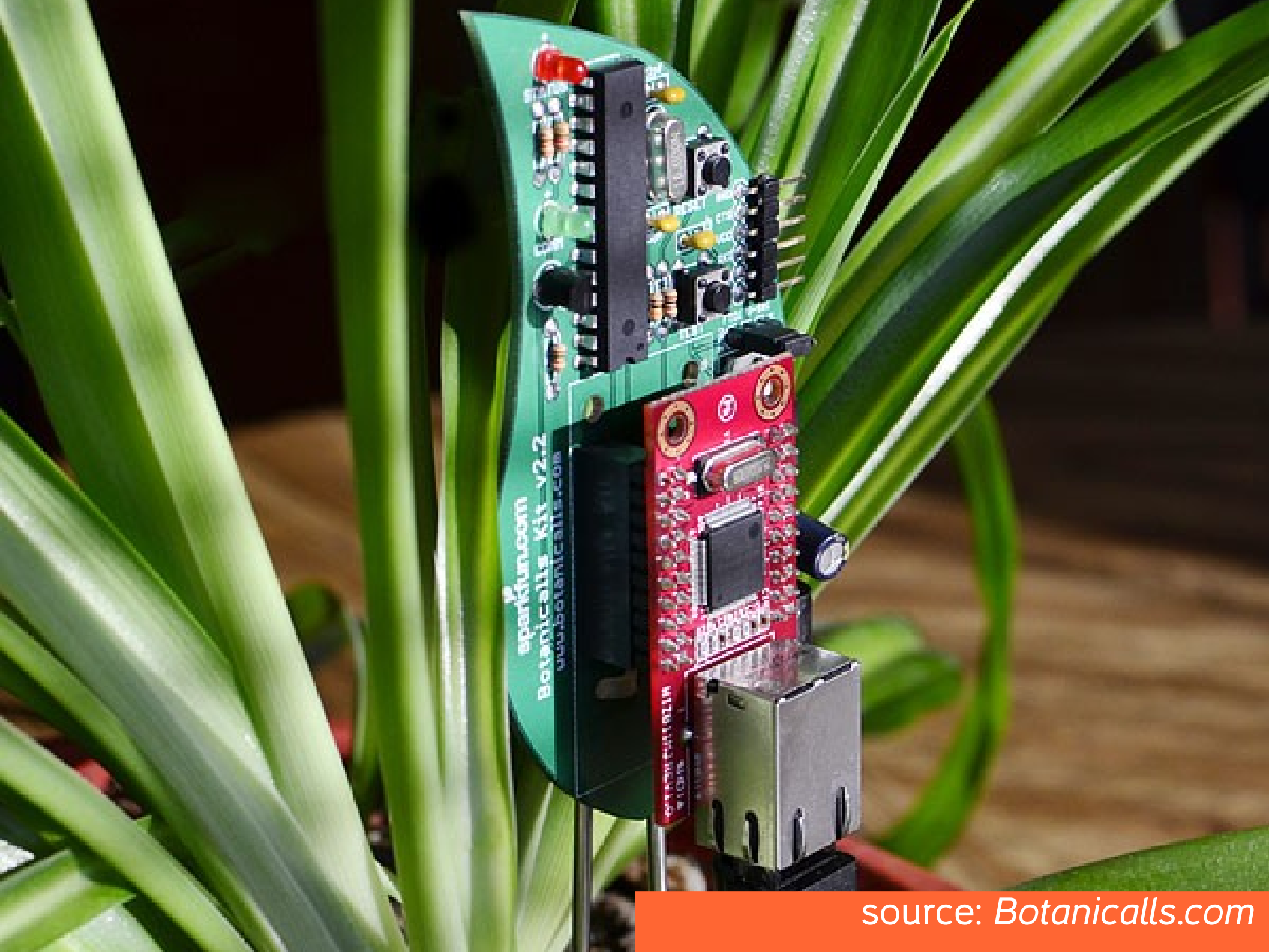
Examples

Quake Alarm

https://twitter.com/#!/alarmasismos

source: *Sebastian, Chile - 2011*

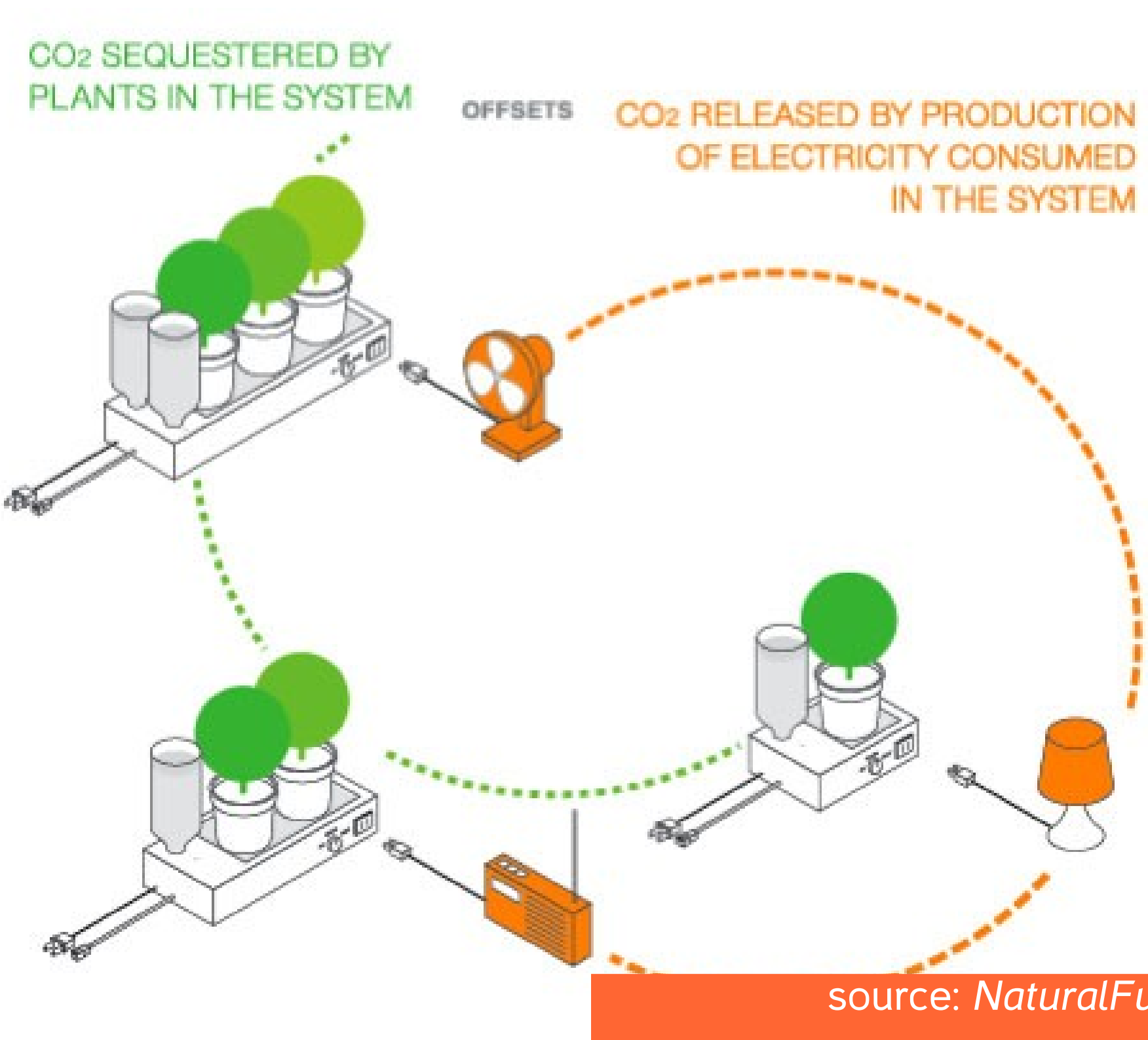

Gardening



source: *Botanicalls.com*

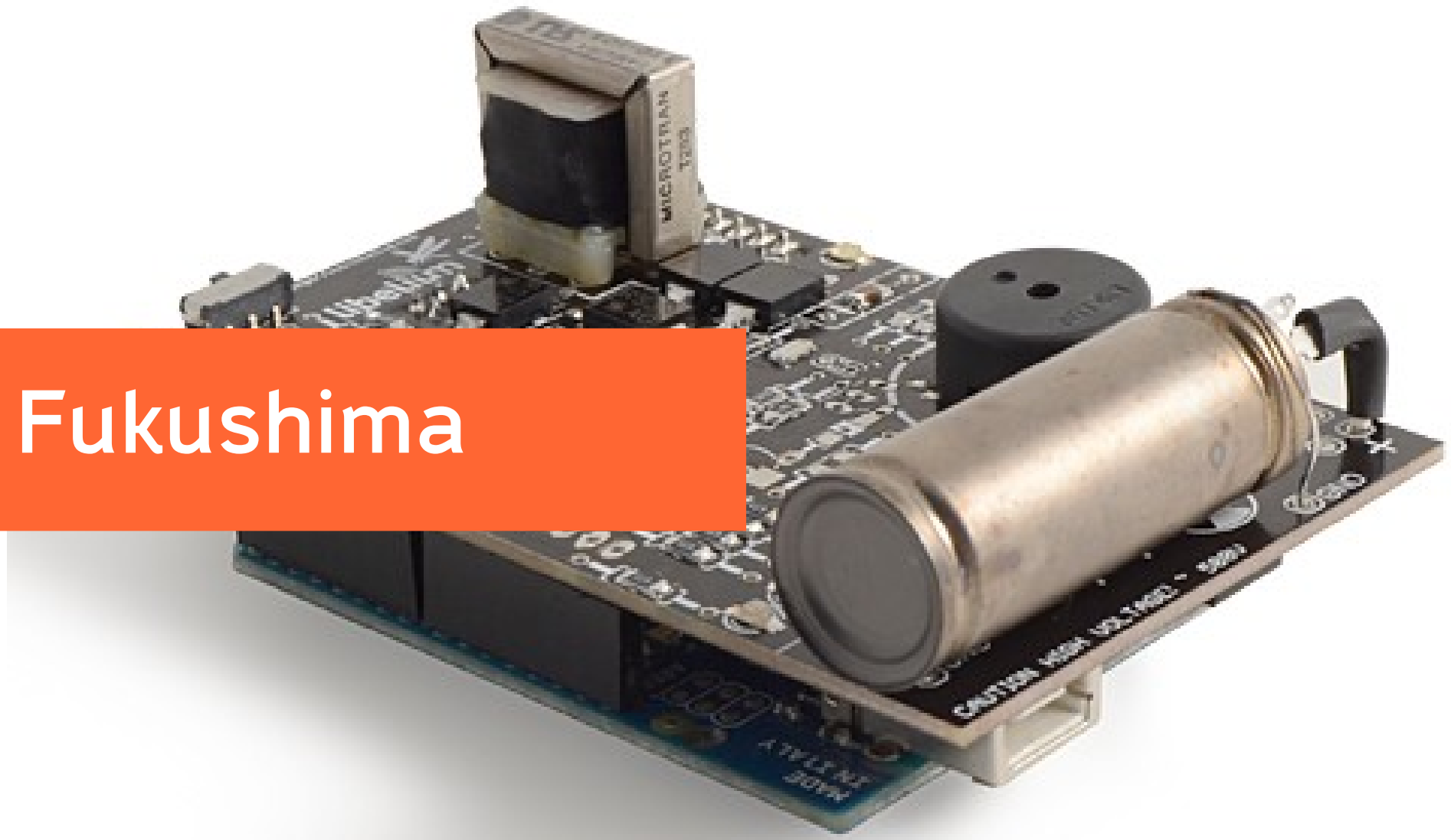
CO2 Recycling

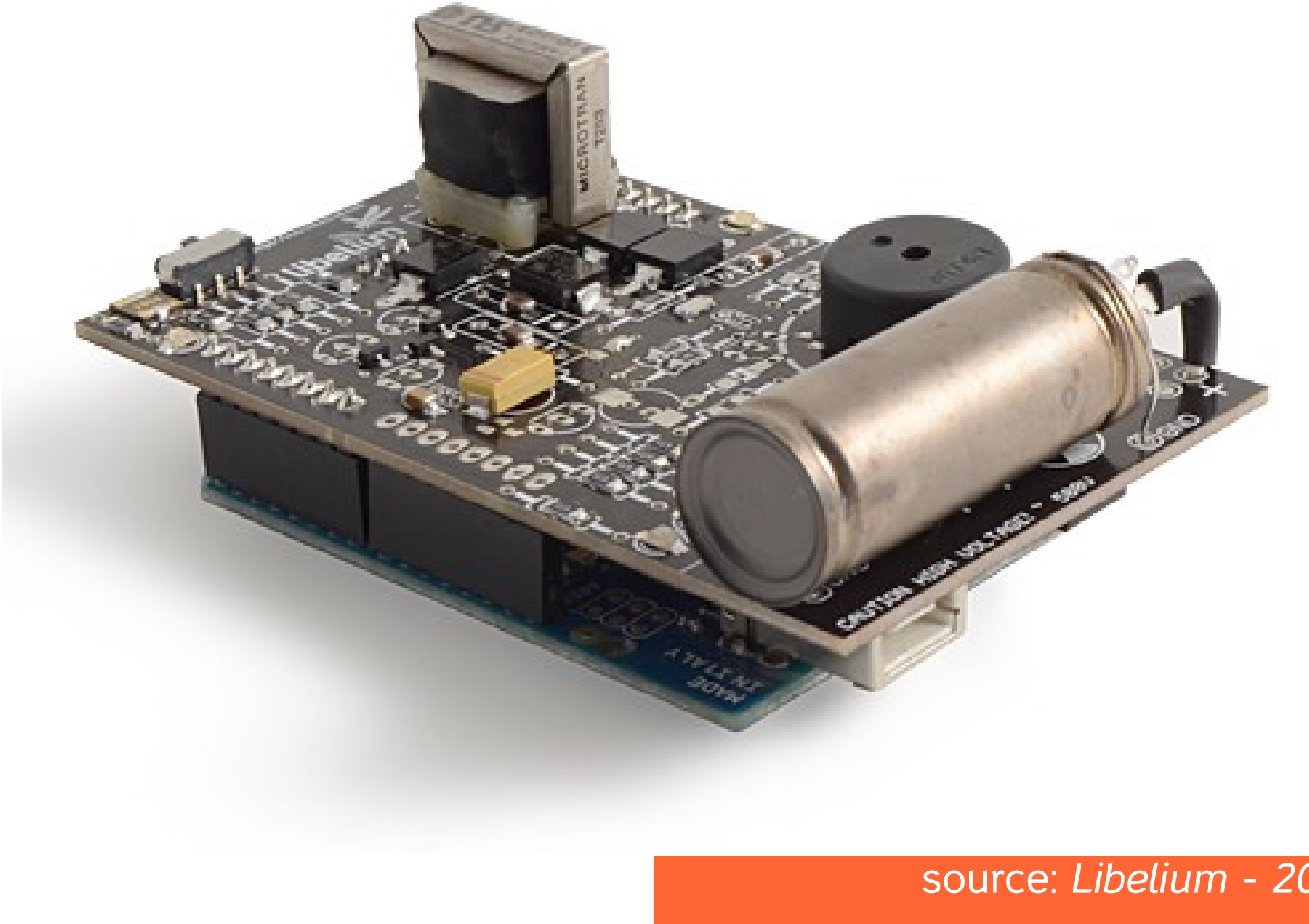
SELFLESS
SELFISH
9v.



source: *NaturalFuse.org*

Fukushima





source: *Libelium - 2011*

Japan Geigermap : At-a-glance

Search for an address: Search

Select data source: All data sources | Safecast Fixed Sensor Network | Individual Geiger Counters | Government Sensor Networks

Most recent reading: Thu, 22 Mar 2012 08:18:09 GMT

日本語 | Eng

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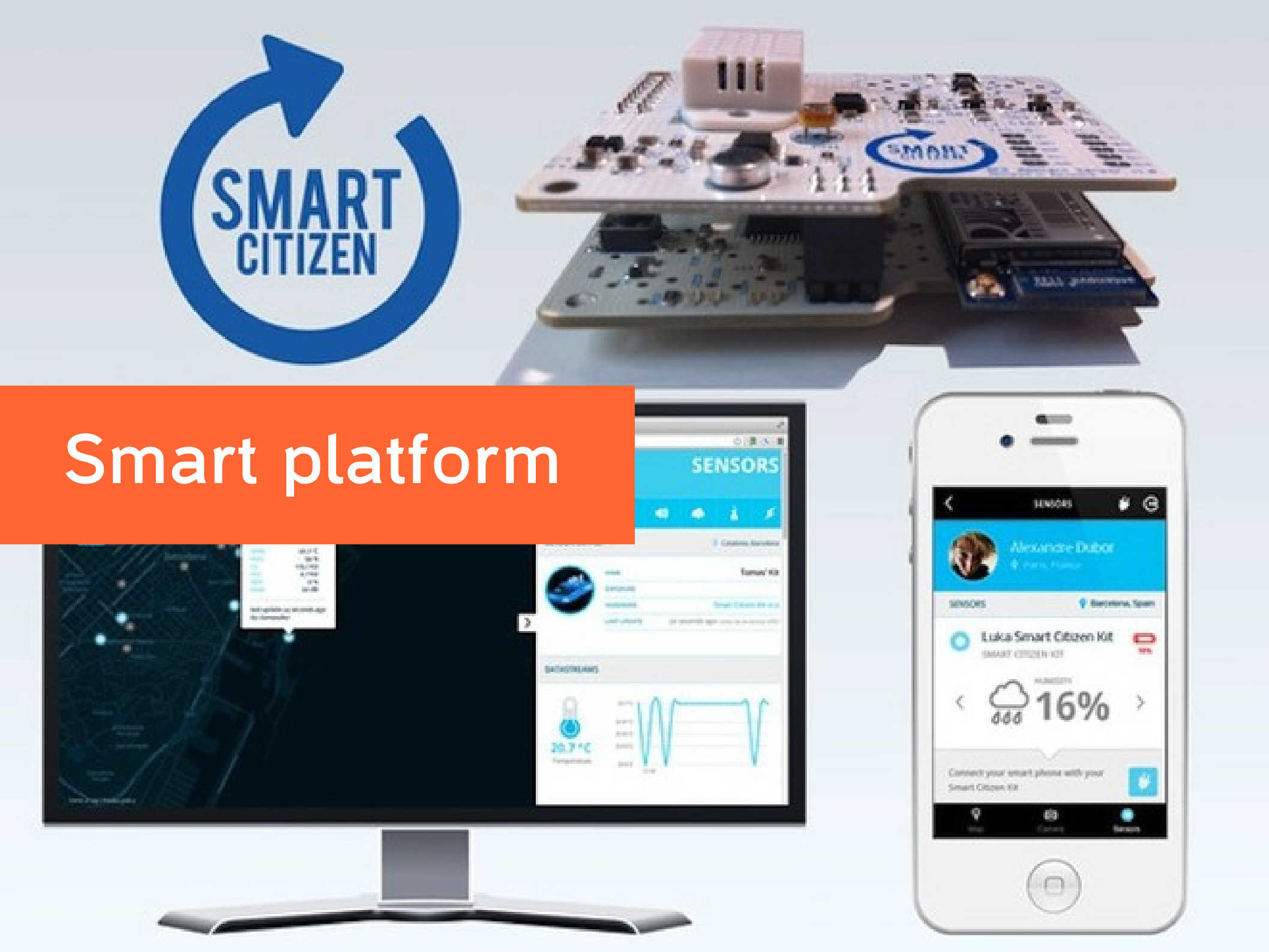
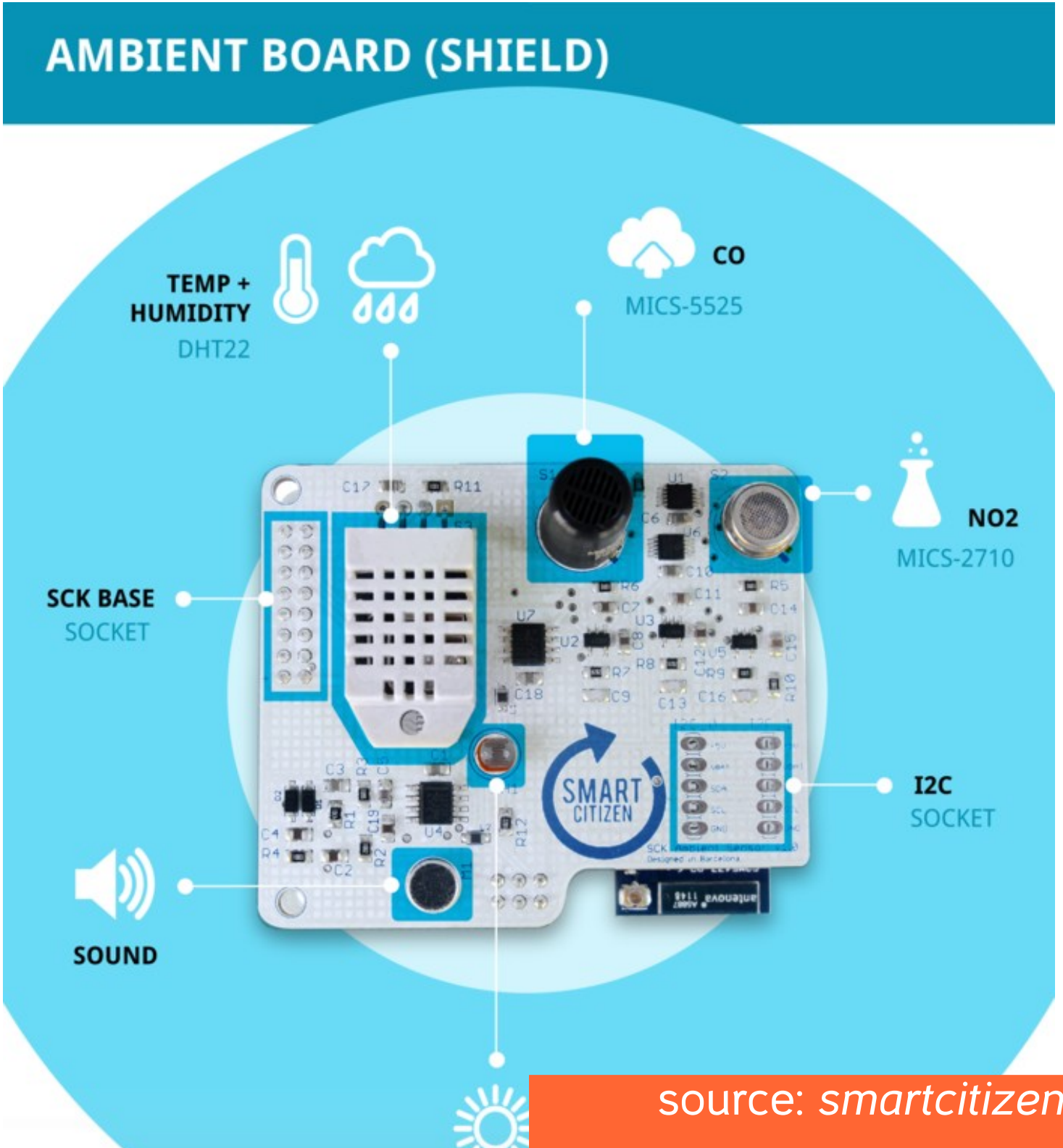
Readings
Pachube h

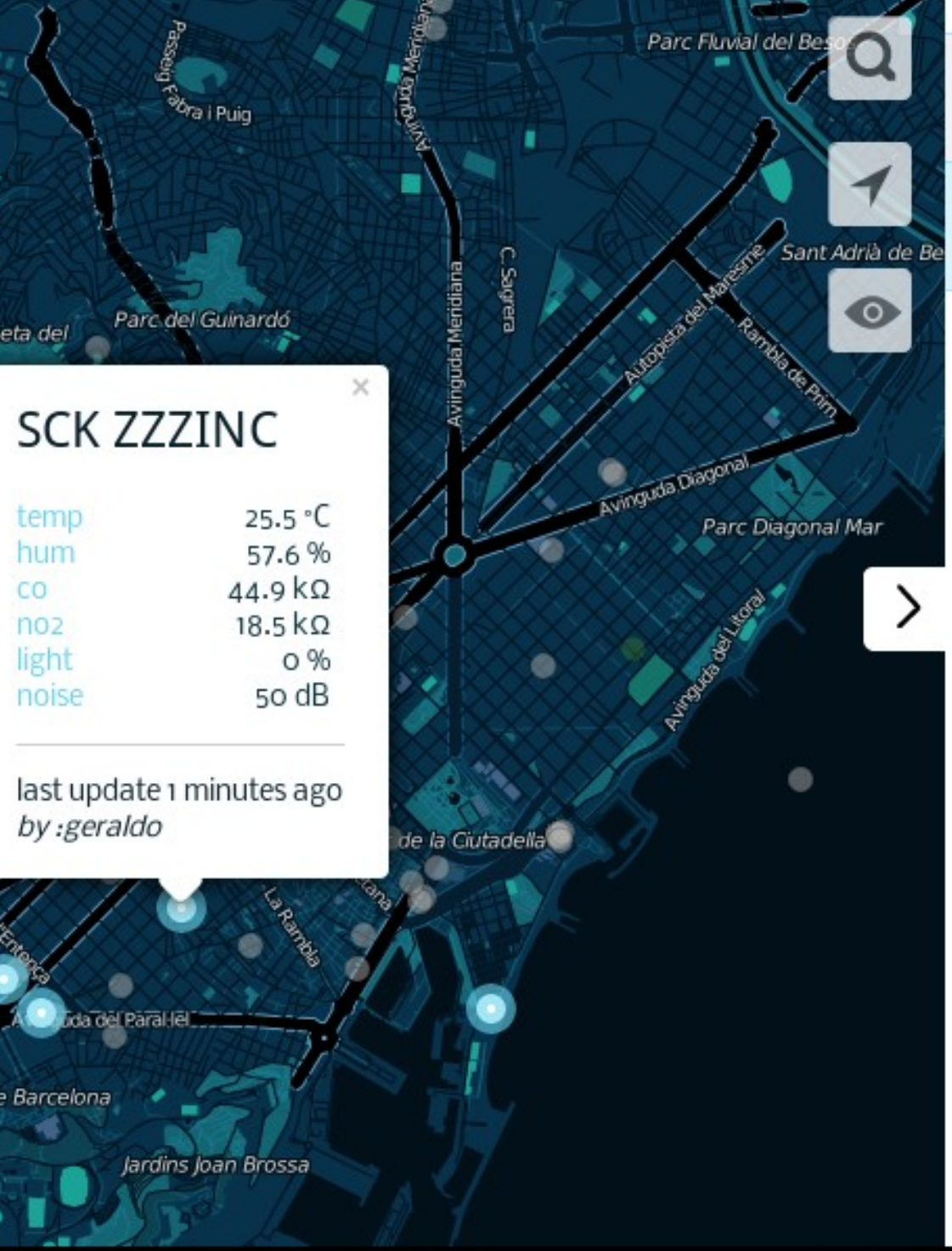
source: *failedrobot.com - 2012*


SMART
CITIZEN
Smart platform
SENSORS
Luka Smart Citizen Kit
16%

AMBIENT BOARD (SHIELD)



source: *smartcitizen.me - 2013*



SCK ZZZINC

temp	25.5 °C
hum	57.6 %
co	44.9 kΩ
no2	18.5 kΩ
light	0 %
noise	50 dB

last update 1 minutes ago
by :geraldo

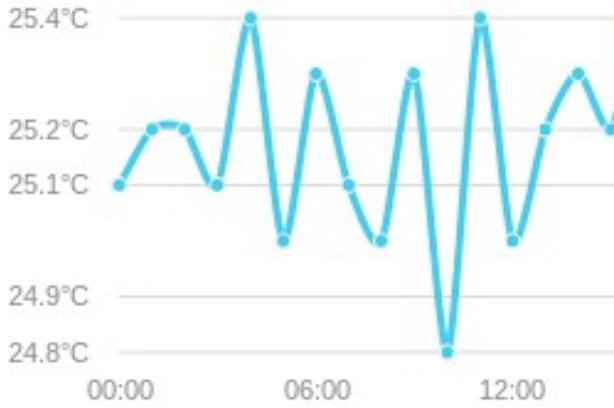
DATASTREAMS

DATASTREAM FOR THE LATEST :

24 hours

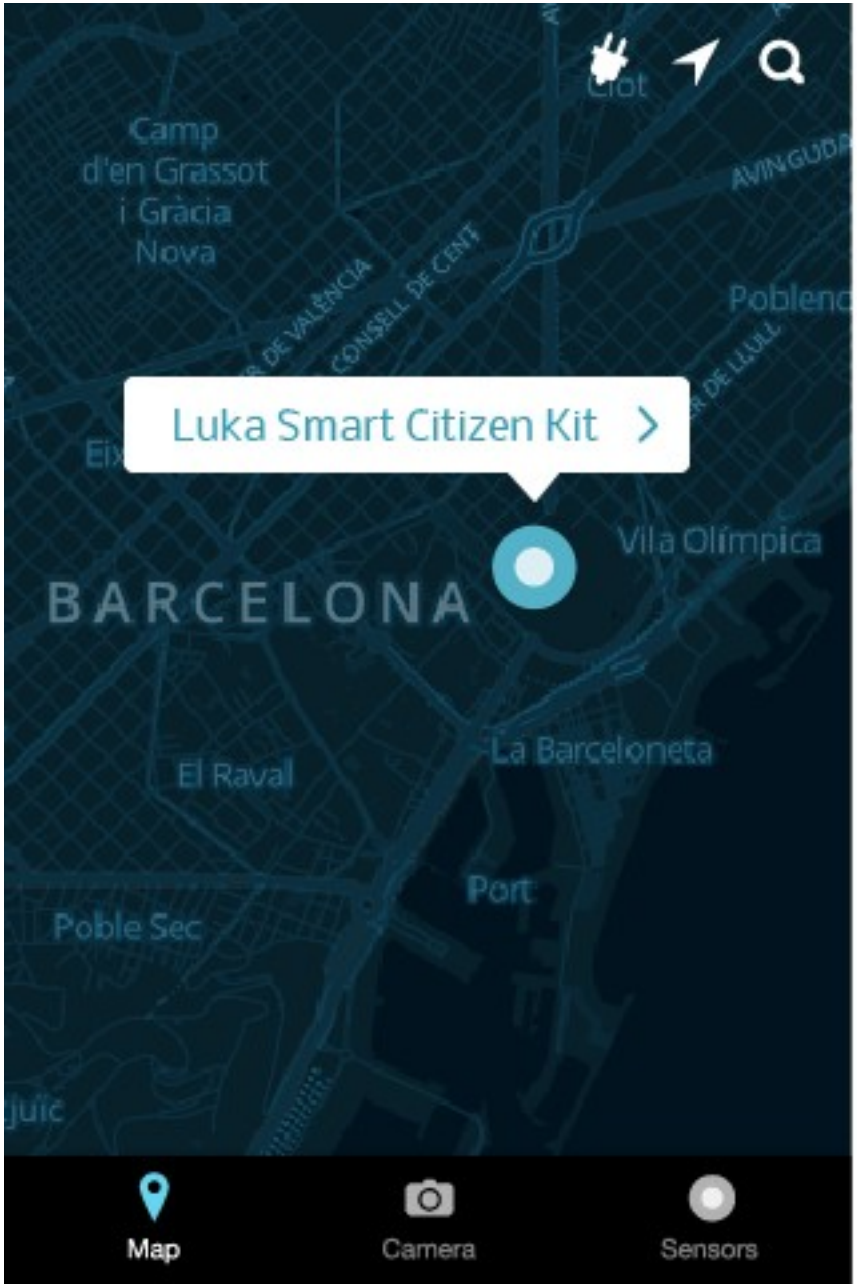
59.3 %
Humidity

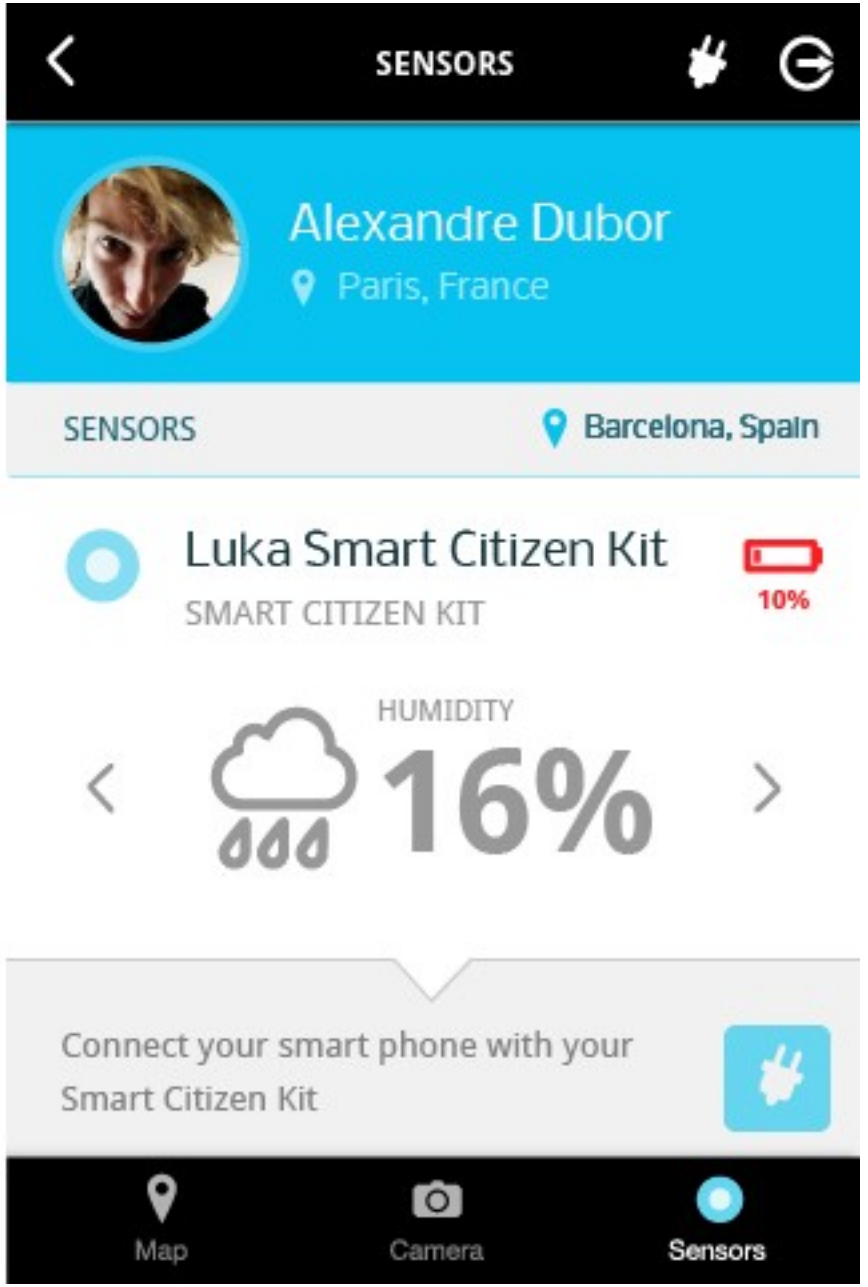
24.9 °C
Temperature



LOGIN UPDATES

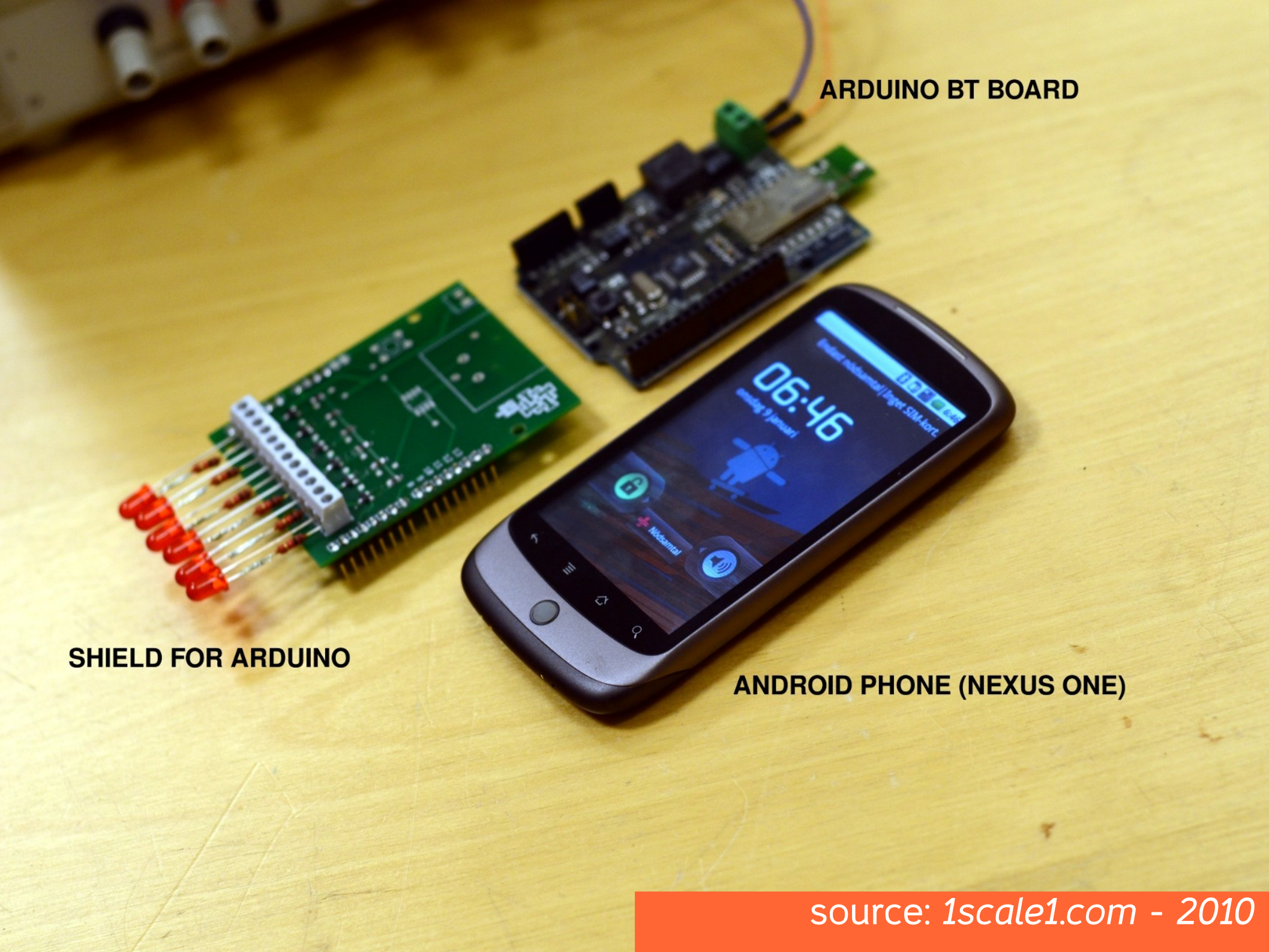
source: *smartcitizen.me - 2013*





source: *smartcitizen.me - 2013*

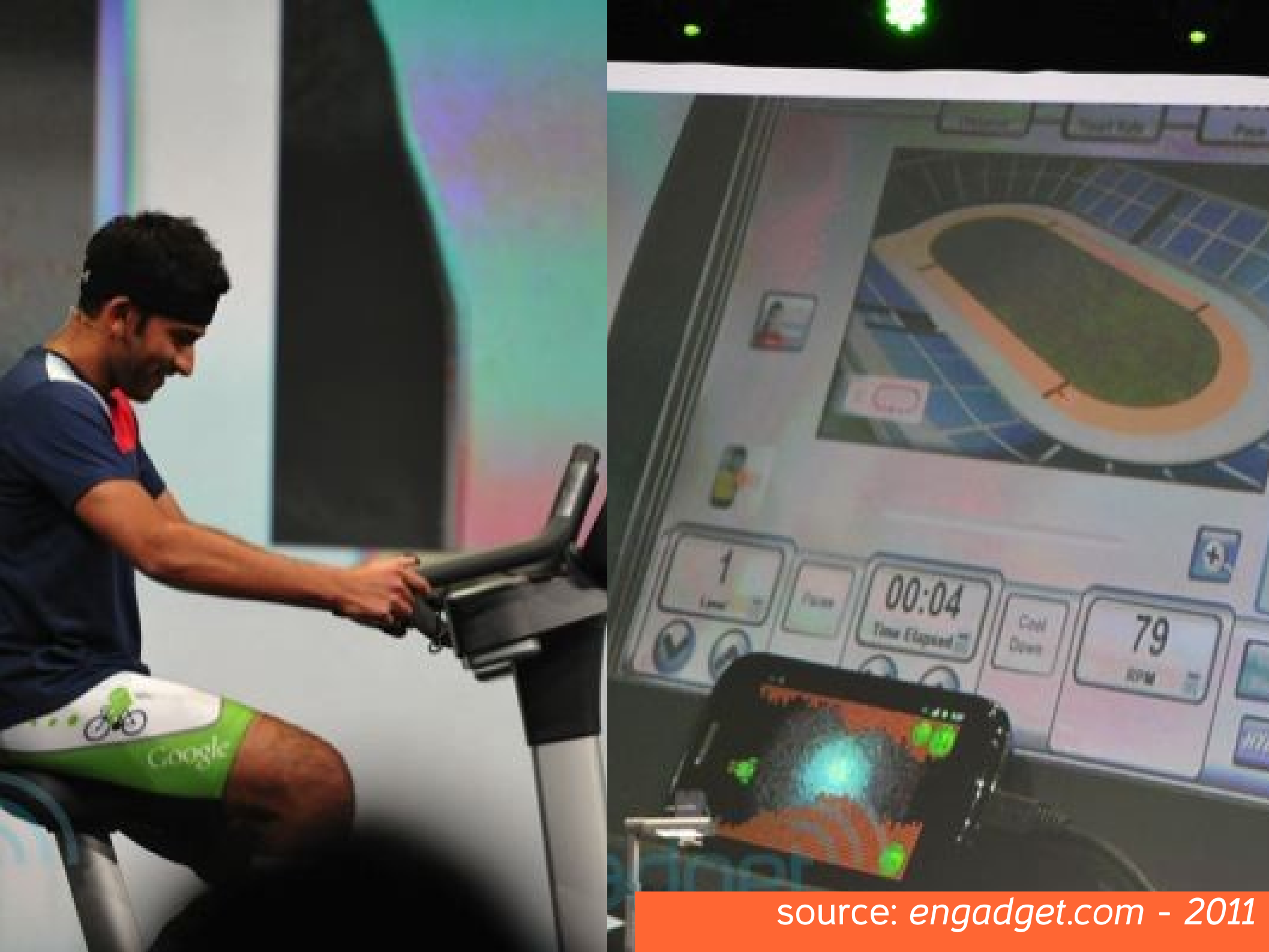
Arts



source: *1scale1.com - 2010*

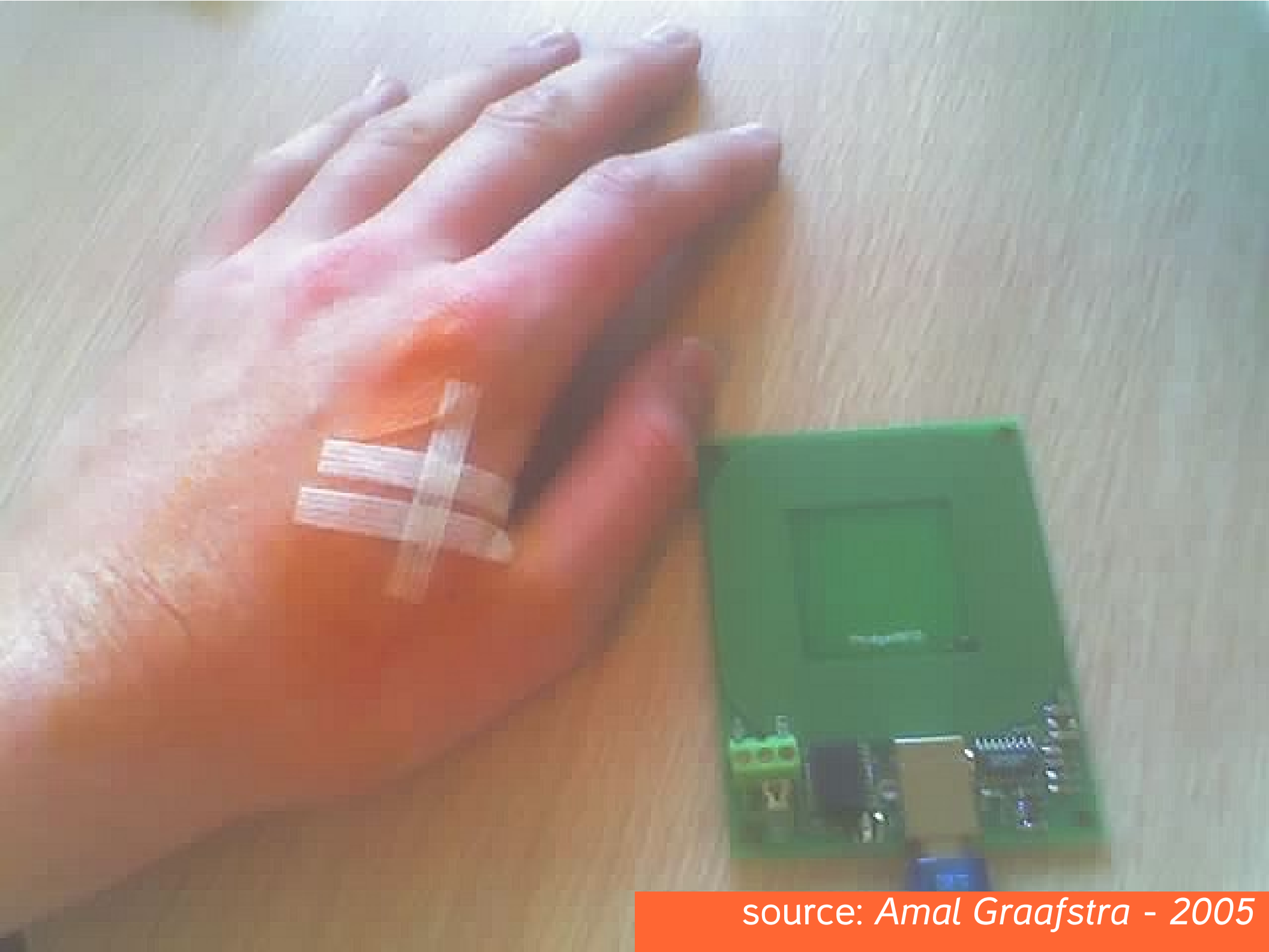
source: *1scale1.com - 2010*

Personal nets
Google
00:04
79



source: *engadget.com - 2011*

Self monitoring



source: *Amal Graafstra - 2005*

Where we stand

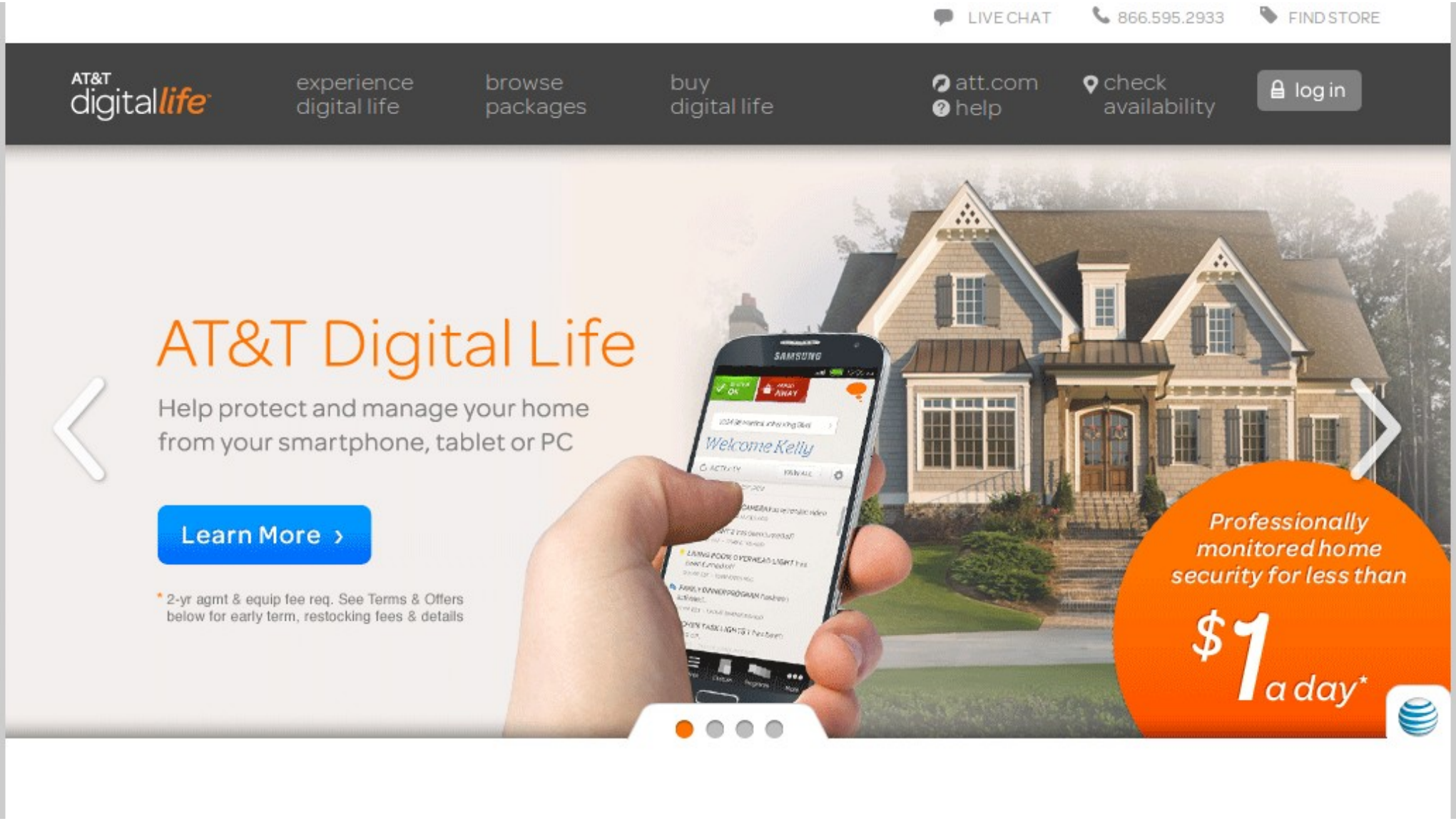
** We are still studying the real value*

** We know the technology we have doesn't allow full scalability*

** We are not sure we (humans) are ready to embrace what it means, taking full advantage of IoT means changing the way we understand our lives*

And companies …

AT&Ts proposal



source: *AT&T - 2013*

What's inside Digital Life

As for the service, it's pretty compelling for the average person who's evaluating a home automation or security system, especially if AT&t does open up the platform later as it promises it will. There are two basic packages. The cheaper entry-level package costs $29.99 a month plus $149.99 for equipment and installation. It includes 24/7 home monitoring, a wireless keypad, a remote, some sensors and an indoor siren. The more expensive package includes all of that plus three more sensors of the owner's choice for $39.99 a month and $249.99 for the gear and installation.

AT&T also has a slew of add-on devices including water leakage sensors, wireless cameras and thermostats that a consumer can buy and add to the plan for a monthly fee. AT&T has staffed two call centers around the clock in the U.S. and has provided a battery with the system to ensure that the product is reliable and online all the time. The wireline broadband and AT&T wireless provide redundancy for the connectivity.

source: *AT&T - 2013*

AT&T LTE 6:35 PM 100%

SYSTEM OK

ARMED STAY

EDIT

Welcome Raina

1024 Hawthorne St.

ACTIVITY

Tuesday, October 25, 2011

LIVING ROOM CAMERA has recorded video

VIEW 9:11 PM EST

FAMILY DINNER PROGRAM has been activated.

8:11 PM EST

KITCHEN TASK LIGHTS 1 has been turned on.

7:11 PM EST

FRONT DOOR LOCK has been activated.

9:30 PM EST

VIEW ALL ALERTS AND ACTIVITIES

Getting Started

Customize these shortcuts to quickly see your favorite Views or Programs..

LEARN MORE

Custom Views

Group Devices together for easy access to common tasks.

CREATE A CUSTOM VIEW

Smart Programs

Automate tasks in your home to streamline your day.

CREATE A PROGRAM

Home Spaces Devices Custom Views

source: *AT&T - 2013*

Telefónica Digital 'Thinking Things' concept can create smart M2M connectivity for any object

Telefonica

Telefonica Digital's 'Thinking Things' concept: A battery module, core module, and a few sensors (temperature/humidity and accelerometer)

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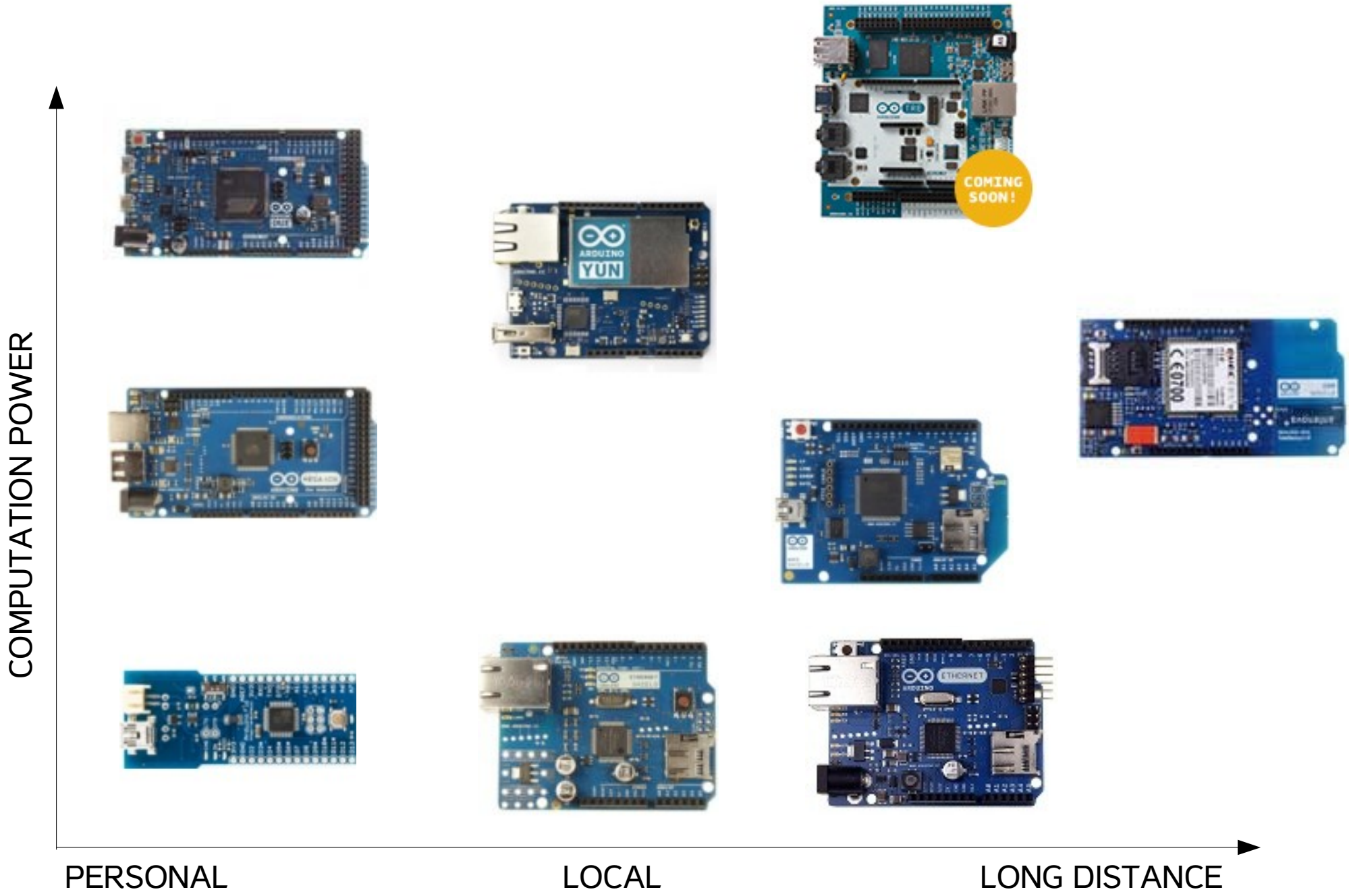
Thinking Things consists of three elements:

- Physical modules containing the core communications and logic
- Energy via a battery or AC
- Sensors and actuators

Modules are simply connected together and then to the device they will control, or deployed in the space to be monitored. For instance, modules can be plugged into a lamp to enable remote control of home lighting. This is demonstrated in the video below (click here to watch it directly on YouTube).

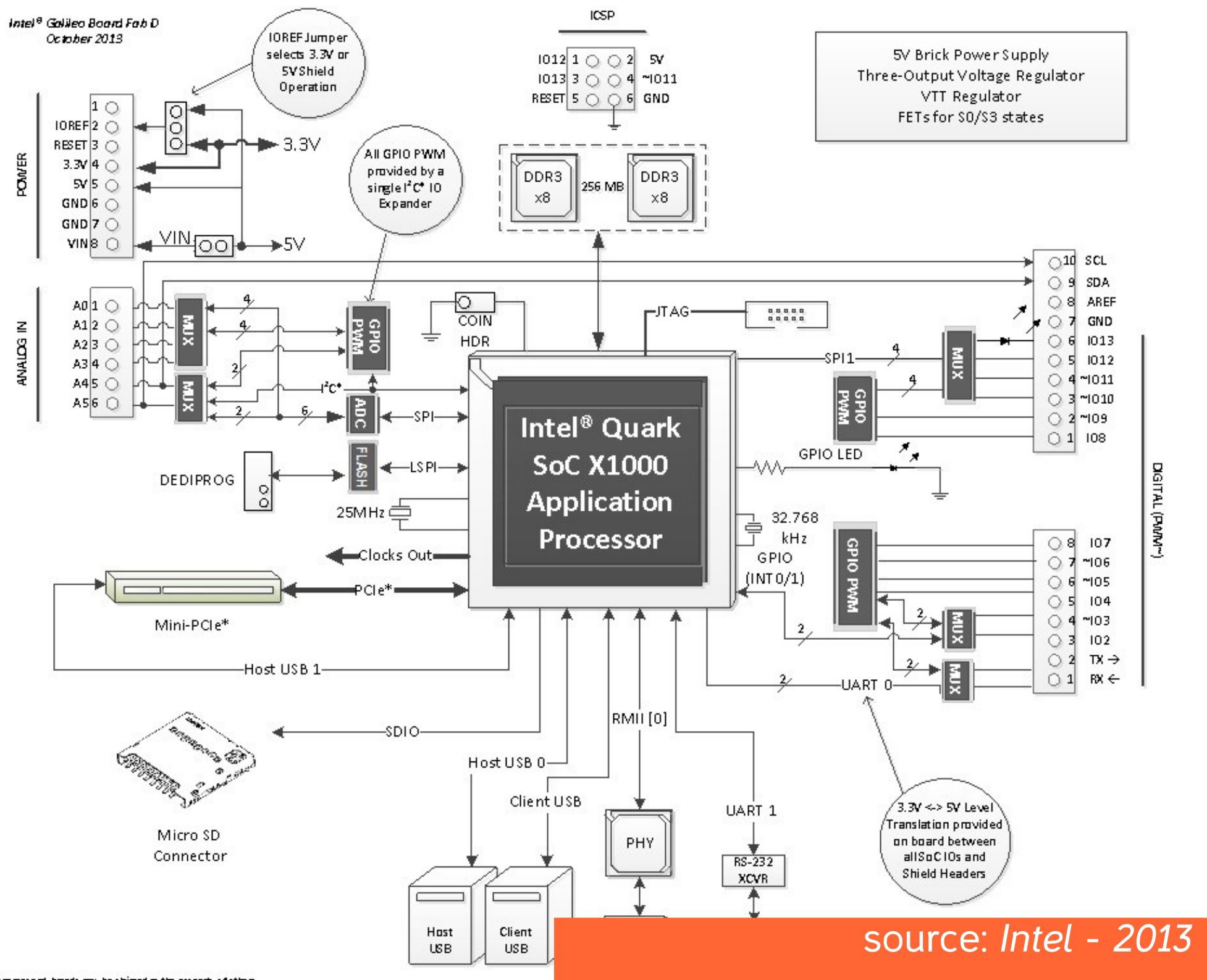
source: *Telefonica - 2013*

Arduino
ELECTRONICS
PLATFORM
SDA SCL
ROHS COMPLIANT
ZERO CARBON
IMPATTO

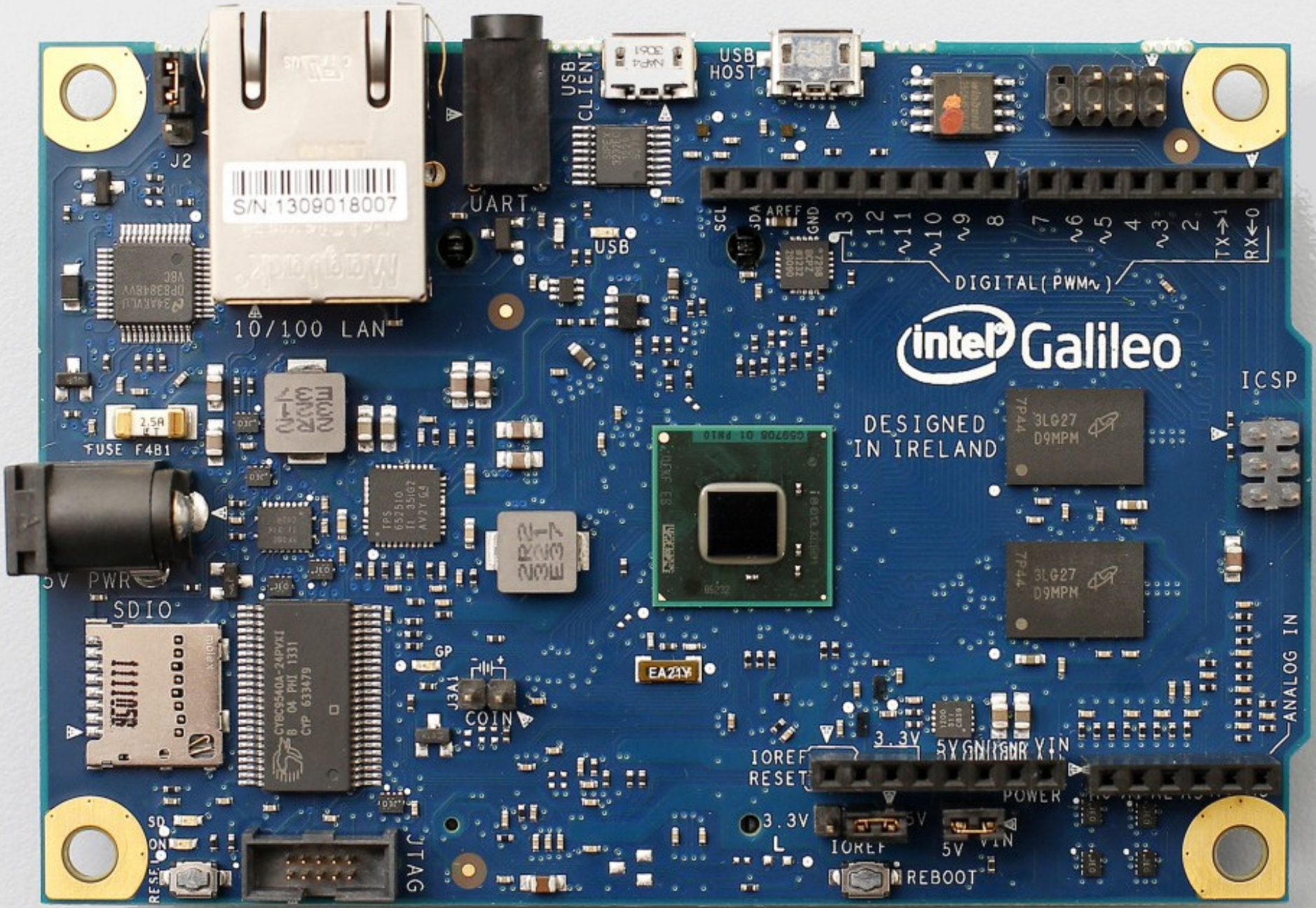


source: *Arduino - 2013*

Intel



source: *Intel - 2013*



source: *Intel - 2013*

HOME EMPRESA PRENSA LIBRERÍA &

cilab city intelligence laboratory S.A.

GAM ÁREAS DE NEGOCIO RESULTADOS TECNOLOGÍAS

Cilab

Cilab

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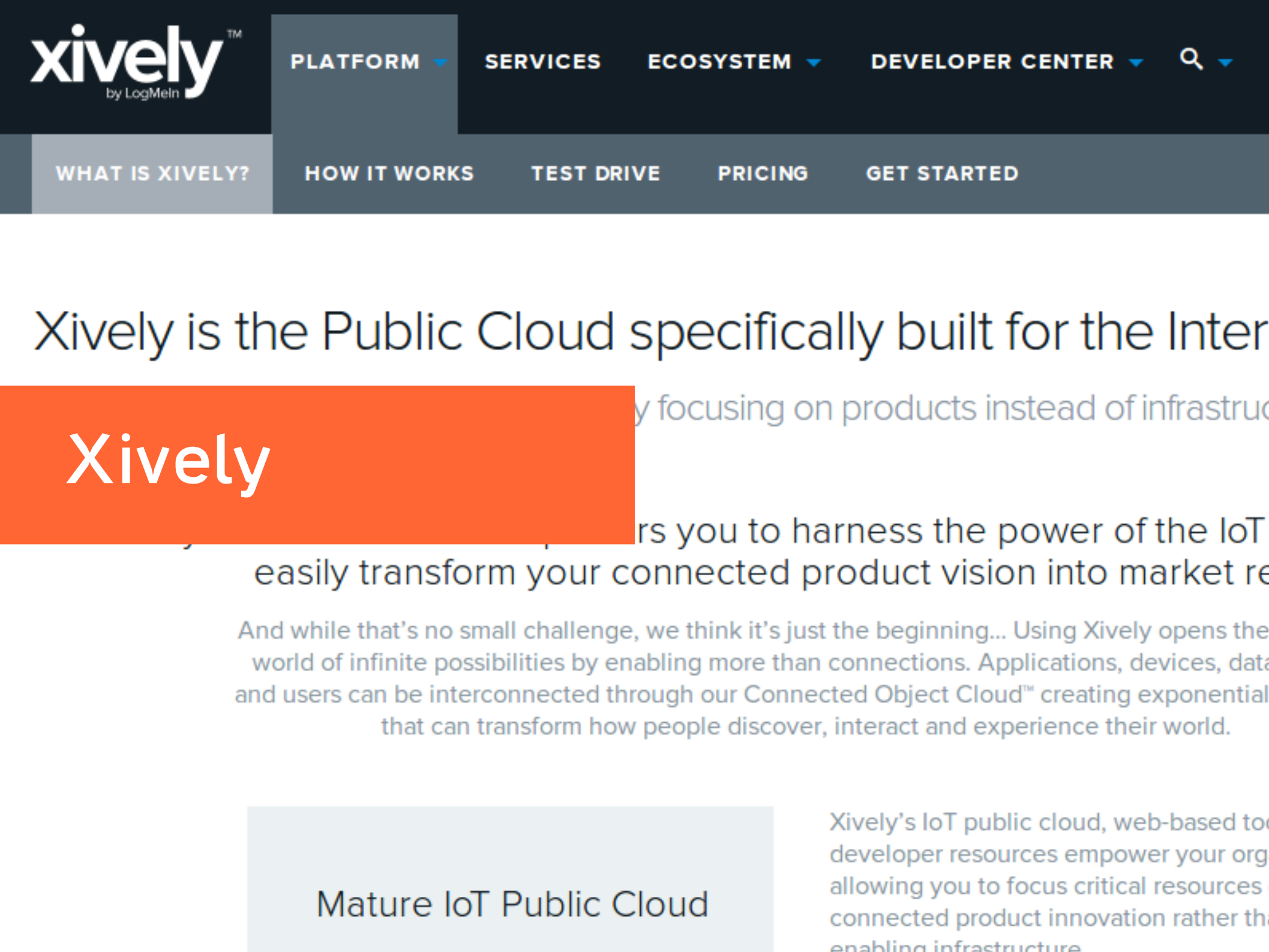
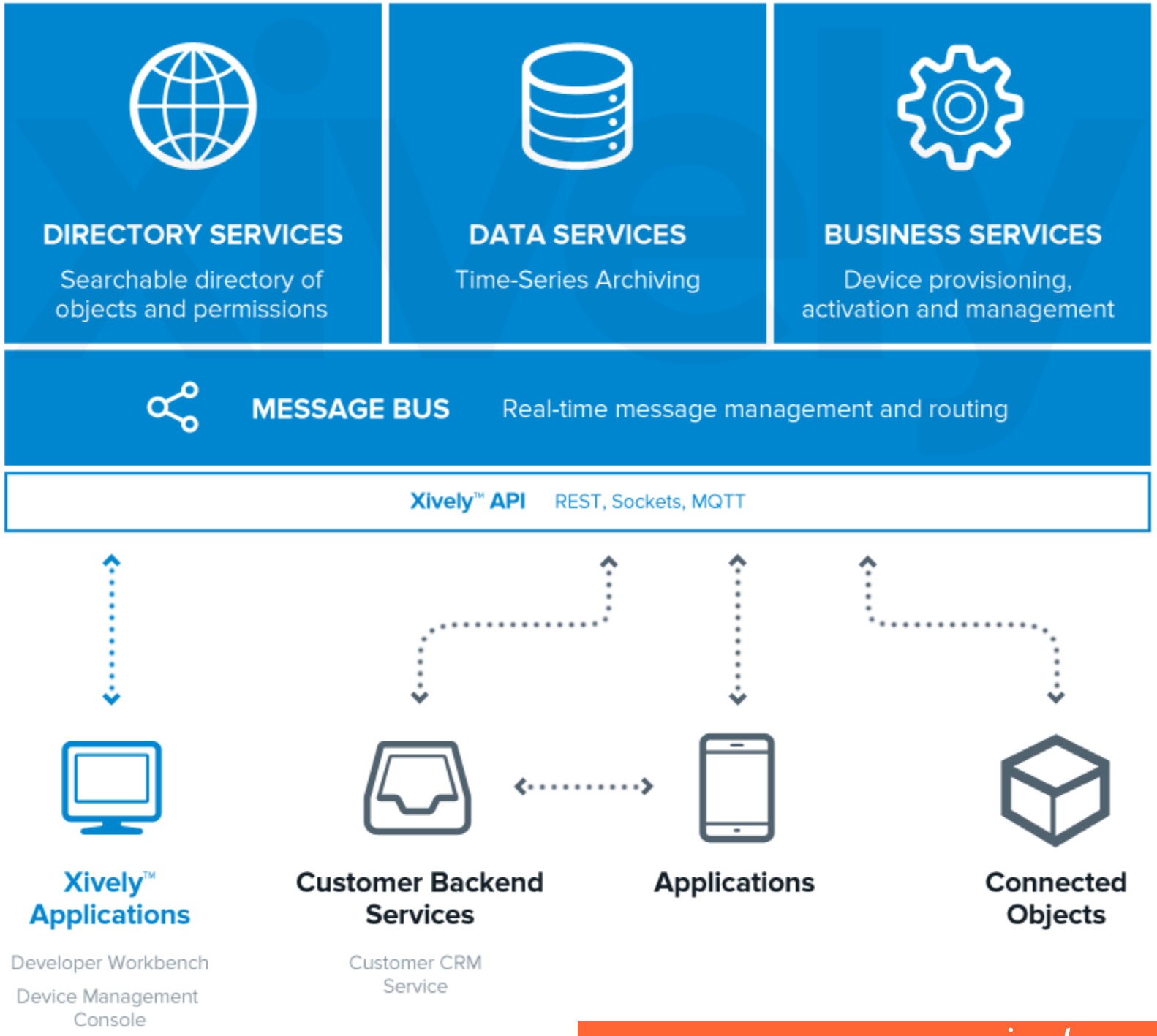
Únete a

Si te gusta lo q puedes encaja

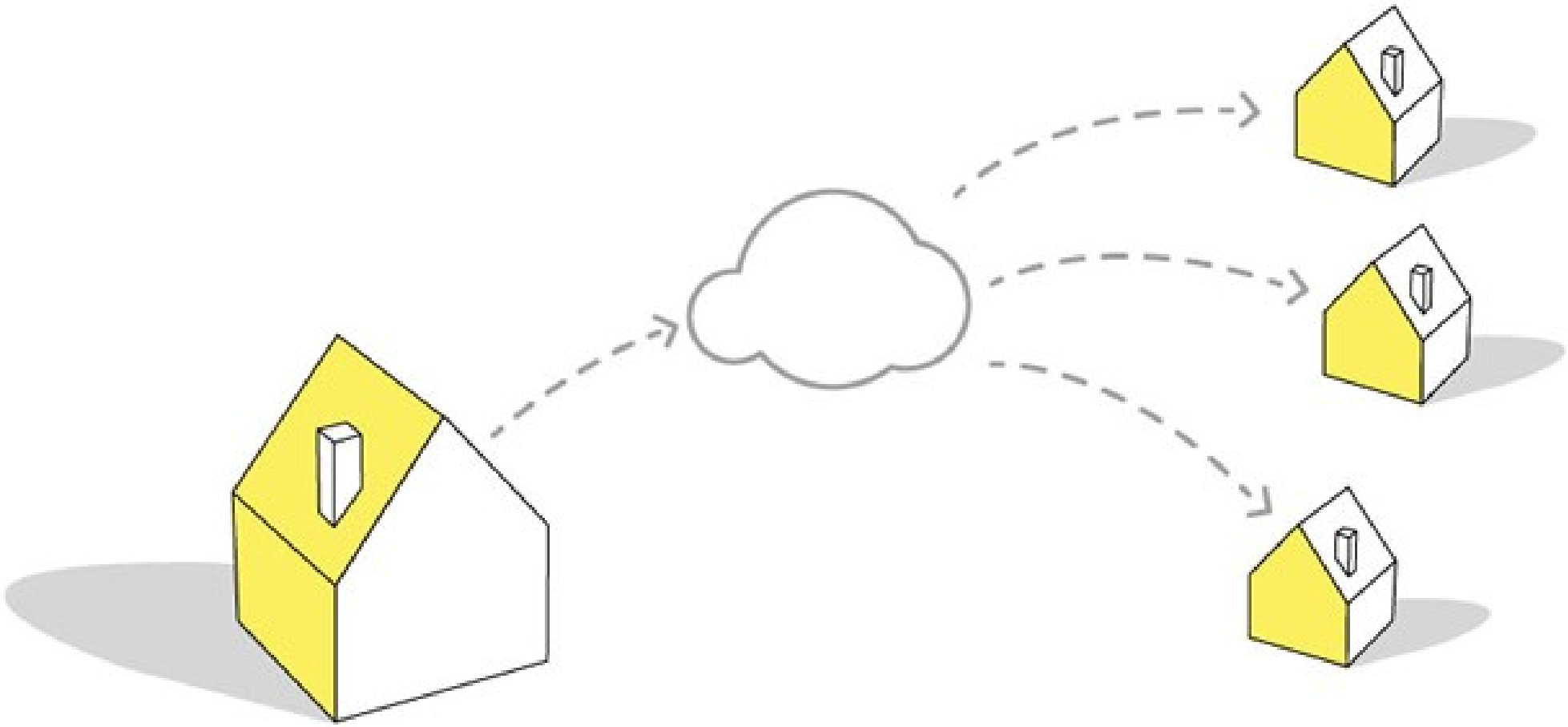
source: *Cilab.es - 2013*


xively by LogMeIn
PLATFORM
SERVICES
ECOSYSTEM
DEVELOPER CENTER
WHAT IS XIVELY?
HOW IT WORKS
TEST DRIVE
PRICING
GET STARTED
Xively is the Public Cloud specifically built for the Inter
y focusing on products instead of infrastruc
Xively
rs you to harness the power of the IoT
easily transform your connected product vision into market re
And while that's no small challenge, we think it's just the beginning... Using Xively opens the
world of infinite possibilities by enabling more than connections. Applications, devices, data
and users can be interconnected through our Connected Object Cloud™ creating exponential
that can transform how people discover, interact and experience their world.
Mature IoT Public Cloud
Xively's IoT public cloud, web-based to
developer resources empower your org
allowing you to focus critical resources
connected product innovation rather th
enabling infrastructure



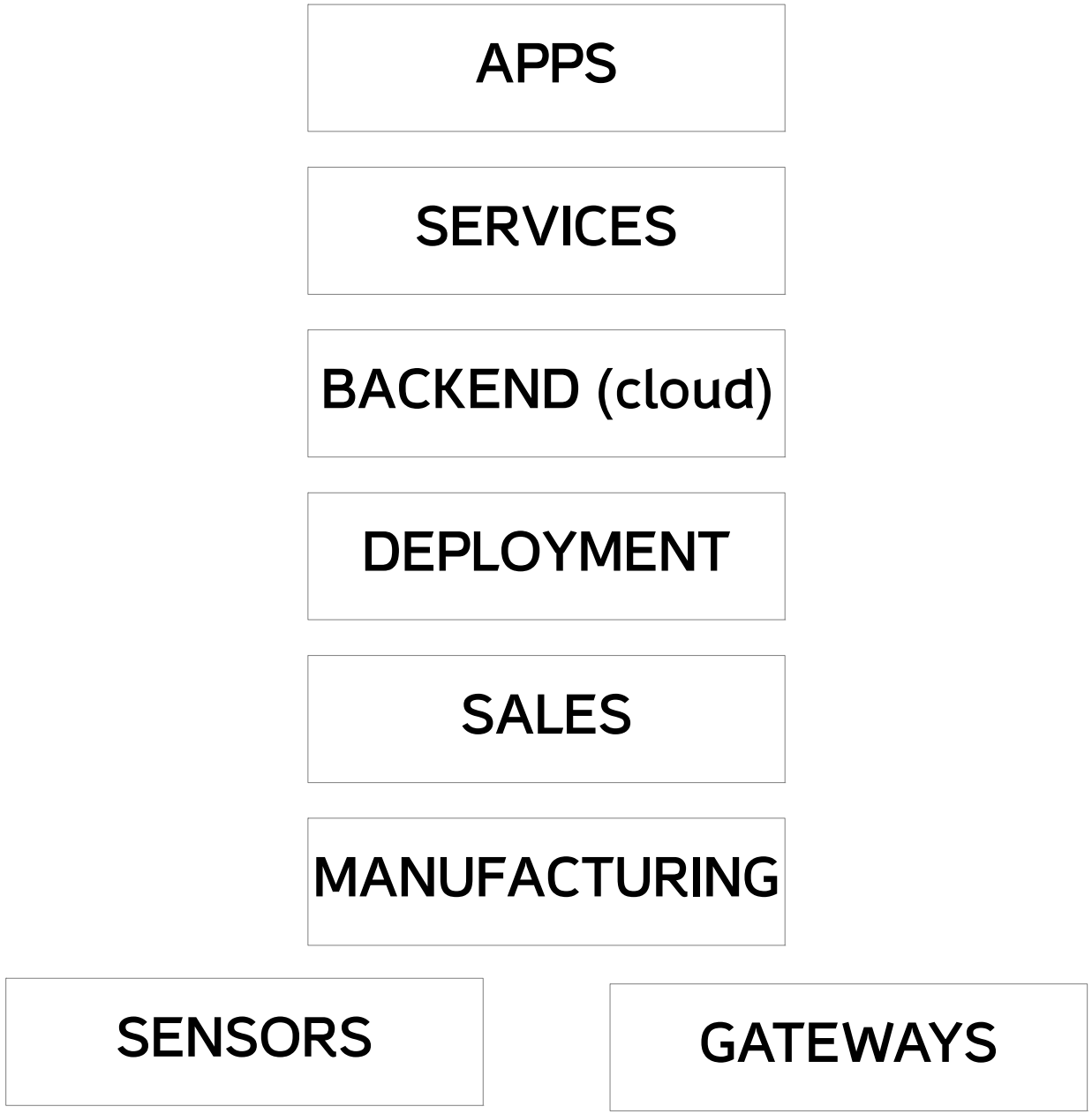
source: *xively.com - 2013*

Good night lamp



source: *goodnightlamp.com - 2013*

How to make IoT?



source: *ioio - 2013*

The Dangers

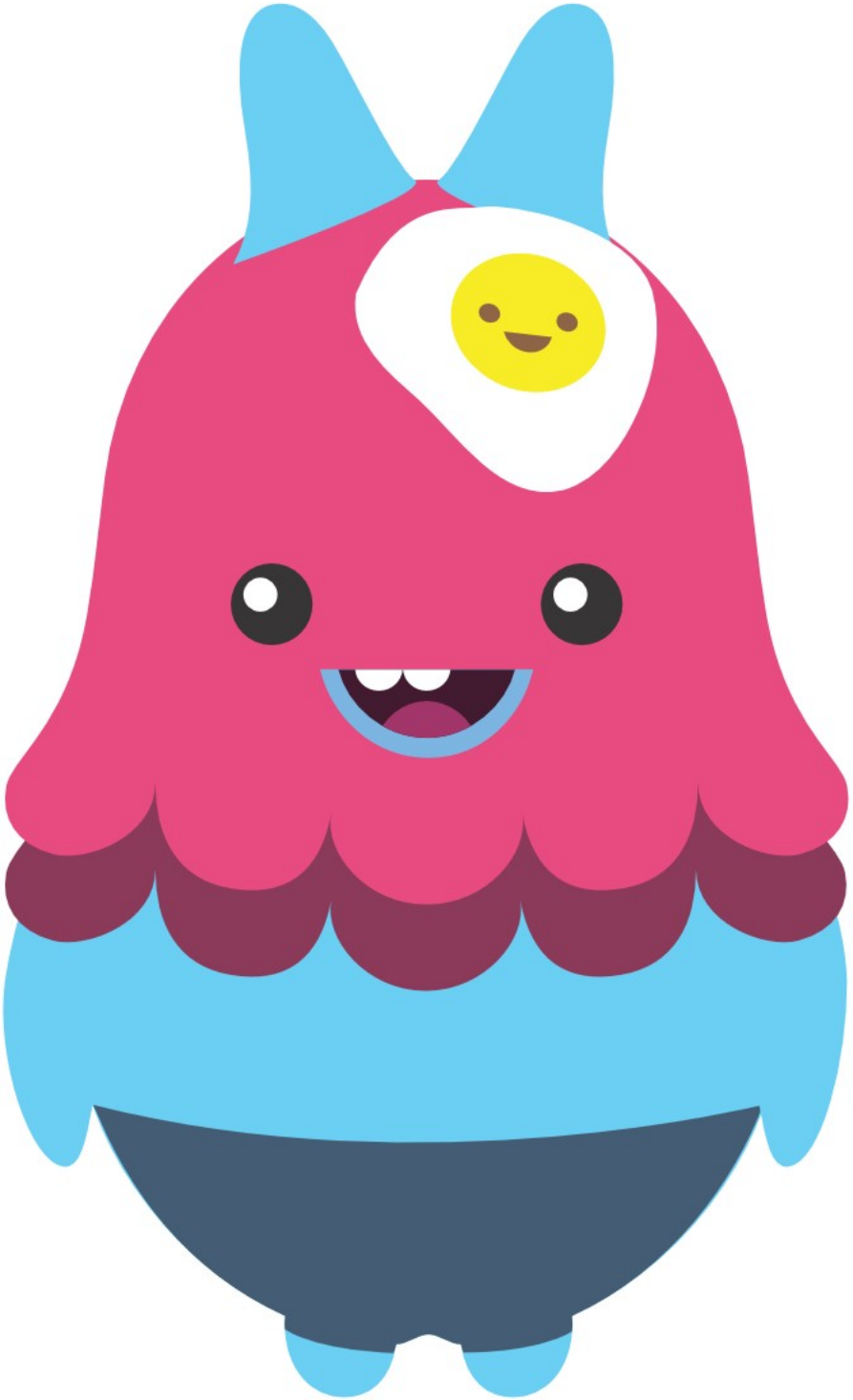
GSM
SHIELD
ARDUINO
antenova
DEVELOPED WITH
Telefónica I+D
CE0700
QUECTEL
M10

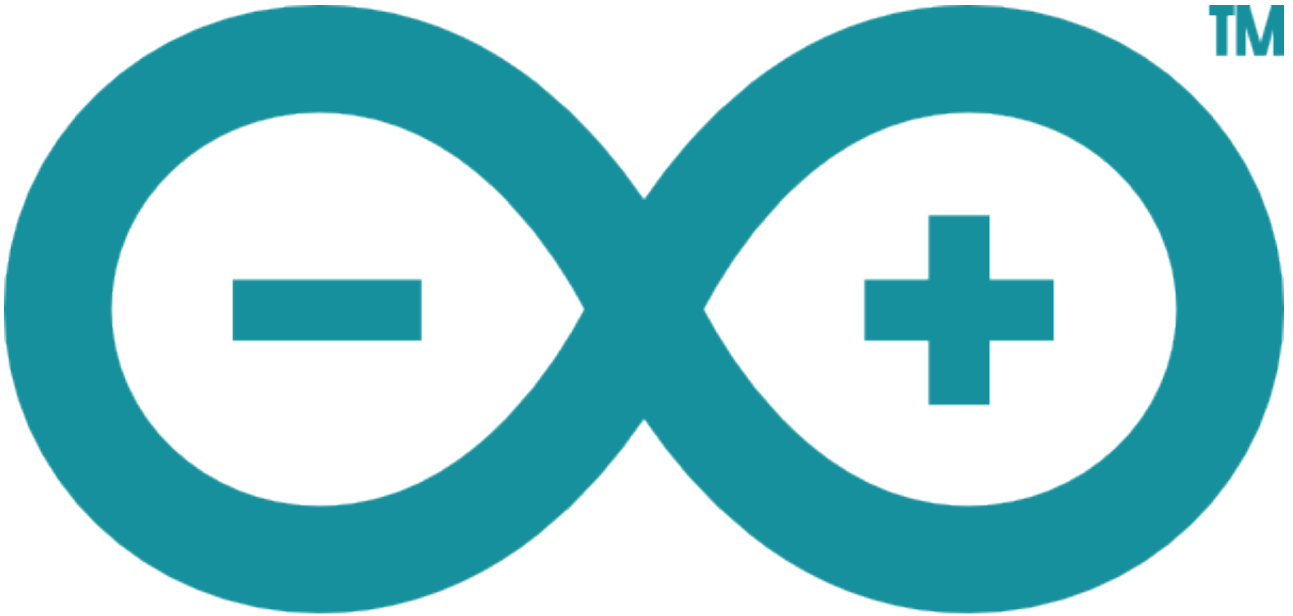
Remember, amigos …

(our lesson learned for you to enjoy)

Sorry We're
OPEN

Arduino ... we do open stuff




ARDUINO