



on the Internet of Things

Software Project

What is the Internet of Things?

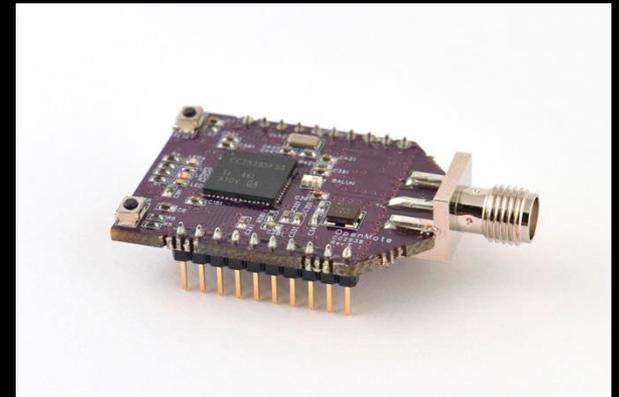
A system in which objects in the physical world can be connected to the Internet by sensors and actuators (coined 1999 by Kevin Ashton)

Key aspects:

- E2E communication via Internet standards
- Machine-to-machine communication
- Embedded devices, often constrained and on battery
- Typically without user interface
- Very large multiplicities, w/o manual maintenance

IoT Applications

- Facility, Building and Home Automation
- SmartCities & SmartGrids
- Personal Sports & Entertainment
- Healthcare and Wellbeing
- Asset Management
- Advanced Metering Infrastructures
- Environmental Monitoring
- Security and Safety
- Industrial Automation

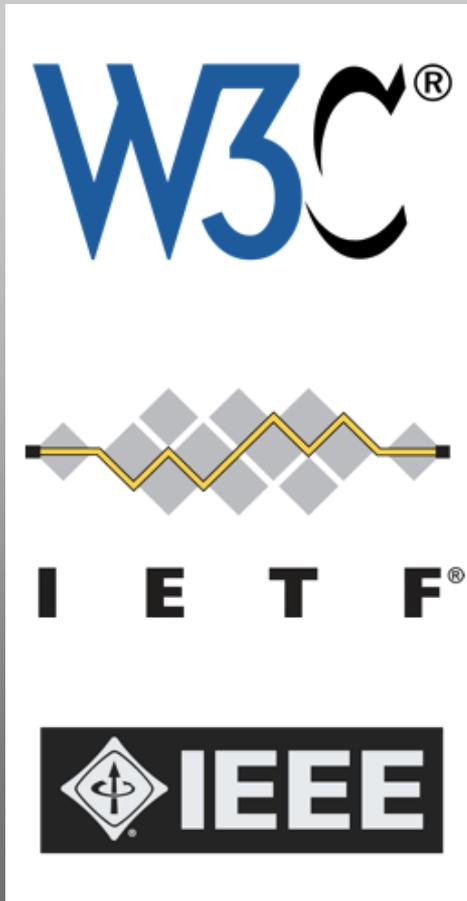


IoT Challenges

The five key issue areas from ISOC:

1. Security
2. Privacy
3. Interoperability and standards
4. Legal, regulatory, and rights
5. Emerging economies and development

No Internet without Open Standards



Application

XHTML XDI CBOR RDF
CoAP JSON Telnet
HTTP XMPP

Transport

TCP UDP
TLS/SSL

Network

OSPF RPL DHCP BGP
OLSR IPv6 SLAAC IPv4

Link

IEEE802.15.4 LoRa BLE
Ethernet

What This Project is About

- Get involved in building the IoT
- Find your team, work out your ideas
- Master IoT technologies and standards
- Collaborate with your team and others
- Build a multi-layered IoT solution
- Help making the world smarter with 

Four Milestones

1. Present your project
Share the ideas of you and your group
2. First mock-up demo
Show how it will look like
3. Release candidate I
Show that it can work
4. Final project presentation
Make your results public