

# IoT: Towards the Internet of Interactive Things

## Energy-Efficient Interactive Cyber-Physical Systems

### People:

K. Altisen, Verimag-Synchrone C. Coutrix, LIG—EHCI

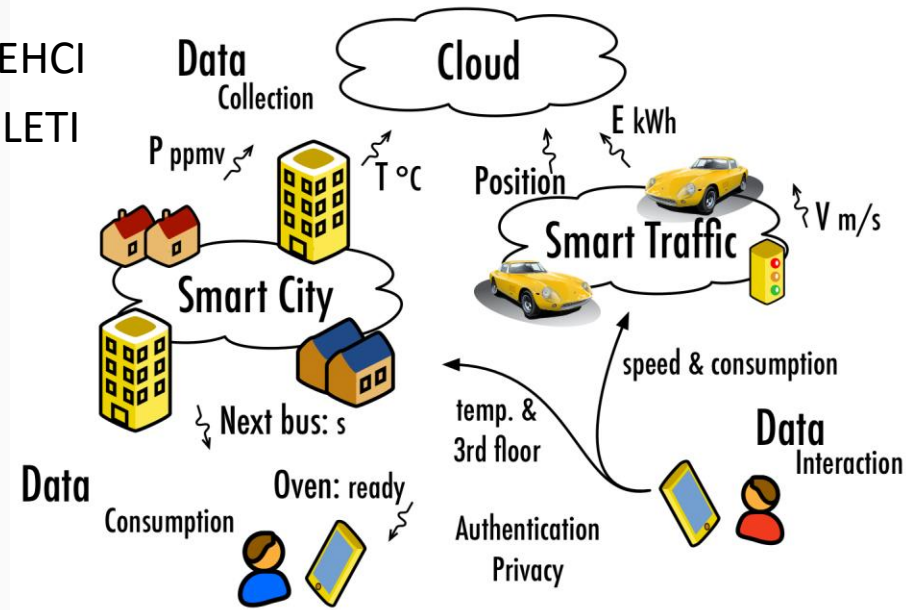
A. Duda, LIG-Drakkar M. Maman, CEA-LETI

Interconnect billions of devices using **Internet technologies**

- Get data from the physical world
- Let users interact with the physical world

### Objectives:

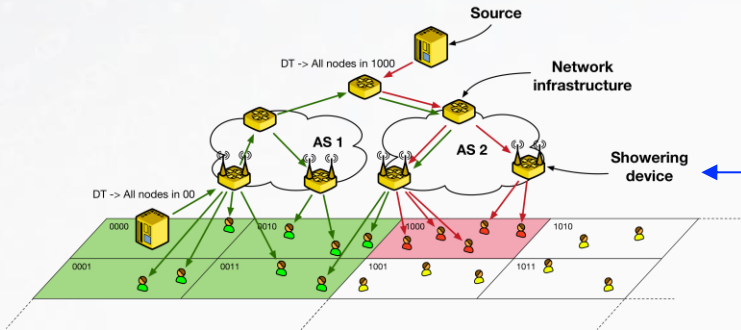
- Energy-efficient protocols for short-range capillary IoT networks (QoS, routing)
- Scalable protocols for long-range cellular IoT networks (access methods, scalability)
- Novel means for user interaction with Things (radio backscatter)



# IoT: Selected Results

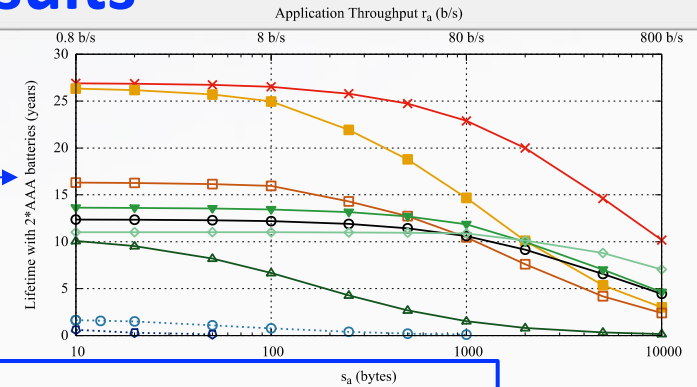
## Lifetime in Wireless Networks for IoT:

- IEEE 802.15.4e, BLE, IEEE 802.11, 802.11ah, LoRa, and SIGFOX

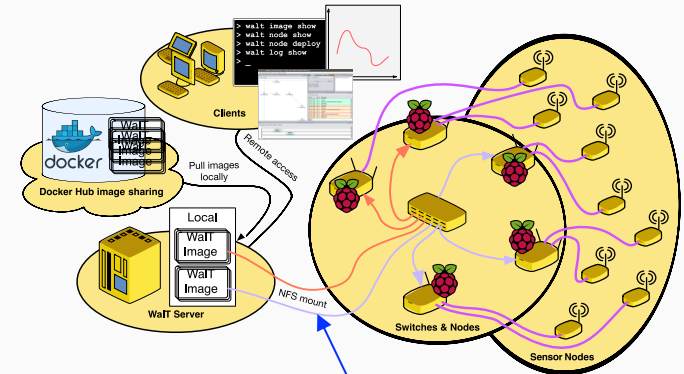
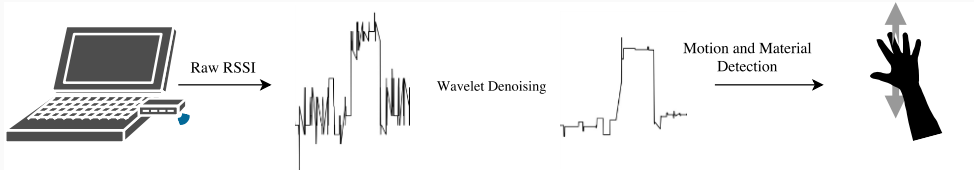


## Geo-Centric IoT Communications:

- dissemination of data messages to all hosts in a given region.



## Radio-based Interaction Techniques



## WaT: a Reproducible Testbed for Reproducible IoT Experiments