



“Thanks to the installation of the Wonderware System Platform in our offices, we now have a platform in which we have been able to integrate all the domotic features of the building as the need arises. Its open architecture does not impose limits on the inclusion of new functions.”

Fernando Conde,
Application Consultant, Logitek

Logitek opts for domotics in its main office building and promotes energy savings with Wonderware technology

by Wonderware Spain

Goals:

- Control the building's installations;
- Remote control;
- Save energy.

Challenges:

- The integration of different technologies (light, air conditioning, domotics, security...) in only one application;
- To avoid different kind of local manual control;
- To make all the facilities' systems working in concert in order to obtain the best environment.

Wonderware Solution:

- ActiveFactory software;
- InTouch HMI for Terminal Services;
- Wonderware System Platform.

Results:

- Integration of the company's domotic services with access from various stations via a clear, attractive interface;
- Direct access to installation data (temperature, consumption), thus helping to reduce energy costs;
- Availability of a platform in which any new building device can be integrated;
- Energy saving.

Rubí (Barcelona), Spain - Thanks to the installation of the Wonderware System Platform and B&R technology, Logitek has managed to integrate all the domotic features of its building into its main offices (located in Rubí, Barcelona), with the possibility of incorporating new functions as the need arises. From the control of lighting and blinds to air-conditioning and the library's projection screen, its open architecture does not impose limits, helping to create a work environment that is more accessible, safe and respectful of natural resources.

Towards an Intelligent Headquarters

Logitek is a leader in providing process automation solutions that allow industrial companies to make intelligent real-time decisions.

In November 2008, Logitek centralised its various corporate departments into one same building. This coincided with the move to its new main offices in Rubí (Barcelona).

As a company that is always at the vanguard of technologies, Logitek wanted to implement a system that would save energy in its facility. This is keeping in line with the company's philosophy of respecting the environment and promoting sustainability. From this need arose the requirement to automate the different domotic systems of its main office (air-conditioning, lighting and control of blinds) and design an intelligent building with the capacity of integrating new functions as the need arises.

Logitek decided to implement an application based on Wonderware System Platform to integrate the domotic systems and monitor energy resources.



Figure 1: Office synopsis showing the temperature level controlled by Wonderware System Platform.

Because of this, Logitek was able to achieve its three main aims: to optimise energy consumption (by modulating water, air-conditioning and light consumption), to improve building safety (with greater control over alarms and security cameras) and to make available reports and statistics using collected data.

An Integrated Environment

As Fernando Conde, Logitek Applicant Consultant, explains: *“The aim is to control the building's various installations, integrating the hardware and protocols of different systems into one environment.”*

The platform is based on Windows 2003 that acts as an object server, communications controller, Wonderware Historian and InTouch HMI (Human Machine Interface) for Terminal Services.

The Wonderware solution is comprised of:

- Wonderware System Platform that provides a unique platform for all automation needs;
- InTouch HMI for Terminal Services, software for process visualisation and control;
- Wonderware Historian, real-time historian;
- ActiveFactory software, a complete series of highly flexible tools to access to visualise and analyse data.

Complete Environmental Control

The installation was fully carried out by Cognicase Management Consulting, a Wonderware system integrator that has great experience in domotic applications. The following functions were initially developed through the Wonderware Application Server which is part of Wonderware System Platform solution and InTouch HMI View:

- Changes to air-conditioning orders;
 - Monitoring of, and manually forced, lighting in the main office and monthly programming turn on/off lighting according to sunlight conditions;
 - Programming the rolling up and down of blinds in accordance with specific times and sunlight conditions; human presence and facade orientation;
 - Control different scenario in the Meeting Room.
- Intuitive handling was an important design consideration because of the high number of users accessing the control of the InTouch HMI screens.



Figure 2: General view with all lighting system, air conditioning and shutters.

Large buttons were used with few keyboard entries in order to optimise the use of the touchscreens. Once the installation had been activated, a check was made to see if the installed infrastructure could serve as a basis for other elements and functions that were not initially planned.

Fernando Conde explains: *“These elements were gradually integrated in accordance with our needs. One example is the security cameras positioned at the entrance to the offices: using the InTouch HMI software solution, we’ve made it possible for it to change direction so the most suitable video can be viewed.”*

Similarly, thanks to the cable structure of the offices, the cameras are connected to the local network via TCP/IP and included in the touch control of the InTouch HMI application.

This complete control capacity also extends to the electricity consumption and environmental temperature control. Consequently, *“by using the peripherals distributed by B&R, measurement can be made of the total electrical air-conditioning consumption,”* adds Conde.

The air-conditioning parameters used in temperature control are stored by the Wonderware Historian, *“has helped to optimise the operation times of the air-conditioning.”* Major energy savings were achieved thanks to this and it truly had an economic impact.

The Wonderware solution also helps to control various different scenarios. For instance, with one single key, the system controls lighting, blinds, the projection screen and adapts the room to different uses.

Main Benefits

The implementation of a shared platform based on the Wonderware System Platform, combined with the peripherals distributed by B&R has helped to integrate all the domotic features of the building. Full system access and control using easy-to-use and clear interfaces has also facilitated the acceptance of the system by all personnel. Similarly, its open architecture does not impose limits when it comes to adding new functions. This provides the possibility of integrating new devices into the building easily.

“The projects already exist to integrate automatic garden watering, access control into the offices and the anti-theft alarm into the same application,” points out Conde.

The publication of different information (and some application screens) is also implemented in a Wonderware Information Server portal. The Wonderware Information Server on that helps to add and present performance and production data obtained via the Internet or Intranet. By using the Wonderware Information Server, it is possible to add large quantities of process data in production reports.

Fernando Conde concludes: *“Direct access to data relating to the installation, regulation and efficient control of air-conditioning, lighting and water consumption translates into an huge reduction of energy costs, thus helping to create not only ideal room temperature for the staff, but also showing how to become more mindful of limited natural resources. We save more than 5% energy due to the reduction of the electricity consumption, when people are not at the office and also because the automatic disconnection of all the electrical appliances when the alarm turns on.”*

The benefits of domotic applications are being strongly incorporated into the day-to-day activities of companies, helping to create greater comfort, safety and ease that promote a much more agreeable, healthy and sustainable work environment.

This document was realized thanks to the support: Logitek and Cognicase Management Consulting, Wonderware system integrator.