

# SMART SYSTEMS

SYSTEM ENGINEERING  
SOFTWARE DEVELOPMENT  
PROCESS & RAMS CONSULTING  
VALIDATION & VERIFICATION  
EMBEDDED SOFTWARE

**intecs** Solutions

the Brainware company

**Intecs Solutions**, founded in 1974, is an Italian private Company at the forefront in the design and implementation of high-tech electronic systems for the AeroSpace, Defence, Transportation, Smart Systems and Telecommunication markets, where safety, reliability, innovation and quality are the key ingredients for success. **Intecs Solutions** designs and develops applications, tools and software components for complex electronic systems in cooperation with major European and Italian Industries, Organizations, Universities and Research Centers.

**Intecs Solutions** strongly believes that **Smart Systems** represent a new generation of technology innovation and convergence working together in unprecedented ways to solve smarter and more complex business problems than previous generations of computing.

## SMART SYSTEMS

Smart Systems are connected embedded devices that also perform functions of sensing, actuation and control. Thanks to M2M (Machine-To-Machine) technology these systems are contributing to the development of the future Internet of Things.

**Intecs Solutions** strongly believes that Smart Systems represent a new generation of technology innovation and convergence working together in unprecedented ways to solve smarter and more complex business problems than previous generations of computing.



The markets where **Intecs Solutions** operates applying this kind of technology are the following:

**eHOME:** Appliances, Ambient Assisted Living, insurance devices

**EMBEDDED:** Applications for embedded market

**MOBILITY:** Intelligent Transportation Systems, on-board insurance devices (black box)

**CONSULTING:** we can help you with your most pressing technology initiatives to address these challenges

## eHOME

**Intecs Solutions** cooperates with the major national and international appliance manufacturers for the design, development and testing of hardware, firmware and software according to the most important domain standards.

Main projects:

- Firmware development, integration and testing for White Goods applications
- Design and development of the components that manage the main cooking and dishwashing functionalities
- Design and development of a smart home device for the insurance market

Main features are:

- Alarm detection and notification by heterogeneous sensors (smoke, water, PIR)
- Emergency call function
- Noise and Motion detection functions
- Hardware, Physical Design and prototyping of an On Board Unit telematics device

Main capabilities:

- GNSS position tracking
- GSM voice and text communication
- Accelerometer and gyroscope functions



## EMBEDDED

Main projects:

- Firmware re-engineering for heat pump inverter, for Large Wet Rotor Circulator Drive (Energy application)
- Electromagnetic Compatibility (EMC) Testing and measurement on energy meters
- Design and development of software applications that allows electronic payment management, compliant to the EMV standard (Europay, Master-Card, Visa), for petrol stations

## MOBILITY

**Intecs Solutions** has its own solution called SIMIS (Sustainable and Intelligent Mobility Integrated System), from the sensors to the application and cloud services, passing through the telecommunications infrastructure and communication middleware.

**SIMIS** has been created with the aim of unbinding the world of sensors from the data processing and management systems.



The development of **SIMIS** has followed a modular approach that makes it possible to obtain a system composed of independent components, each of them with its own specific functionality within a centralized control room that can also operate in a distributed environment.

This approach enables high scalability and adaptability for the system in order to meet the needs of the public authorities and making it the ideal solution for extremely heterogeneous operating environments, ranging from small urban and industrial areas to more complex metropolitan scenarios. Scalability is possible at both HW and SW levels so that the user can have a high level of customization.

#### **SIMIS** offers:

- A middleware for the collection and storage of data in order to provide both real time and offline information
- Interface modules for integration with existing systems (e.g. VMS panel management, info by text message, heterogeneous data acquisition)



- A set of services that can be scaled according to user needs: parking management, vehicle tracking, car sharing applications, real-time flow sensing and statistical models, integrated ticketing services

#### **SIMIS** can integrate:

- Parking and flow sensors using proprietary technology, as well as the integration of commercial sensors and surveillance systems
- Cartographic and textual interfaces that allow local and web access to the services

**SIMIS** is highly scalable, making it possible to meet the specific needs of each customer, reducing costs and development time for new features. **SIMIS** platform is currently deployed in Pisa and Florence urban area and offer urban transport services and car parking slot control services

#### **CONSULTING**

**Intecs Solutions** can provide advanced consulting to help customers in the certification process.

**Intecs Solutions** has developed particularly strong competence in the area of “Business Process & IT” and “Engineering Process” consulting.

#### **MOBILE APPLICATIONS**

**Intecs Solutions** has been developing custom mobile applications for Windows and Android smartphones and tablets.

Main applications:

- Monitoring and video surveillance of a domestic/small business environment equipped with heterogeneous sensors
- Remote monitoring of public lighting sites

## SMART CITY

Cities, not Countries, will drive wealth creation in the future.

New Internet of Things (IoT) applications that leverage ubiquitous connectivity, big data and analytics are enabling Smart City initiatives all over the world.

These new applications introduce tremendous new capabilities such as the ability to remotely monitor, manage and control devices, and to create new insights and actionable information from massive streams of real-time data. As a result, IoT offerings are transforming cities by improving infrastructure, creating more efficient and cost effective municipal services, enhancing public transportation, reducing traffic congestion, and keeping citizens safe and more engaged in the community.

**Intecs Solutions** is deeply involved in the Smart City domain offering smart lighting solutions for energy consumption reduction.



**Intecs Solutions** can offers different solution:

Transportation: Smart Parking system; Vehicle tracking system

Energy, Utility, Water: Smart Metering system; Smart Monitoring systems

Building, Infrastructure: Smart Street Lighting solutions; Smart Security solutions

## PRECISION AGRICULTURE

Precision agriculture solutions are utilised in every phase of the farming cycle from land preparation and planting to irrigation and water management, nutrient and pest management, harvest, and also in the data collection and analysis.

Precision agriculture has transformed the way farming is conducted today. It enables a farmer to monitor his fleet remotely, map field boundaries, geo-reference crop scouting information, conduct soil analysis, monitor yield, or create prescription maps to target each area of a field uniquely. Precision agriculture is based on location-based technologies such as GPS and GIS, and there are many applications for its use on the farm.

The agricultural solutions from **Intecs Solutions** address all seasons, crops, terrains and vehicles including tractors, applicators, and harvesters.

## CONTACTS



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