

The Internet of Things

Living in a Connected World

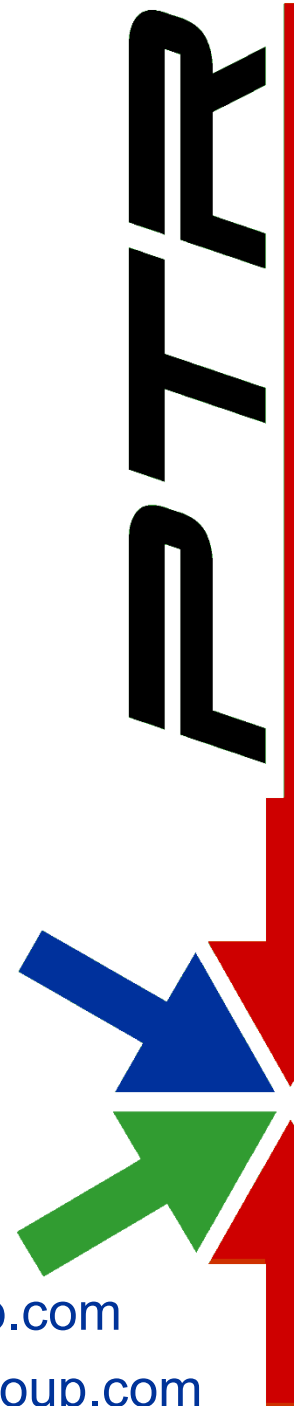
Mike Anderson

Chief Scientist

The PTR Group, Inc.

<http://www.theptrgroup.com>

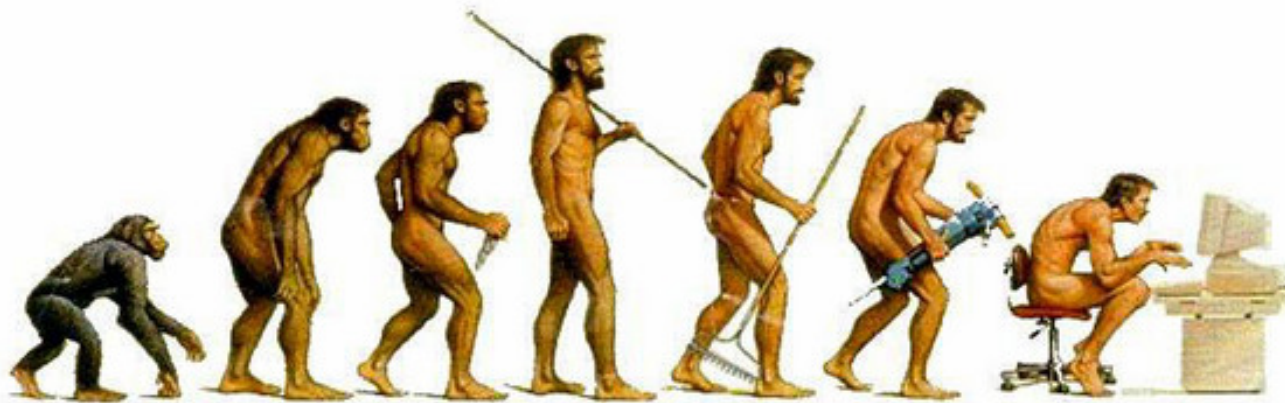
[mailto: mike@theptrgroup.com](mailto:mike@theptrgroup.com)



■ What We Will Talk About

- Evolution of the Internet
- Connected things
- Enablers
- Instrumenting things
- Improving life
- Connectivity and addressing
- Powering it all
- Experiments underway
- Reaching out
- Summary

Evolution of the Internet



The Internet of Things

Internet of Things

noun \ 'in-tər-net -əv -thiŋz\ (abbr.: IoT)

- the point in time when more devices or objects were connected to the Internet than people

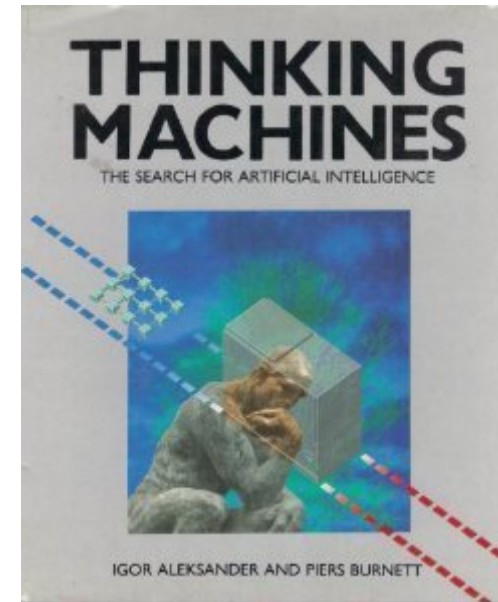
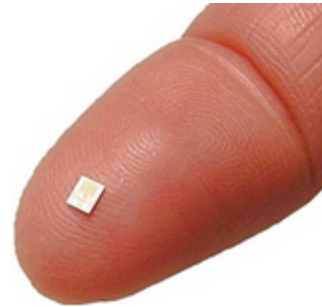
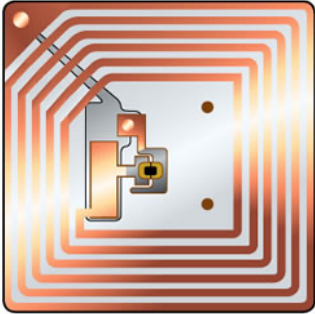
Connected Things



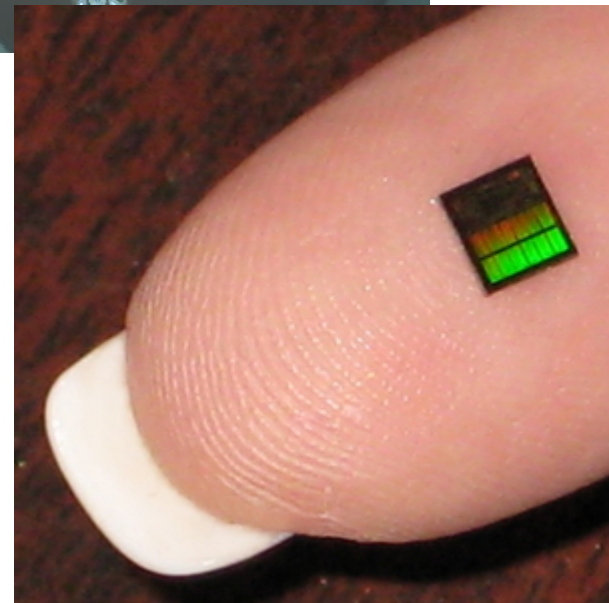
Connected Earth



Enablers



RFID Everywhere



Instrumenting Things/People

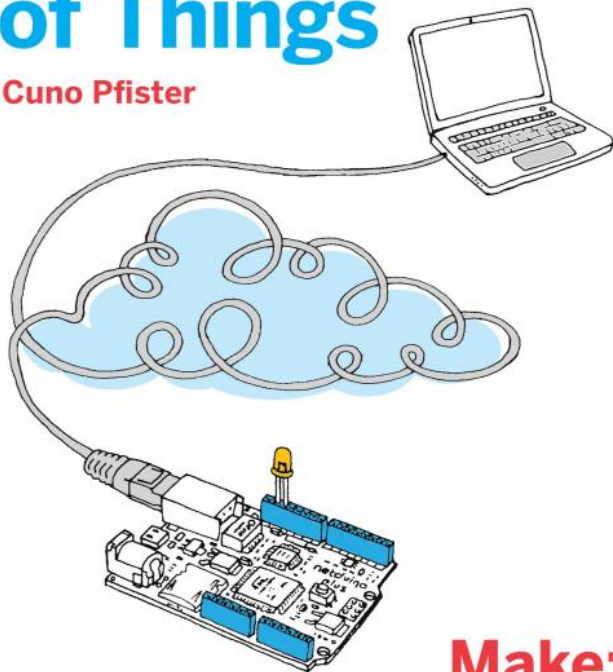
Copyrighted Material

Make: PROJECTS

CONNECTING
SENSORS
AND MICRO-
CONTROLLERS
TO THE CLOUD

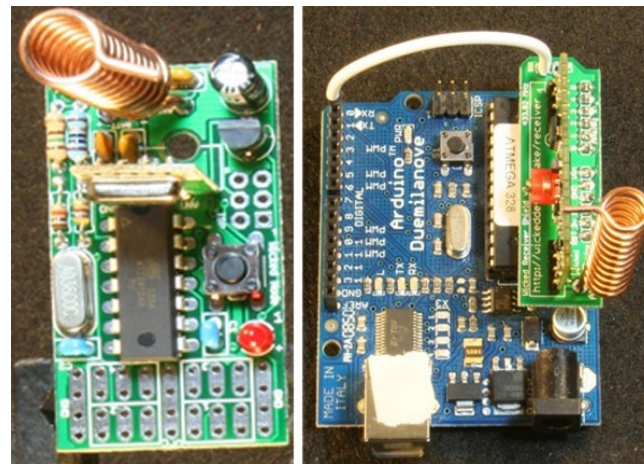
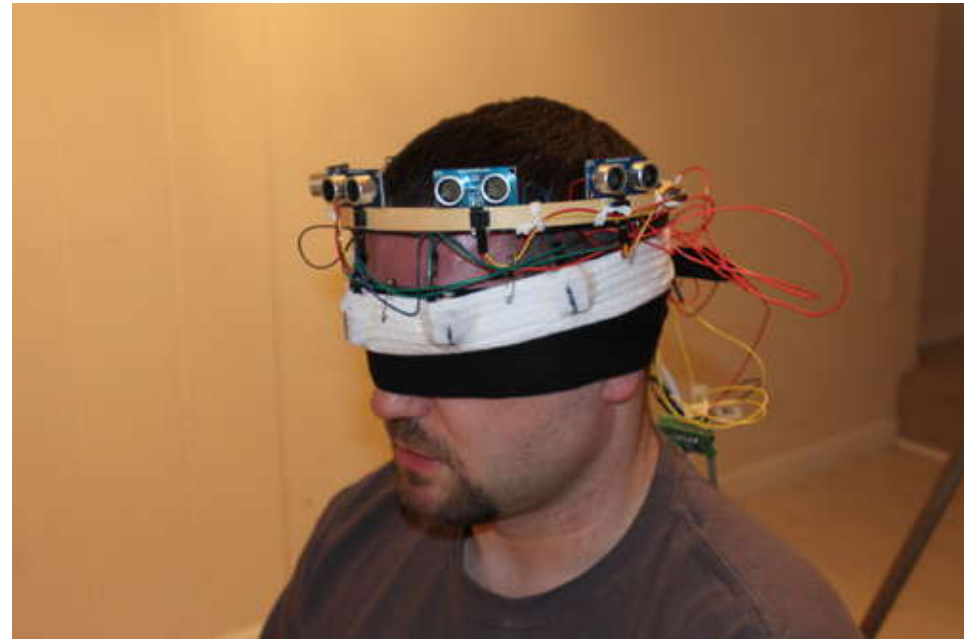
Getting Started with the Internet of Things

Cuno Pfister



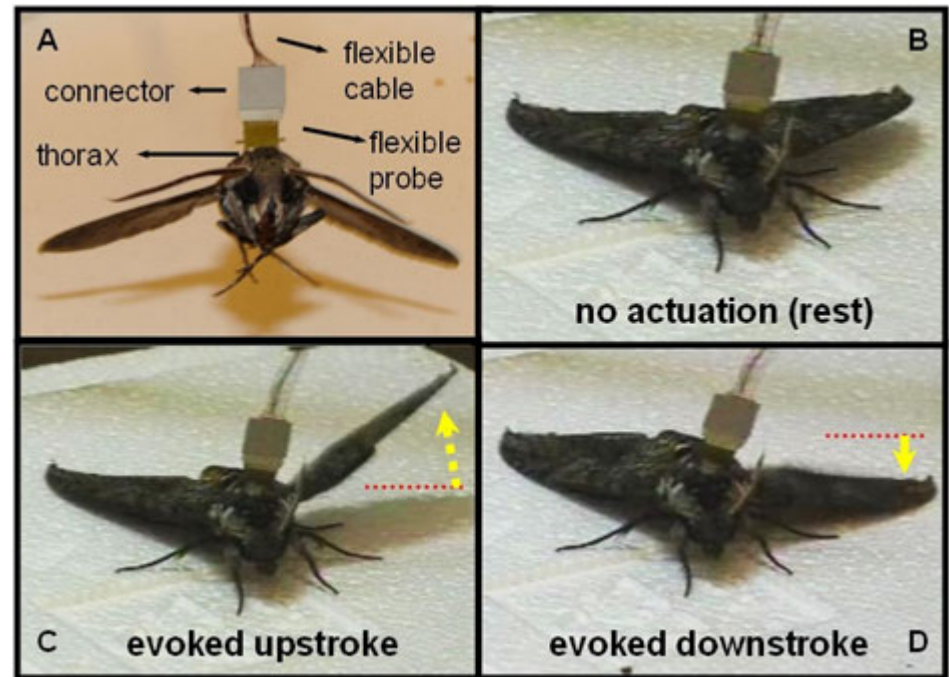
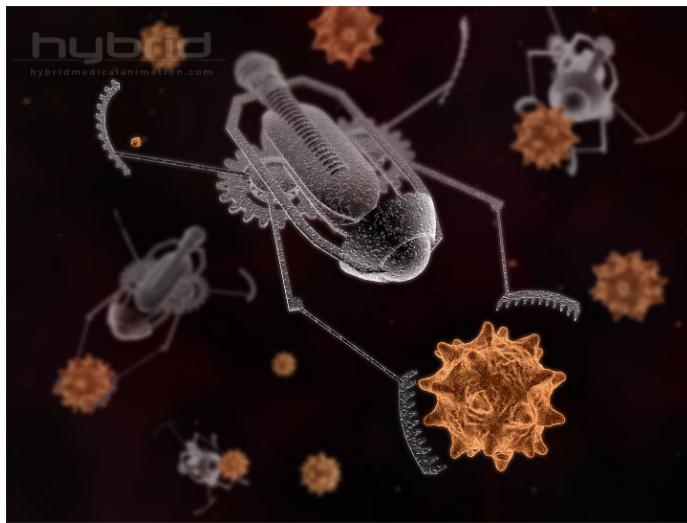
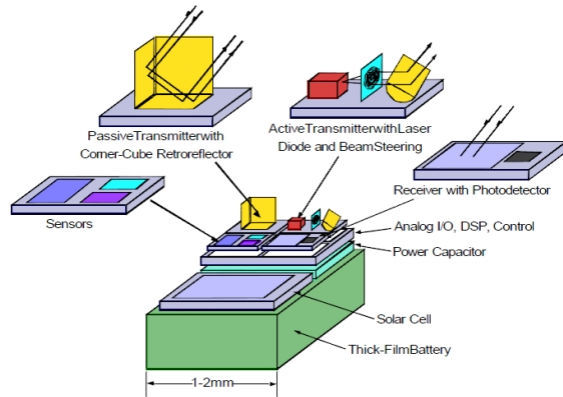
O'REILLY

Make:
makezine.com

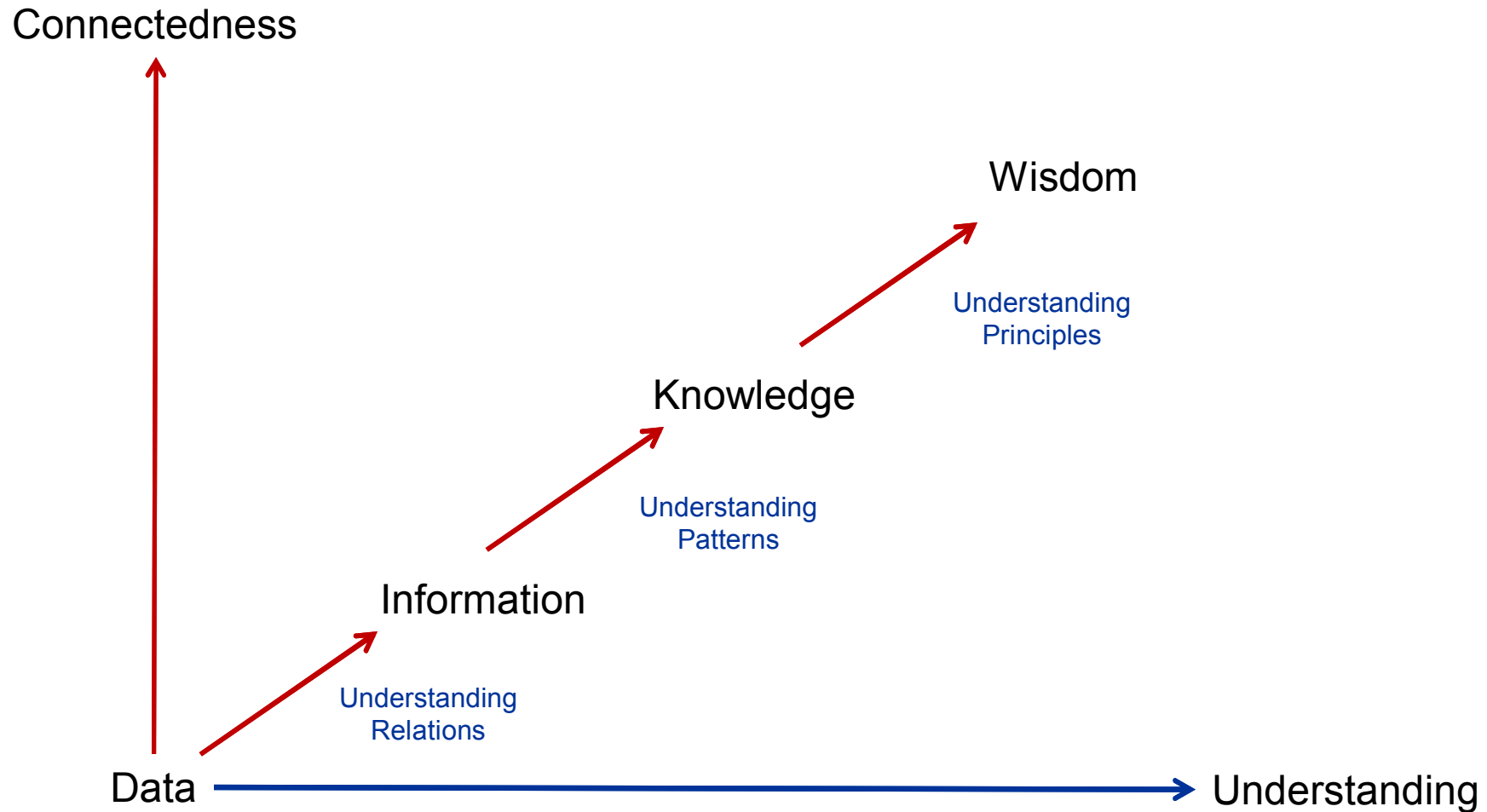


Smart Dust, Nanobots and MEMS

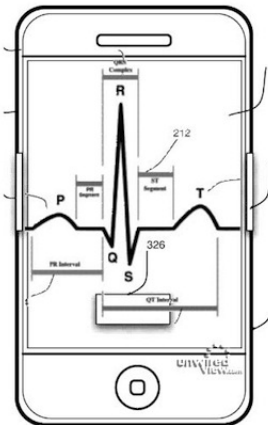
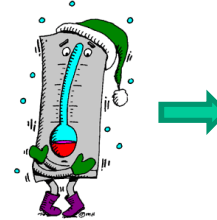
Smart Dust Mote



The DIKW Relationship



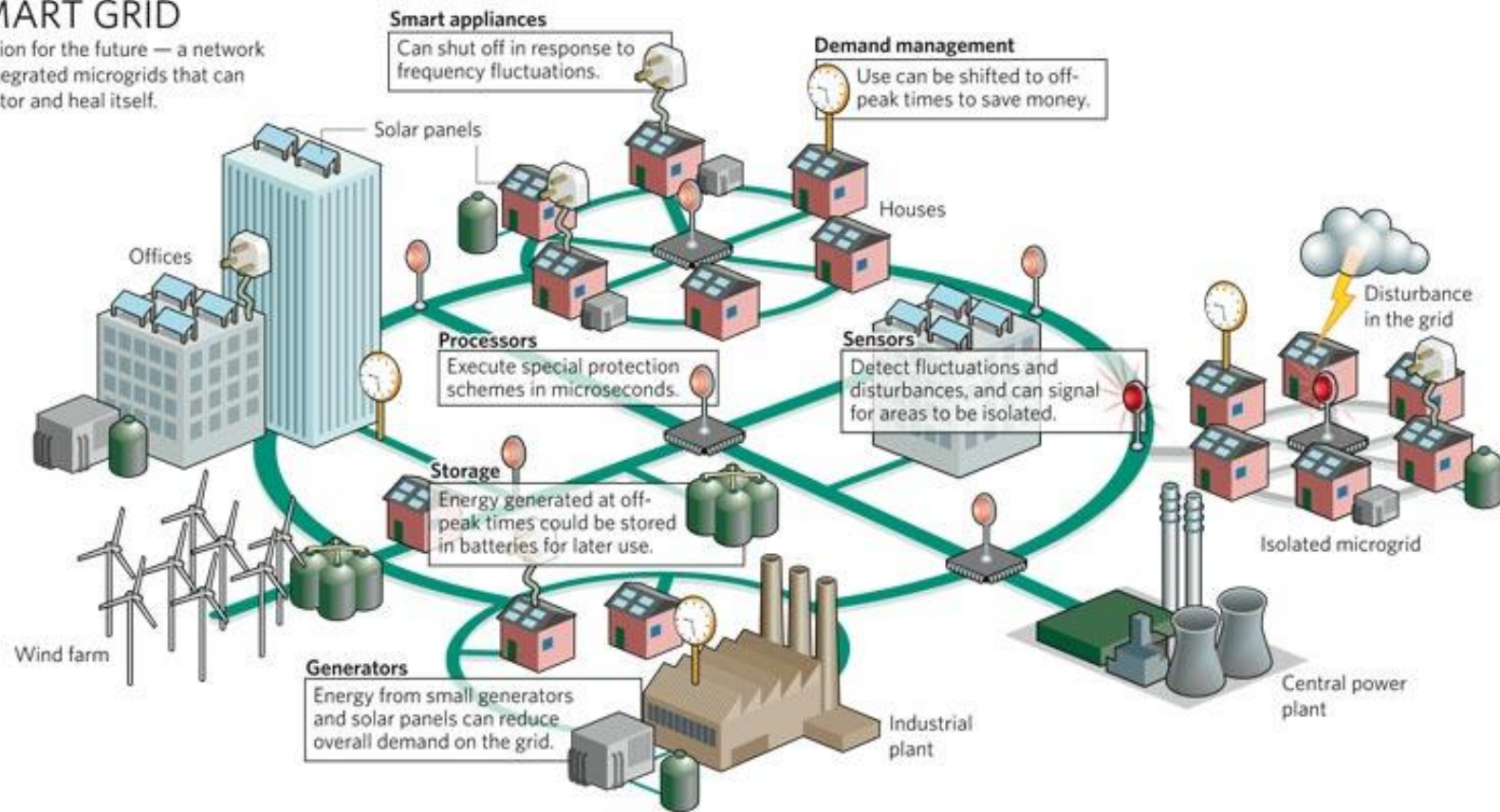
Improving the Human Condition



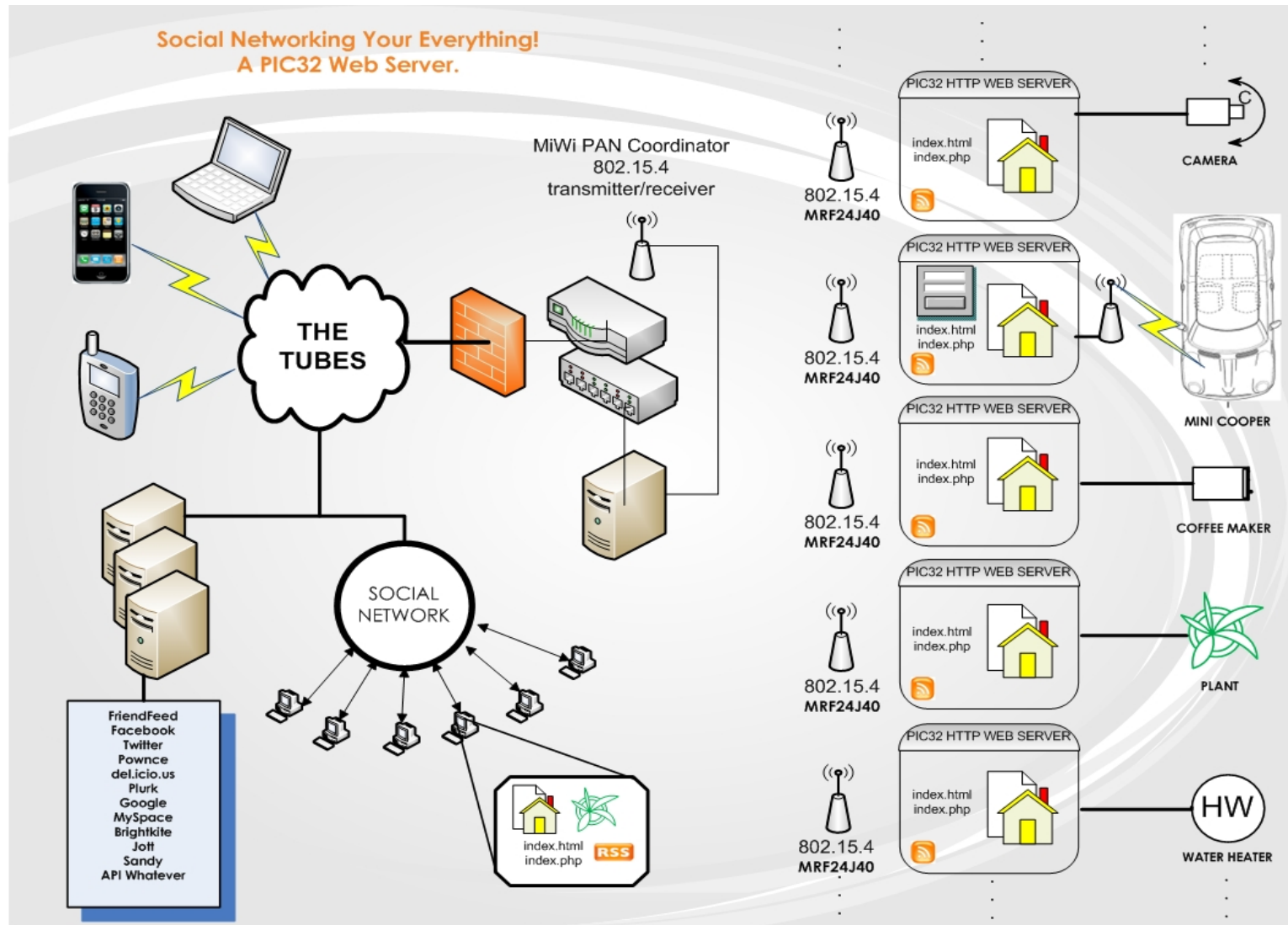
Better Energy Efficiency

SMART GRID

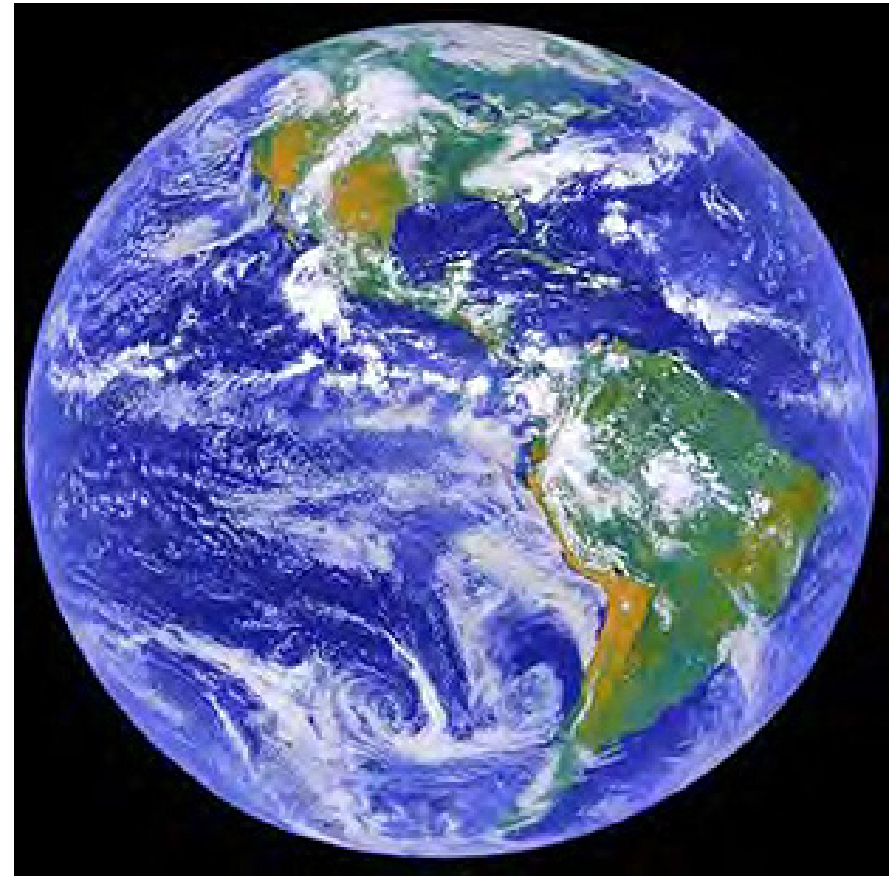
A vision for the future — a network of integrated microgrids that can monitor and heal itself.



Connections Everywhere

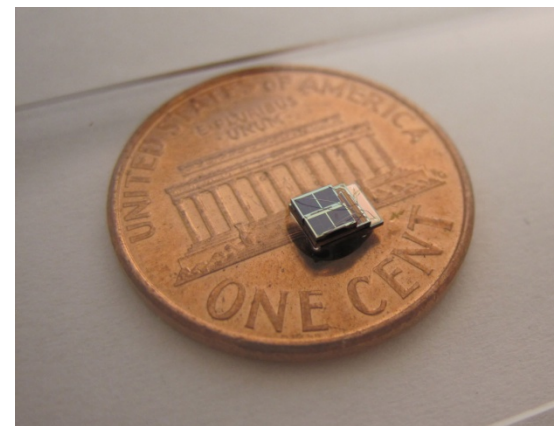
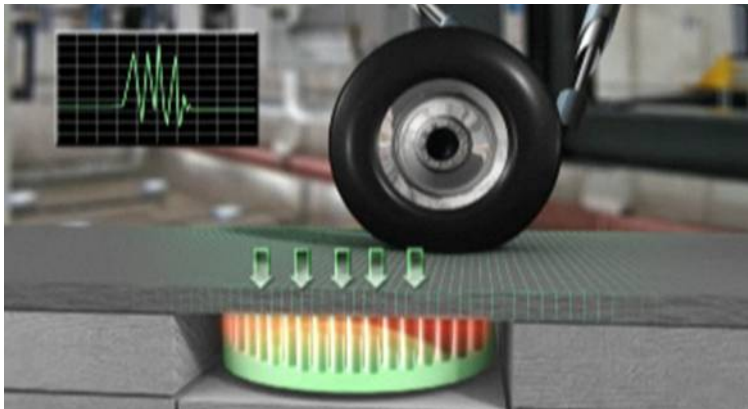
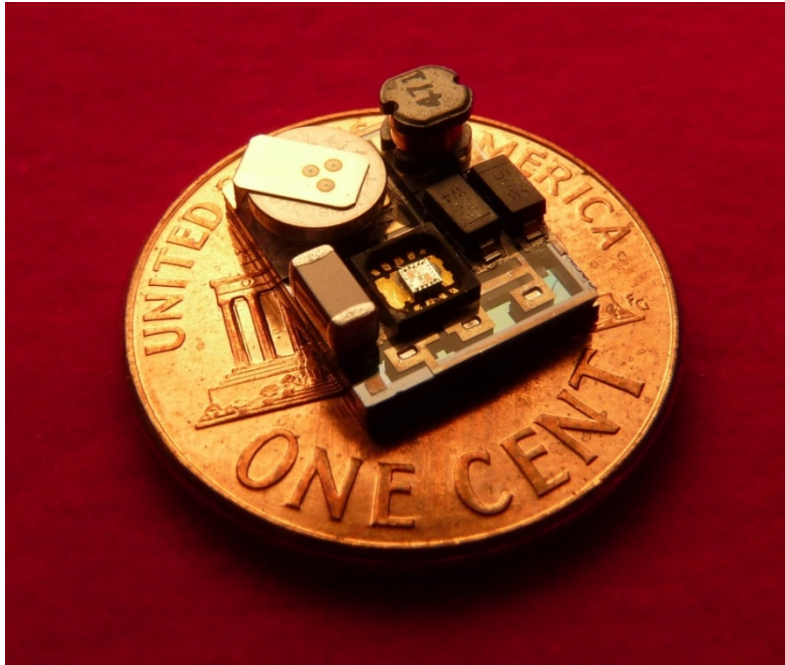


Addressability – IPv4 vs. IPv6

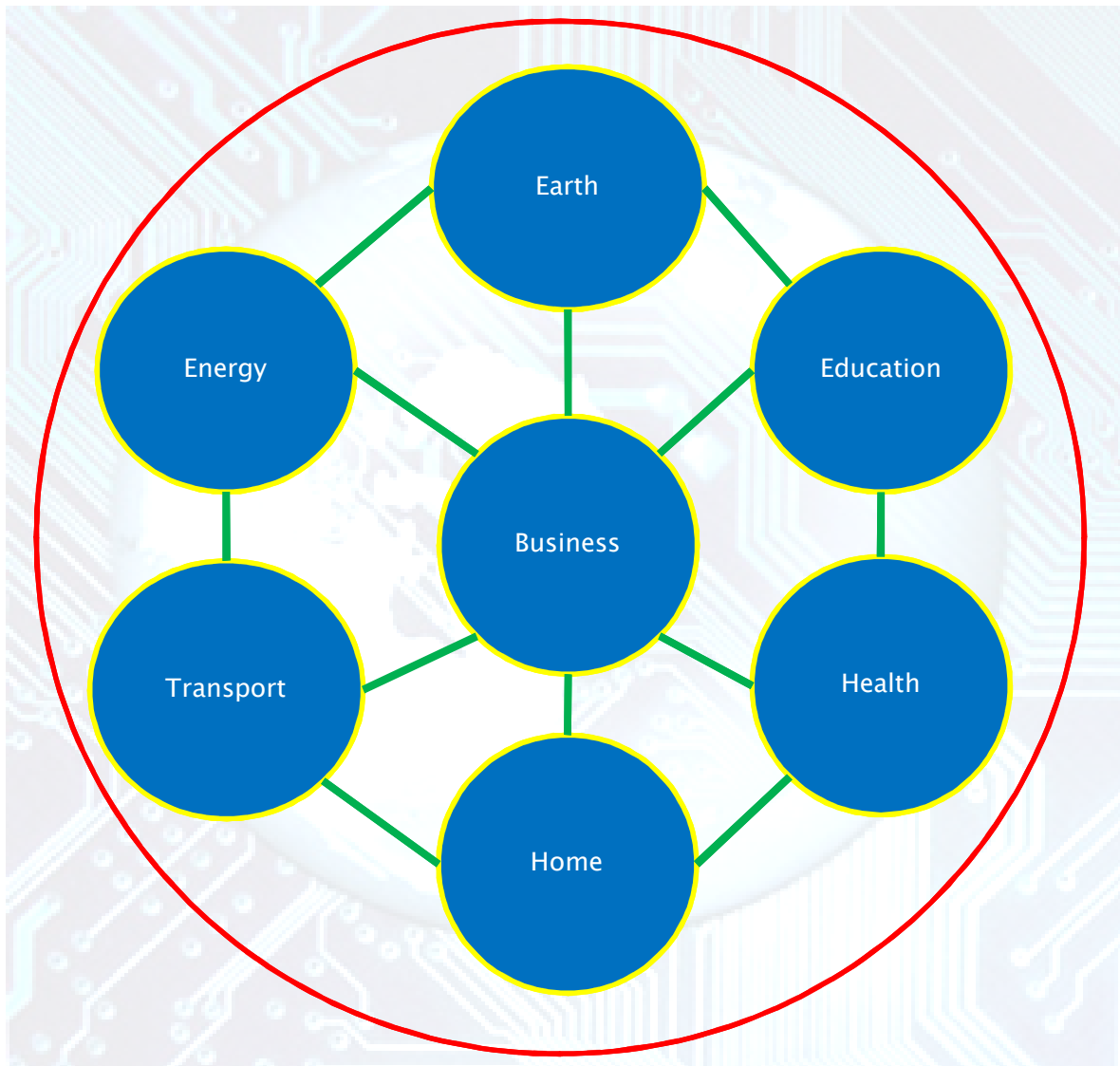


340,282,366,920,938,463,463,374,607,431,768,211,456 addresses!

Powering the IoT



A System of Systems



Privacy/Security



“All things are subject to interpretation. Whichever interpretation prevails at a given time is a function of power and not truth.”

F. Nietzsche

Experiments are Underway



Reaching Out...



Summary

✦ Chaos and Opportunity

