IoT & Crowd Sourcing
Supporting smart cities
WSIS 2015
Geneva

Sébastien Ziegler
sziegler@mandint.org
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Many opportunities for IoT use:
Environmental monitoring
Transportation and mobility
Waste management
Energy efficiency and smart grid
Water management
Security and Safety
eHealth
eGovernance, etc.
Dual set of requirements

**Technical requirements**
- Scalability
- Reliability and QoS
- Interoperability
- Security / privacy
- Portability
- Cost
- Sustainability

**User requirements**
- User acceptance
- Priority management
- Citizens satisfaction
- Resource allocation
- Customization
- Cross-domain integration
To research the potential of crowdsourcing for the Internet of Things (IoT)

To extend test bed infrastructures for multidisciplinary experiments with more end-user interactions.
Interrelated projects
UNIS Smart Campus

200 fixed IoT units: SmartPlogg (1000+ sensors), 100 embedded GWs, 100 mobile IoT units, 10 smart displays, 30 smartphones
MI Smart Office

Heterogeneous sensors and actuators + energy metering

Functional areas:
- Meeting space
- Office desks / work stations
- Lounge area
- Kitchen / Toilets

IPv6 and 6LoWPAN/CoAP environment + heterogeneous communication protocols
Smart HEPIA

Focus: 4th and 5th floor
Facades exposition: South and North

Sensors, actuators and energy meters

Functional areas:
- Class rooms
- Office spaces
- Lobby
- Toilets
- Technical areas
- Data centre
University of Geneva

WSN TelosB, WaspMotes, actuators, RFID, etc. CoAP environment
CTI Patras

Diverse sensor motes (TelosB, Iris), Android smartphones
Electricomechanical devices (lights, HVAC, curtains, etc.)
Control Cube actuators, Smart power meters, etc.
IPv6

IPv6

IoT6

User devices

IoT Lab
Crowdsourcing The Future
Crowd Sourcing Tool

Privacy by design

Crowd Sourcing

Citizens inputs

Crowd Sensing

Sensing
IoT Lab as a Service

Economic Research

Societal Research

Technological Research

Internet

IoT Lab

Testbed as a Service

Individual participants

FIRE

WISEBED

Smart Santanders

Hobnet
Paradigm shift
New venues

Anywhere
Pervasive urban testbed

Exploring
Testing
Validating
Improving

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Crowd driven research

Bridging the gap between researchers and end-users
Cross domains

Participatory / Co-design process
Energy efficiency
Mobility
Environmental improvement

...
Scaling up citizens participation

Citizen engagement
Bottom-up codesign
End-user driven
Sustainable Smart City

Quality of Life
Environmental sustainability
ICT deployment and optimization
Infrastructure monitoring
Equity and social inclusion
Productivity and efficiency
Quality of services
Open invitation

You are welcome to join and collaborate

IoT Lab platform is available to:
- Smart cities
- Researchers

Demonstration in the exhibition booth.

Contact us:

contact@iotlab.com  ww.iotlab.eu
THANK YOU!

Sébastien Ziegler

sziegler@mandint.org  www.iotlab.eu