THE SOCIAL NETWORK OF EVOLVING THINGS

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Survival of the fittest in human selection
+ Massive (Base)

+ Open Source (Gene)

+ Maker (Mutation)
CrazyFlie is a small indoor quadcopter designed by three Swedish embedded engineers. Seeed helped to manufacture and sell it since 2011 till today.

**Brain**
- STM32F405 main application MCU (Cortex-M4, 168MHz, 192kb SRAM, 1Mb flash)
- nRF51822 radio

**Soul**
- C for the Crazyradio and Crazyflie firmware
- Python for the Crazyflie PC API and client (the also have Ruby and C/C++ APIs maintained by the community)
- Java for the Crazyflie Android Client

**Gut**
- 3 axis gyro (MPU-9250)
- 3 axis accelerometer (MPU-9250)
- 3 axis magnetometer (MPU-9250)
- high precision pressure sensor (LPS25H)
- On-board LiPo charger with 100mA, 500mA and 980mA modes available

**Skeleton**
- 5 x CW propellers
- 5 x CCW propellers
- 6 x Motor mounts

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The wrong team, for now

Software team is Like a Band

While Hardware Team is like an Orchestra
Open Hardware for bands

Popular Development Platforms
- Arduino
- BeagleBone Green
- Raspberry Pi
- LinkIt One
- mbed
- Intel Edison

Modular Sensors & Actuators

Online Communities

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The pyramid of propagation

INDUSTRY RESOURCES

GROW THE DIFFERENCE

10k+
Hardware Corporations

1,000
Indie Products

1
Hardware Startup

0.1
Engineering Sample

0
Veteran Maker

Prototype

Maker

Idea

Dreamer

MAKER BUSINESS PYRAMID
Faster, and faster Evolutions

- Co-design via cloud based tools and crowd-sourcing
- One-click prototyping service, Open Parts Library
- Manufacture as a service, Approximate to users
- Supply according to demand

CROWD DESIGN
OPEN TECHNOLOGY
FUSION SAMPLE
NEW PRODUCTION TRIAL
AGILE MANUFACTURE CENTER
P2P FULFILLMENT
DEMAND CHAIN DISTRIBUTION

- Development basing on open hardware and software technologies
- Design for Manufacturing review (BOM, Gerber, Mechanical, Testing & Manufacturability)
- P2P delivery covers local demands and niche markets better

Your turnkey solution for taking a prototype to production

http://www.seeedstudio.com/service/
From IT To IoT

25 Years Difference

40 Years Difference
The gap

industry

Cloud

Application

Behavior

Events

Things

...
Now,
You can rule them all!
Social needs
Of things

物际关系
Accumulated Happiness

Smart

Intelligent

social
Open Humble world

- Door

  ```json
  {  
    "@events": {  
      "bell": null,  
      "key": {  
        "valid": "boolean"  
      }  
    },  
    "@properties": {  
      "is_open": "boolean"  
    },  
    "@actions": {  
      "unlock": null  
    }  
  }
  ```

- Light switch

  ```json
  {  
    "@properties": {  
      "on": {  
        "type": "boolean",  
        "writable": true  
      }  
    }  
  }
  ```

https://www.w3.org/2015/05/wot-framework.pdf
Call your things/pets

www.seeed.cc/rephone/
Hello Human.
Thank You

With diverging community platforms
- Chaihuo Maker Space
- Maker Faire Shenzhen
- Ecommerce
- Global Distribution

With agile manufacturing services
- Fusion Prototyping Service
- Open Parts Library
- Hardware Development Kit
- Agile and Open Manufacturing Service
- Distributed Portal

With open source hardware
- Maker Education Kits
- Open Source Hardware Modules
- Theme Based Kits
- Technical Solutions