

# KNOW-HOW IN DOMOTICS AND INTELLIGENT ENVIRONMENTS

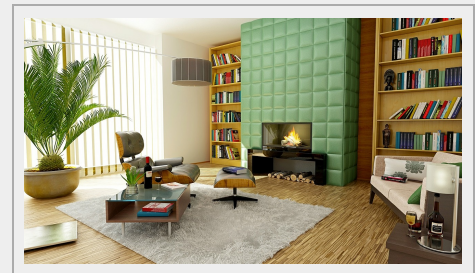
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**ABSTRACT**

A Spanish research group has a wide experience with domotics technology developments. Researchers have developed new technologies applied to home. The main objective is to integrate the management of all electronic devices at home.

The research group is specializing in offering domotics solutions to persons with reduced mobility, for example elderly, childhood or handicapped people. Researchers are looking for partners to apply the developed Systems or joint further developments.

**TECHNICAL DESCRIPTION**

Middleware design to make applications and services independent. Integration of open systems and proprietary software, wireless or not. Integration of KNX, X10, LonWorks, EnOcean, DALI, Zigbee, RFID, etc.

**Efficient use of energy**

Integration of different energy sources. Development of intelligent techniques to choose the best source of energy in each moment. Consumption monitoring.

**Life assisted by the environment**

Application of these technologies to make daily life easier to elderly, childhood, handicapped people, etc.

**People-environment interfaces**

Development of new multimodal systems for the interaction with the environment. These systems are based on computer vision, speech recognition and sensors.

**Intelligent environments**

Modelling and analysis of the people behaviour to events detection and prediction: detection of fall, depression, cognitive problems, etc.

**ADVANTAGES AND INNOVATIVE ASPECTS**

The research group is able to develop specific solutions to integrate any electronic device at home: lighting, security, electrical appliance, sensors, etc. In addition, they can integrate any kind of energy generation and control system to make saving energy easier. In that way buildings can be more efficient.

The group is able to develop customized solutions to solve specific needs.

## CURRENT STATE OF DEVELOPMENT

The technology developed by the research group has been applied in a collaborative project with a centre for the promotion of the employment and technological development of the metallurgic sector. They have design and developed a Digital Home called metalTIC that simulates a modern house with the latest technologies applied to home. It is a 50 m<sup>2</sup> house with a living-room, kitchen, bedroom and bathroom where you can find energy control, security management, leisure time applications, communication technologies, etc.

This Digital Home is available for demonstration. Nowadays it is being used for demonstration and as training room for



manufacturers or installers of domotics technologies.



## MARKET APPLICATIONS

Digital services for home, efficient energy use, environment assisted life, building, elderly or handicapped people technologies, etc.

## COLLABORATION SOUGHT

- Type of partner sought: companies or research centres.
- Specific area of activity of the partner: building sector companies, domotics solutions manufacturers, designers, installers, software developers for home applications.
- Task to be performed: the research group is interested in transferring their know-how to any company or centre interested in putting into practice domotics technologies at any environment. The Spanish group is interested in further developments and solves specific needs. They are opened to participation in international R&D projects.

Possible collaborations:

- Technical cooperation for joint further development, testing of new applications and adaptation to specific needs.
- Technical assistance for assembly, technical consultancy or maintenance of integrated systems.
- Financial resources and R&D projects.

## MARKET APPLICATION (1)

Computer Science, Language and Communication