

Consumer's Services Companies

Second Madrid Forum on Electric Demand Side
Operation, DSO

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Company presentation

- Visual Tools is a Spanish company who develops technology innovation for digital video systems applied to security (surveillance) and remote control of operations
- Our contribution to this Forum is two-fold:
 - *Technology perspective.* We have succeeded in developing and marketing products offering actual solutions for energy saving
 - *Market perspective.* We are an important player in a market, the security market, that is well established in the domestic and tertiary sectors offering products and solutions demanded by consumers

The Technology of Visual Tools

- We have developed the concept of “*visual intelligence*” over the past three years. By using computer vision techniques our products analyze the images of video security cameras to extract actual data and alerts (suspicions)
- Some examples follow.
 - **Outdoors object tracking**
 - **Indoors object tracking in a Commercial Mall**



People Counting and Data Analysis System

- Using computer vision systems one can:
 - Count the number of people passing through a certain area
 - Estimate the visitors flow distribution in a shopping mall
 - Measure the occupation of a museum or large building
 - Warn when some premises are empty
- Applying advanced analysis techniques to the people counting data one can drive conclusions and forecast future trends
 - Example of visitors flow analysis in a shop during a whole year and similarities with the electric demand curve

Other Real Applications of the Technology

- The company is currently working in inmotic projects (domotic applied to the Tertiary sector)
 - In a shopping mall in Italy our system counts the number of visitors and uses that information to control in real-time the heat, ventilation and air-conditioning, and the working periods of escalators and elevators. The goal is saving 25% of the electric consumption
 - In an office building the system generates a signal when the occupation of the building goes below a certain threshold. This signal is used to schedule pre-programmed switch-off of certain secondary services in pre-determined areas
- We are currently developing new technologies for the **DIGITAL HOME** together with key players at world-wide level such as **FAGOR** and **PHILIPS**. These projects are partially funded by the EU

Domotics and the Security Market

- Domotics is a business in a very early stage:
 - 21 M€ in 2003
 - 30% annual growth
 - Thirty five thousand domotic installations are estimated in new homes built up during 2005
 - Average cost of a domotic installations is estimated in ca. 2.000 €

Domotics

- Some domotic systems currently installed in Spain are:
 - shutters and illumination control
 - Technical alarm detection
 - Intrusion alarm detection
 - Smart management of Heat, Ventilation and Air-conditioning systems
- The five main application areas of domotics:
 - Security
 - Indoors
 - Outdoors
 - Confort Management
 - Energy saving
 - Communication infrastructure
 - Entertainment



The Security Market

- The number of alarm systems installed in Spain is estimated in four million units (residential plus tertiary sectors)
- More than one million alarm systems are connected to Central Security Stations
- The number of alarms systems increases in three hundred thousand units per year

¿Why domotics does not succeed?

Some important causes:

- Inadequate distribution channels
- Home Builders are not willing to bear the cost in new constructions
- The consumers are not so much motivated by saving energy but by increasing their confort level
- Wireless (and PLC) technologies will play a substantial role because
 - They enable the retrofiting of existing homes...
 - ... But the current offer is still limited



The security market could be the solution (i.e. Killer application)

- Energy saving in homes/companies is not first priority
- Users will only move if they are provided with a complete solution (whole product)
- The companies serving the security market have a strong position in contacting the consumers who allow them
 - To Install security products in their homes
 - To Use the home communication lines to test the system, to send bidirectional orders, to change configurations remotely,...

Conclusions

- **Technology Innovation** is not the only factor to provide new solutions...
- ... **playing 'the commercial game' differently**, i.e. new distribution channels, novel market segmentation,... is also a key factor of innovation that can be essential to trigger the success of products demanded by users

Contact Information

Arturo Rodríguez-García

*Director General
General Manager*

V I S U A L T O O L S

C/Isla Graciosa, 1.

28034 Madrid, Spain.

Telephone: + 34 91 729 48 44

Fax: +34 91 358 52 36

Mobile: +34 609 483 200

arodriguez@visual-tools.com