



Harmonize today's comfort with prestigious heritage of history

The exclusive Villa Cimbrone hotel in Ravello, an enchanting atmosphere of history, suggestion, technology and building automation on the Amalfi coast...

An elegant and sophisticated environment, wrapped in comfort and safety to the credit of modern technology and a supervision control system: temperature control, fire alarm system, room access with badge, all the mod cons without effecting the hotel's fascinating and harmonious architectural structure. Immersed on the Amalfi coast, 'far from the maddening crowd' of today's city life, you will find a place that belongs to the past where time has stood still, an ideal location for those who are looking for peace and rest in relaxing atmosphere: The Villa Cimbrone Hotel.

Its roots go back centuries (the 6th century). The surrounding and enchanting scenes have captured many a visitor from all walks of life

such as royalty, art, science and politics, through out a thousand years of the history of man.

It is not at all surprising to find oneself mesmerized in wonderment while strolling through the immense and well kept gardens or admiring the magnificent statues and frescos, or reading the Latin and English inscriptions, surrounded by the spectacular views all in the name of mother nature.

The location

The Villa Cimbrone Hotel is situated in a 12th century patrician palace, apparently built on the remains of an ancient Roman villa belonging to a noble family, where a noble Englishman lived at the beginning of 1900.

The Challenge

Submerged in history and nature, the Villa Cimbrone has installed a Building Automation system created by S.E.E.C.I. SUD Srl, a software engineering and system integrator company residing in Giffoni (Salerno, South Italy).

The ambitious project commissioned to S.E.E.C.I. SUD was to reconcile the past with the future by merging the most modern technology with the hotel's historical background. This meant that the new technology had to be incorporated into the hotel's original environment, without the hotel needing any restructuring or re-modernizing, to preserve and combine its historical heritage with modern comfort. In short: discrete technology without spoiling the Hotel's large heredity.

The project

They created a system designed to provide the Hotel guests a very efficient and comfortable service, which integrated and focused on optimizing all types of consumptions and where each significant event is retrievable for examining. Every little detail had been cared for in the project phase leaving no room for errors. The solutions used for controlling the whole system are based on SAIA PLC and on a central supervision system based on the Movicon technology, a product for which the company is a Solution Provider. The only real problem was where and how to feed the power and signal cables through; this was solved by distributing the PLCs according to their structure, and that of the building, and connecting them on a bus network with a common shielded cable. Each PLC has its own program capable of managing all their assigned signals independently. The PLCs are capable of making devices work when not connected to the main central station. This 'distributed intelligence' has consented cable tunneling optimization.



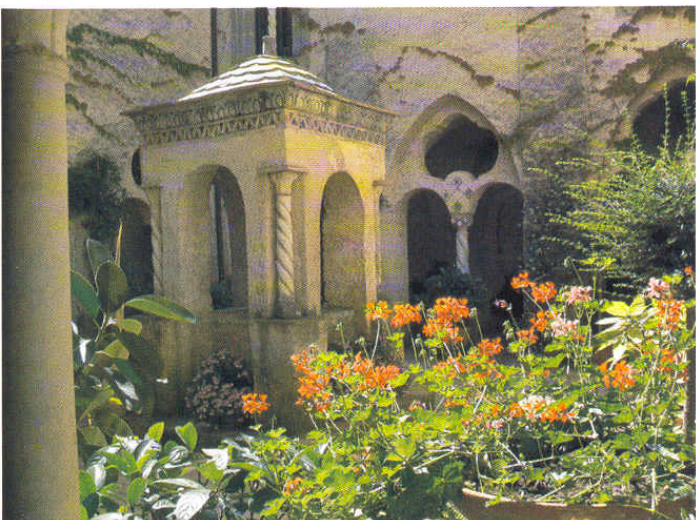
The electrical work was done while restoration work was being done to the Villa under continuous surveillance. The Movicon supervisor system works in a Windows XP environment and is positioned at the hotel's reception, connected through the bus to PLC PCD2s, equipped with the appropriate cards for acquiring signals arriving from the field (temperature sensors, badge readers, etc.). Their job is to carry out the following functions:

- Data acquisition from field devices of updated information on events, different location statuses and how other apparatuses are working (ie. central heating)
- Sending commands directly to the field devices, with eventual requests for authorization at supervision level.
- Supply information relating to significant retrieved events at supervision level

The Movicon supervision and monitoring software is articulated with interactive graphical pages, capable of presenting all the relative information to all the services managed; consents different access levels (with differential protection levels) in relation to the preset functions provided and users enabled.

The information, which arrives from the field in realtime, is organized in different detailed levels on video pages (screens).

These pages contain images (or



photographs) of the Hotel's floors and rooms, numeric data (ie. different room temperatures) and any other information the receptionist or user may need by using a very efficient and userfriendly interface. The simplicity of use was an important requirement strongly emphasized by the client so staff did not need to have any special qualifications to use it.

Apart from the complete diagnostics situation, the user can send commands to the field (ie. turn on/off lights in specific areas).

The system, in addition to access control and functions of each single room, carries out:

- The supervision of systems or technological services (central heating, fire alarm and intruder alarm systems)
- Control of the emergency light system efficiency
- Optimization of consumptions according to predefined logic

When entering the Villa Cimbrone the guest is welcomed and checked-in and given a magnetic card (badge) and the air-conditioning is turned on in their room.

The guest then uses this badge as a room key, which is deactivated when they check out and can be kept as a

souvenir of their unforgettable stay. As soon as the guest opens their room door with the badge, the lights automatically turn on. Each light is controlled by the PLC; when not working (blown light bulb) the PLC alerts Reception.

The guest can change the speed of the fan-coil and room temperature, in a range of $\pm 3^{\circ}$ preset by the system manager, as preferred.

The temperature reference point can be set for all the rooms at the same time or individually, room by room.

When a window is opened the air conditioning automatically switches to stand-by mode to save on electricity. Analogously, all the lights automatically go out when exiting the room while the air-conditioning switches to stand-by.

The system therefore demonstrates that comfort and energy saving can happily live together.

When the guest checks out, the system disables their assigned code for no-longer use.

The Results

The final results have fully satisfied the client, who is now capable of guaranteeing hotel management of such prestige with top level efficiency, and system reliability thanks to deploying technology tried and tested in an industrial environment, involving PLCs, to the full effect and convenience of a building automation environment. The supervision system, the "heart", provides pleasant and simple-to-use solutions, thanks to Movicon's powerful graphics functionalities.

Its vast configurability has also consented to realizing the whole system very quickly, guaranteeing openness to integrating all the technologies required.

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