

# *CETIC Applied Research & Technology Transfer*

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FEDER



UNION EUROPEENNE



Wallonie



LE FONDS EUROPEEN DE DEVELOPPEMENT REGIONAL  
ET LA WALLONIE INVESTISSENT DANS VOTRE AVENIR.

 **cetic**

Your Connection to **ICT** Research

# *Applied Research & Technology Transfer*



- ❑ Accredited “collective” R&D centre by the Walloon Region
  - Founded in 2001
  - Applied Research & Technology Transfer to benefit the SMEs
  - Connection between Business/Industry & Research/Academia
  
- ❑ Key Figures 2010
  - Total staff: 42 employees (>38 researchers)
  - Budget: 4,5M€
  
- ❑ Serving the ICT sector
  - Contribution to innovation and Regional Economic Development
  - International focus - European Research Area
  
- ❑ **Thanks to our contacts, we can bring some SMEs (in Belgium/Wallonia) in the consortium !**

## ❑ Software & Services Technologies

- Helping industry to exploit faster distributed, dynamic, service-oriented architectures, Semantic Web & Future Internet opportunities



## ❑ Software & System Engineering

- Helping industry to improve Software & Services quality and security



## ❑ Embedded & Communication Systems

- Helping industry to develop « ambient intelligence » systems based on mobile / wireless technologies, Internet of Things



## □ Service Oriented Technologies

- Distributed technologies (Cloud, SaaS, Grid...)
- Resource discovery & relocation
- Secure resource broker service (matching of user and provider policies)
- Reputation service (track service user reputation)



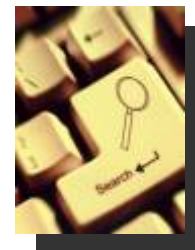
## □ Open Source Software Technologies

- Overall quality (process/product) of open source
- Supporting SME ecosystems (FLOSS business models)



## □ Intelligent Contents & Semantics

- Web technologies - web watch - semantic search engines
- Reverse engineering



## □ Computing Centre Lab



## □ Software Quality

- Process quality
  - Methods for SMEs (micro-evaluation, Noemi)
  - Cost evaluation (COSMIC)
- Product quality
  - Source code analysis based on metrics - dashboard



## □ Security/Certification

- Security engineering methods based on formal methods (security & safety)
  - For safety, e.g. in aeronautics (DO-178B)
  - For IT security, e.g. common criteria, eID



## □ Smart objects/Internet of Things

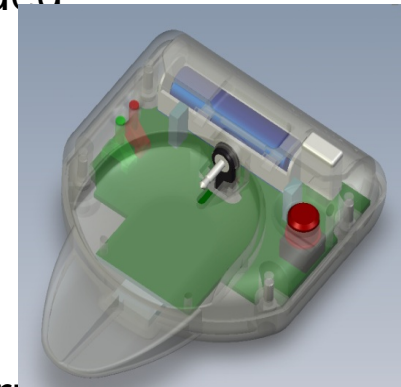
- Distributed intelligence, intelligent routing, mobility

## □ Embedded Systems

- New hardware architecture (PCB design, FPGA/VHDL, MCU including multi-core architectures)
- Advanced software architectures & algorithms
- Embedded OS
  - Contiki, Android, Windows EC/CE, Windows Embedded
- Low Power, energy management

## □ Wireless Communications

- New standards (especially low-power)
  - Zigbee, UWB, Bluetooth LE, NFC, 6LoWPAN, etc
- Network management
  - Self management, adaptive routing, mobility support



## □ Methodology

- Formal and non formal design, development, & test methodologies
- Certification of critical systems (hardware and software)
- HW + SW co-design

# CETIC in European Research Area

## □ Strategic positioning in the European Research Area (ERA)

### □ FP6



- CoreGRID
- EverGrow
- BEinGRID
- QualOSS (C)
- HPC4U
- GridTrust (C)
- AssessGrid
- Oldes

### □ FP7



- RESERVOIR
- Deploy
- PONTE
- Bonfire
- S-Cube

### □ Other European Projects

- AgentLink III (Coord. Action)
- Extra (CORNET)
- C2A (Interreg Iva)
- AMACS (EraSME)
- COMOD-IT (EraSME)
- DAPCARE (LEAD-ERA)






- ❑ Automatic Monitoring of Activities using Contactless Sensors
- ❑ ERA-NET - EraSME project - Oct. 2010-Sept. 2013
- ❑ The goal of the project is to allow elderly people presenting age-related risks or pathologies (e.g. risk of fall, cognitive decline) to safely stay in their home environment as long as possible.
  - develop and evaluate in real-life situation an ICT-based system that can automatically monitor the activities of daily living (ADLs) of elderly people living alone at home
  - detect changes in the senior's behavior, i.e. changes in the ADL patterns
- ❑ CETIC is in charge of the definition, design and development of the exchange platform which collects the information about ADLs and changes in seniors' behavior and adequately communicate this information to the seniors, their medical records and their caregivers.
- ❑ **Projects partners:** Mobilab, KULeuven, Vlaamse Katholieke Hogeschool voor Wetenschap & Kunst, Fontys Paramedische Hogeschool, Intersysto, PCSol, Smolinfo



*Thank you*

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