M2M and 4G/LTE Platform use in cooperation with ETSI

Claude HARY
Operational Director
claude.hary@com4innov.com
Using 4G/LTE network for M2M or communicating objects projects

**Why?**

- Latency
- Objects Distribution & mobility
- Connection Time
- Re-enforced security
- Extended addressing
- Throughput need for some applications
- Priority management
- ...
M2M & 4G/LTE/IMS test / IoT environment

Value Add Services Development tools

Full-scale and convergent 4G/LTE/IMS/M2M platform

Training On new technologies

Methods & measurement tools

Com4Innov – ETSI M2M Workshop – November 7th, 2013
A look on the M2M test environment

- User Interfaces
  - Alert management

- Applications
  - Decision Management

- Data Management
  - Supervision

- Ad Hoc Network

- Sensors

Real-time

M2M Federation Cloud Gateways, Applications

- 2G/3G/4G/LTE

- Remote SIM cards

- Newsteo
- ZigBee
- 6LowPAN...
An example of M2M traffic simulation

Applications Use Cases

Gateways 2G/3G/4G

Data Traffic Simulation

Radio Sensors Simulation

Sensors Objects

SIM Manager: Web menu, API

M2M QoS test manager
Current Collaborative Projects (SCS Cluster)

- **LTE Now**
  - *LTE tests*
  - **gemalto**
  - **NVIDIA**
  - **EURECOM**
  - **smartcom**

- **WLBOX-4G**
  - *LTE/IMS/M2M tests*
  - **iqsim**
  - **gemalto**
  - **EURECOM**
  - **mios**

- **SMART 4G TABLET**
  - *LTE tests*
  - **ARCHOS**
  - **InfoVista**
  - **EURECOM**
  - **wystsps**

- **4G Invitro**
  - *LTE tests*
  - **com**
  - **Supélec**

New generation M2M LTE IMS project
Zoom on this new generation M2M/4G project

WLBOX-4G

LAN

IP phone

PC

WiFi

Smart/SIP Phone

WiFi router

M2M Gateway

Luminosity

6LowPan

M2M robot

Temperature

Camera

Dry contact

xLite client on IPTel

Tablet

Tablet

Public Server

M2M application

4G/LTE Phone

4G/LTE Phone

4G/LTE/M2M

Com4Innov Platform

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Example of possible cooperation on ETSI M2M related projects

- **ETSI Plugtest with Com4Innov environment**
  - cloud, gateways, applications, network (2G-3G-4G)

- **Reference platform for protocols tests**
  - 6LowPAN, ZigBee, WmBus, Newsteo, CoAP

- **Projects with simulation needs**
  - Data traffic simulation at M2M Gateway level
  - Sensor traffic simulation at M2M Device level

- **Ready for M2M / IP V6 / 4G-LTE**
  - Convergence M2M and LTE
  - Full use of M2M Device / Gateway and Network Domain level
Com4Innov Users

• Users Adherent Members
  - M2M test on LTE
  - LTE/IMS Training
  - LTE/IMS tests
  - LTE/IMS tests
  - LTE tests
  - LTE tests

• ETSI VoLTE QoS Assessment event November 18\(^{th}\) - 20\(^{th}\), 2013

• Users in the list
  - Projects: e.g.
    - ETSI: Interoperability tests LTE/IMS, Smallcells handover test
    - Future European project (XIFI): Enabler M2M / LTE
    - Others LTE/IMS/M2M tests

• Users Founders Members e.g.
  - Orange: M2M / LTE Tests (i.e. SmartGrids, Intelligent Transport)
  - EURECOM: LTE/IMS Tests, semantic based of M2M process distribution
  - OneAccess: Optimisation gateway test
A unique experimentation platform

New generation technologies and services
4G/LTE/IMS/M2M/Communicating Objects
End-to-End development and test from services/applications to communicating objects

A few usage example:

- Hand-over, interoperability, reliability, compatibility against standards
- Development and Regression tests
- Performance testing (latency, throughput, connection time…)
- Load tests on shared or dedicated network
- Technology, protocol, application selection and/or validation
- Pre deployment and traffic simulation tests
- Benchmarking, comparative analysis
LTE/IMS Infrastructure
Deployed & Operated by Telecom Platform Association & its partners

Founder Members

Active Members

Publics Funds

Contributors
Differentiators versus Labs & Operators

Unique full Scale Infrastructure
- M2M test environment combined with 4G/LTE & full IMS infrastructure
- Liaison LTE core Com4Innov - LTE core Monaco Telecom
- InterRat 3G/4G Test @Monaco Telecom
- Possibility to use the infrastructure in exclusive mode

Open laboratory
- Traces at all levels
- Traffic generation
- Simulation and Measurement tools
- Gateway & sensors integration
- Applications servers integration

Excellence in technical support
- Assistance in problems analysis
- Support et consultancy from operational structure and partners

Last generation terminals
- M2M sensors library
- Gateways
- 4G/LTE user equipment library
Thanks