

MINIXCon 2016

Participation in the Internet of Things

Michael Schloh von Bennewitz

Computer Scientist

<http://michael.schloh.com/>

In this $\frac{1}{2}$ hour

Terms & theory

Embedded adaptation

Transports & protocols

(Net|Free)BSD leverage

M2M message flow

Terms

Connected devices

(Open) Web of Things

Internet of Things

≈ IOT

Physical
Web?

Terms

(Io) Things are:

Scalable

Autonomous

Resilient

Durable

Connected

Terms

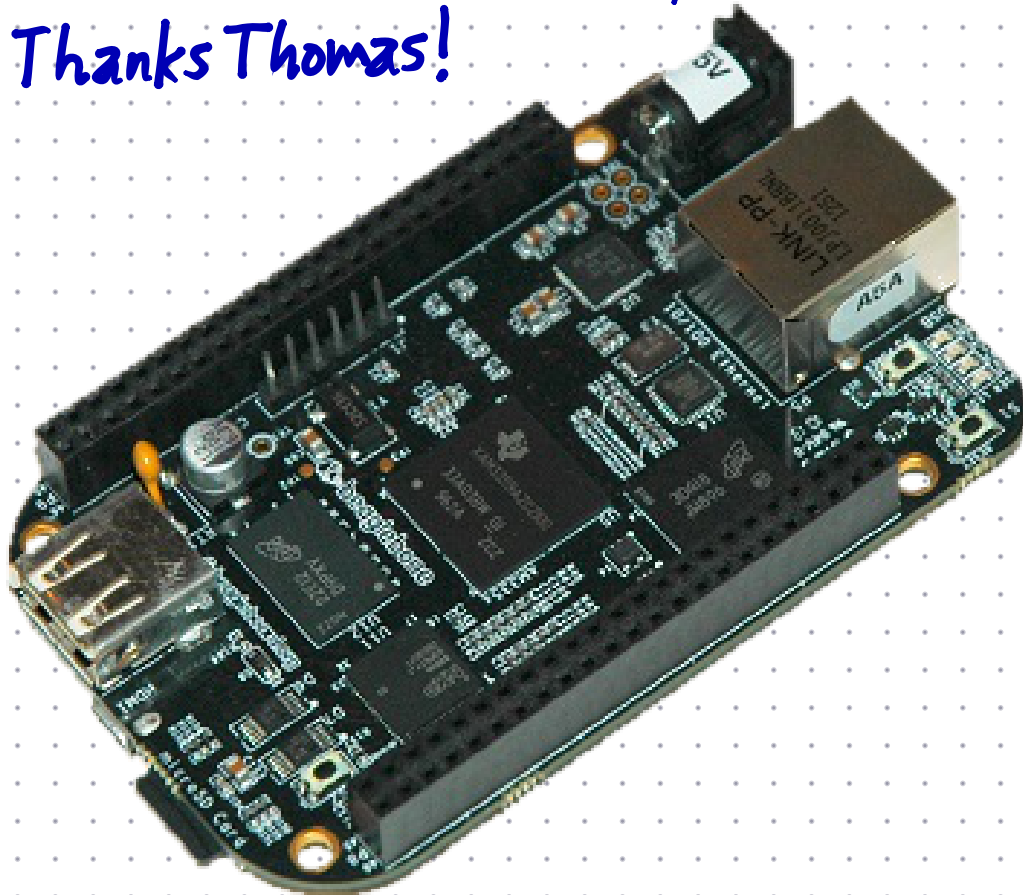
IoT nodes —

Computers

Sensors (telemetry)

Actuators (telecommand)

Embedded adaptation
Thanks Thomas!



Transports & protocols

2.4GHz	Bluetooth 2, 3	MQTT (OASIS spec)
	Bluetooth Smart	CoAP (RFC 7252)
	ANT	AMQP (ISO 19464)
	ZigBee 802.	LWM2M (OMA)
	WiFi 802.11	ZeroMQ (?)
	Ethernet 802.3	
	Z-Wave	
	LoRa & SigFox	H2M M2M

(Net|Free)BSD leverage

<http://ftp.netbsd.org/pub/pkgsrc/current/pkgsrc/README-all.html>

<https://www.freebsd.org/ports/master-index.html>

RabbitMQ

Mosquitto

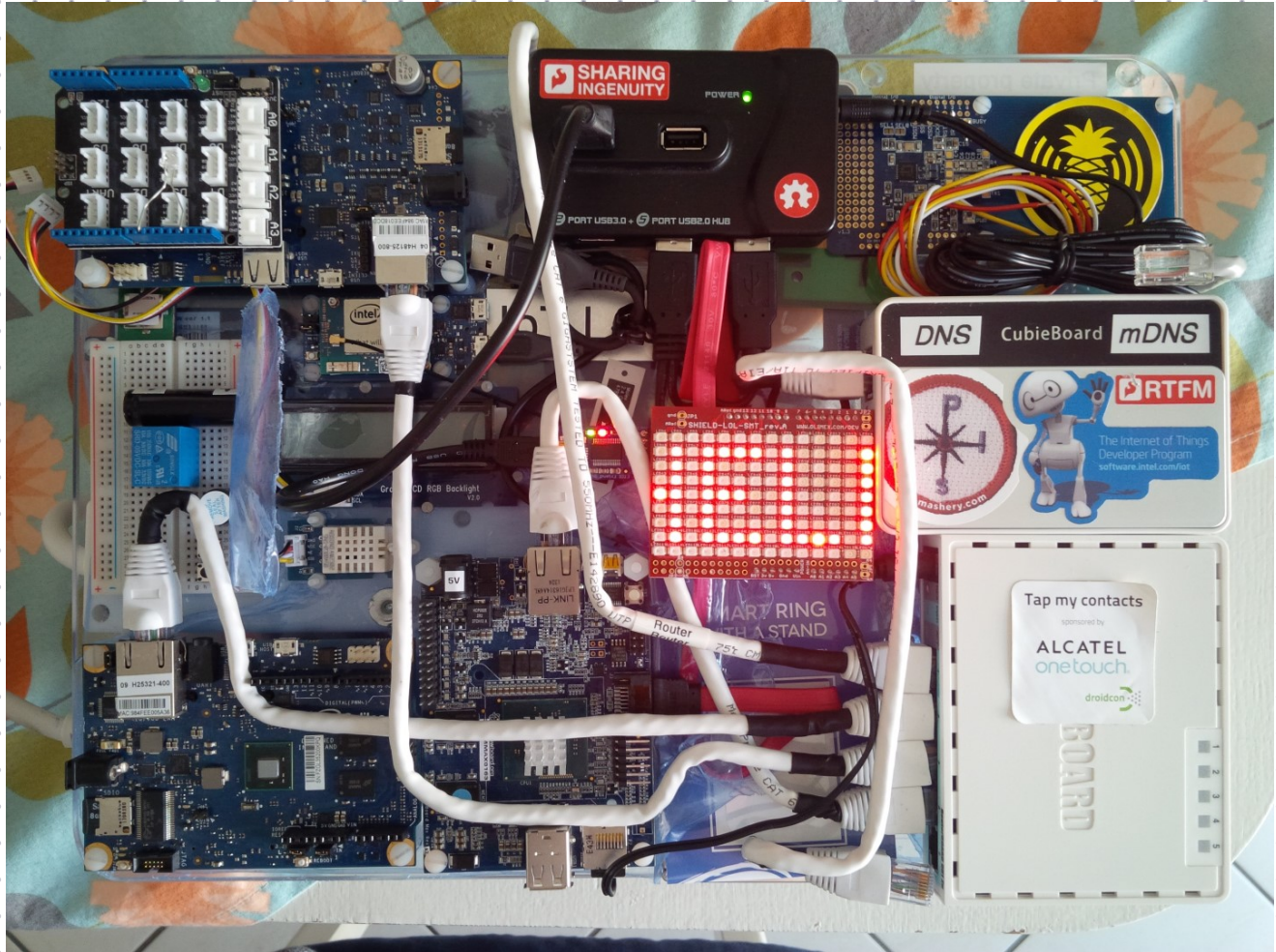
Libzmq

CoAP 

Mobile IoT lab

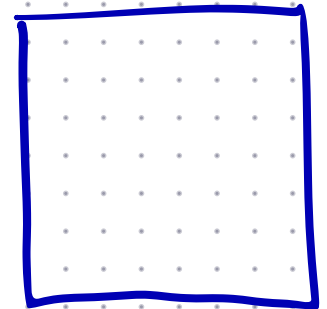


M2M message flow



M2M message flow

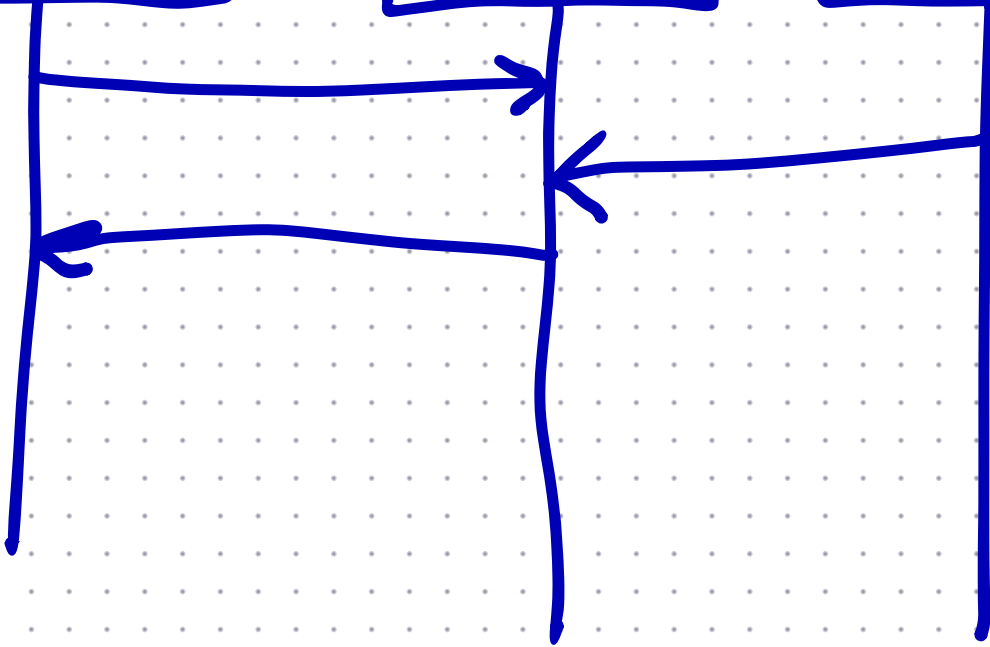
We didn't have time for this part



Subscriber

Broker

Publisher



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